

HUDSON RIVER

ALBANY

COXSACKIE

SAUGERTIES

KINGSTON

RHINECLIFF

POUGHKEEPSIE

NEWBURGH

BEACON

PEEKSKILL

CROTON

NYACK

TARRYTOWN

YONKERS

QUEENS

BROOKLYN

STATEN ISLAND

2010 YEAR CLASS REPORT

**for the
Hudson River Estuary
Monitoring Program**

Prepared on behalf of

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Solutions through Science

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CHAPTER 1

INTRODUCTION

Since 1973, an annual Year Class Report has been prepared on behalf of the several electric utility companies (collectively, the “Utilities”) operating generating stations in the Hudson River estuary. This report, which is based on the 2010 Hudson River Biological Monitoring Program, has been prepared on behalf of Dynegy Roseton L.L.C. – Debtor in Possession, Entergy Nuclear Indian Point 2 L.L.C., Entergy Nuclear Indian Point 3 L.L.C., and GenOn Bowline L.L.C. The principal reporting objective has been to present and analyze data on the distribution and abundance of early life stages of selected fish species based on field surveys conducted throughout the Hudson River estuary. The content and scope of these reports have varied over time from estimating the environmental impact of five Hudson River generating stations to focusing on indices of year class strength to describing the spatiotemporal distribution of selected fish species. Since the early 1990’s, the annual Year Class Report has been standardized to describe the physical/chemical parameter patterns in the Hudson River estuary and the spatiotemporal distribution of 16 selected species of fish. These 16 species were identified by the New York State Department of Environmental Conservation (NYSDEC) of interest for discharge permitting purposes.

This report adds to the historical database by presenting the results of the Longitudinal River Ichthyoplankton Survey, the Fall Juvenile Survey (formerly, the Fall Shoals Survey), and the Beach Seine Survey for 2010. However, the format of this report differs from previous years in that it is primarily data, supplying summarizing figures and tables without the accompanying text. The 2010 Year Class Report presents basic abundance and distribution data with the following objectives:

- Present the patterns and variability of environmental parameters occurring in the Hudson River estuary in 2010.
- Present the distribution and abundance of 16 selected species of fish ([Table 1-1](#)) in the Hudson River estuary in 2010.
- Present patterns in growth for the 2010 year class of key species.

This report is organized into four chapters with supporting appendixes. Data collection and analysis methods are described in [Chapter 2](#). Physical and chemical parameters are presented in [Chapter 3](#) and spatiotemporal distribution of selected fish species are presented in [Chapter 4](#). Detailed data tables supporting report figures are contained within the appendix sections as follows:

- [Appendix A](#) – Quality Control Report for the 2010 Hudson River Ichthyoplankton Laboratory Program and 2010 Fall Juvenile Survey;
- [Appendix B](#) – Physical/Chemical Parameters;
- [Appendix C](#) – Numbers of Fish Collected in the Long River (1988-2010), Fall Juvenile (1985-2010), and Beach Seine (1985-2010) Surveys;
- [Appendix D](#) – Annual Abundance Indices;
- [Appendix E](#) – Density and Standing Crop Estimates; and
- [Appendix F](#) – Length Frequency Distribution.

[Link to Chapter 2](#)

Table 1-1 Fish Species Treated in Depth in the 2010 Year Class Report

Common Name	Scientific Name ¹
Alewife	<i>Alosa pseudoharengus</i>
American shad	<i>Alosa sapidissima</i>
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>
Atlantic tomcod	<i>Microgadus tomcod</i>
Bay anchovy	<i>Anchoa mitchilli</i>
Blueback herring	<i>Alosa aestivalis</i>
Bluefish	<i>Pomatomus saltatrix</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Hogchoker	<i>Trinectes maculatus</i>
Rainbow smelt	<i>Osmerus mordax</i>
Shortnose sturgeon	<i>Acipenser brevirostrum</i>
Spottail shiner	<i>Notropis hudsonius</i>
Striped bass	<i>Morone saxatilis</i>
Weakfish	<i>Cynoscion regalis</i>
White catfish	<i>Ameiurus catus</i>
White perch	<i>Morone americana</i>

1. Names listed in Nelson et al. 2004.

CHAPTER 2

MATERIALS AND METHODS

2.1 SAMPLING DESIGN

Several fishery techniques were employed in three separate sampling surveys to obtain comprehensive information on the abundance and distribution of selected larval, juvenile or young-of-year (YOY), and adult fish species in the Hudson River estuary. Temporally, the monitoring program encompassed the spring through fall season, the period of greatest biological activity in northern U.S. temperate waters. The surveys were designed to sample the full range of Hudson River habitat toward a representative assessment of species-specific spatial distribution patterns. During 2010, survey-specific techniques were employed which were consistent with previous Hudson River Monitoring Programs.

The scope and objectives of the three sampling surveys comprising the overall monitoring program are summarized as follows.

1. **Longitudinal River Ichthyoplankton Survey** (LRS or Long River Survey)—Sampling encompassed the entire length of the Hudson River estuary, from River Mile (RM) 1 at the Battery in Manhattan to RM 152 at the Federal Dam in Troy. The LRS yielded ichthyoplankton data to support calculations of standing crop, temporal and geographic indices, and growth rates for selected Hudson River fish species. The primary species were Atlantic tomcod (*Microgadus tomcod*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*), white perch (*M. americana*) and bay anchovy (*Anchoa mitchilli*). LRS sampling was concentrated during the spring, summer, and early fall when eggs and larvae of the primary species have historically been abundant.
2. **Fall Juvenile Survey** (FJS or Fall Shoals Survey)—Samples were collected every other week from the Battery to the Troy Dam in mid-summer and fall. The objective was to provide data on YOY fish to support calculation of standing crop and temporal and geographic indices for selected Hudson River fish species. The target species were Atlantic tomcod, American shad, striped bass, and white perch.
3. **Beach Seine Survey** (BSS)—Beach seine samples were collected in alternate weeks relative to the FJS at stations ranging from the George Washington Bridge (RM 12) to the Troy Dam. The objective was to obtain distribution and relative abundance information on YOY American shad, Atlantic tomcod, striped bass, and white perch during periods when these species were concentrated primarily in the shallow, near-shore areas. The survey was conducted from mid-June through October, when YOY of these species were typically abundant in the shorezone nursery areas.

Sampling for all surveys was conducted according to a stratified random design in which the Hudson River estuary from the Battery (RM 1) to the Federal Dam at Troy (RM 152) was divided into 13 regions (Figure 2-1). Each region was further divided into "strata" on the basis of river depth. The strata, based on river depth, are graphically presented in Figure 2-2 and defined below:

- **Shore**—That portion of the Hudson River estuary extending from the shore to a depth of 10 ft (the stratum defined only for BSS).
- **Shoal**— That portion of the Hudson River estuary extending from the shore to a depth of 20 ft at mean low tide.
- **Bottom**—That portion of the Hudson River estuary extending from the bottom to 10 ft above the bottom where river depth is greater than 20 ft at mean low tide.
- **Channel**—That portion of the Hudson River estuary not considered bottom where river depth is greater than 20 ft at mean low tide.

The relative area and configuration of the shoal, bottom, and channel strata vary over the length of the Hudson River estuary but may be characterized using the three cross section views presented in [Figure 2-2](#). For example, the low relief sectional is characteristic of the Tappan Zee and Croton-Haverstraw regions, the high relief sectional is exemplified by the Yonkers and Poughkeepsie regions, and the fjord relief sectional represents the West Point region.

A minimum of two samples was assigned to each stratum in most regions for the LRS. However, no samples were allocated in the Poughkeepsie through Albany regions during the first three sampling weeks of the LRS (15 March – 4 April) nor in the Hyde Park through Albany regions during the final seven sampling weeks of the LRS (12 July – 10 October) because few organisms of the target species were historically present in these regions during these weeks. A minimum of two samples was assigned to each stratum in each region for the FJS except no channel samples were allocated during the final three sampling weeks (25 October – 5 December). A minimum of three samples was allocated in each region for the BSS. Shoal strata samples were not assigned in upriver regions nor were shoal or shore strata samples assigned in the Battery region. The strata actually sampled in each region during the 2010 survey period are presented in [Table 2-1](#).

A general summary of the three sampling surveys for the annual monitoring program is presented in [Table 2-2](#). The field and laboratory methods used for each survey are described in detail in the following sections.

2.2 LONGITUDINAL RIVER ICHTHYOPLANKTON SURVEY

2.2.1 Field Methods

The 2010 LRS was performed over a period of 30 weeks from 15 March to 11 October with all sampling prior to 24 May conducted during the day and all subsequent sampling conducted at night ([Table 2-2](#) and [Figure 2-3](#)). For the first three sampling weeks, sampling was conducted between RM 1 and RM 61. For the next 13 weeks beginning 5 April, weekly sampling encompassed RM 1 to RM 152. In the final phase of sampling from 12 July through 10 October, sampling was conducted biweekly between RM 1 and RM 76.

The allocation of sampling effort among river regions and strata was temporally adjusted in response to the projected presence and distribution of target species and life stages. The 2010 LRS sampling program was scheduled as 6 separate multi-week efforts. The first sampling effort, performed in March and early April, focused on the collection of Atlantic tomcod post

yolk-sac larvae (PYSL). The second effort, performed during April, focused on the collection of American shad eggs. The third effort, from late April to mid-May, was designed to collect eggs of *Morone* spp. and American shad. The fourth effort, performed from mid-May through early June, targeted *Morone* spp. and American shad yolk-sac larvae (YSL). The fifth effort, in June and early July, was designed to collect *Morone* spp. and American shad PYSL. The LRS sampling program concluded with a 13-week period, sampled biweekly, from the middle of July to early October. The final sampling effort was designed to collect all life stages of bay anchovy.

The allocation of sampling effort among regions and strata is presented in [Table 2-3](#). Of the 3522 ichthyoplankton samples scheduled for collection during 2010, 3519 samples were collected, accounting for 99.9 percent of the scheduled total.

Two distinct gear types were used for field collections during the 2010 LRS:

- 1.0-m² Tucker trawl ([Figure 2-4](#) and [Table 2-4](#)) to sample the shoal and channel strata (non-bottom), and
- 1.0-m² epibenthic sled ([Figure 2-5](#) and [Table 2-4](#)) to sample the bottom-only shoal and channel strata.

Both gear types were towed against the prevailing current for 5 minutes. The tow started with the remote opening of the net and terminated with its remote closing. If the river depth was 20 ft or less, an open set and retrieval of the net was performed. The tow speed for the Tucker trawl was adjusted to maintain a towing wire angle of approximately 45° averaging approximately 0.9 m/second. The tow speed for the epibenthic sled-mounted net was maintained at approximately 1.0 m/second. An electronic flowmeter mounted along the side of the research vessel and equipped with an on-deck readout display was used to establish and maintain tow speed. A calibrated digital flowmeter mounted in the center of the net mouth was used to calculate the volume of water filtered for each sample.

Following deployment and retrieval of the sampling gear, net washing was performed to concentrate the sample into the codend bucket. The samples were then examined for yearling and older fish which were identified, enumerated, and returned to the Hudson River estuary. Special care was taken to observe sturgeon species for physical condition and for the presence of marks and/or tags. All yearling and older sturgeon were measured to the nearest millimeter, weighed to the nearest gram, and, if alive, returned to the river or, if dead, frozen and saved for the NYSDEC. After yearling and older fish were removed, the remaining sample was placed in container(s) so that the sample occupied no more than 25 percent of the container volume. The containers were filled with a 10 percent aqueous formalin solution.

In situ measurements of water temperature (°C), dissolved oxygen (mg/L), and specific conductance (microsiemen/cm at 25°C) were taken with calibrated meters at fixed river mile and strata stations in conjunction with the biological sampling. The number of physical/chemical sampling locations, by river mile and strata, are presented in [Table 2-5](#) for the 2010 LRS. Physical/chemical measurements were recorded from surface, mid-depth, and bottom water depth at channel stations and from the surface and bottom water depth at shoal stations. During the 23 collection weeks of the 2010 LRS, 3520 physical/chemical measurements were scheduled and 3519 measurements were actually recorded, accounting for nearly 100 percent of the scheduled total.

2.2.2 Laboratory Methods

In 2010, approximately 70 percent of the regular LRS samples were selected for laboratory analysis. Selection of samples for laboratory analysis began with the grouping of samples according to river run (i.e., sampling week), region, and strata. Based on these groupings, samples were selected based on one of the following criteria:

1. If there were less than 6 samples in the group, then all were selected for analysis.
2. If there were between 6 and 12 samples in the group, then 50 percent of the samples were randomly selected for analysis.
3. If there were more than 12 samples in the group, then 20 percent of the samples were randomly selected for analysis.

The allocation of samples for laboratory analysis among regions, strata, and gear types based on these criteria is listed in [Table 2-6](#). The total number of analyzed samples for 2010 was 2440, comprising 69.3 percent of the collected samples.

In 2010, as in previous years, splitting (or subsampling) was permitted. A trained technician first determined, by visual inspection, if the sample needed splitting. Samples containing large numbers of eggs may have been split so that eggs were only sorted from one or more aliquots containing a total of at least 250 eggs (all species combined).

Two different sets of criteria were used for subsampling of larval stages, depending on the river run. Beginning with the river run in which striped bass PYSL first appeared, and for the next 8 river runs (a total of 9 consecutive river runs), a minimum of 500 *Morone* larvae (i.e., the combined total of YSL, PYSL, and YOY of striped bass, white perch, and unidentified *Morone*) was sorted from the entire sample and a minimum of 50 non-*Morone* larvae was also sorted. Because some of the more difficult distinctions between species (e.g., striped bass versus white perch) or between life stages could not be made reliably during sorting, samples from these 9 river runs were typically sorted in their entirety for larvae (i.e., YSL, PYSL, and YOY combined) of all species combined. An exception to this may have been made, at the discretion of the laboratory supervisor, under the following circumstances: when extremely large numbers of non-*Morone* larvae occurred in the sample and a qualified identifier had verified that sufficient numbers of both *Morone* larvae and non-*Morone* larvae were sorted to meet their respective subsampling quotas. The purpose of this exception was to allow splitting before sorting of taxa such as clupeids which could readily be distinguished from *Morone* by sorters.

The second set of criteria for subsampling larvae applied to the 13 other river runs not covered in the previous paragraph (before and after the period of striped bass abundance). Any sample from these river runs may have been subsampled so that larvae were sorted from one or more splits containing at least 100 larvae (i.e., YSL, PYSL, and YOY combined) of all species combined.

To eliminate bias, some steps in the splitting procedure were performed by an assistant so that the sorter had no prior knowledge of which splits were to be used for the analysis. This procedure is explained in [Figure 2-6](#). Randomness of the splitting procedure was monitored and demonstrated by testing selected samples to determine whether splits from the same sample differed by more than random variation. Samples were selected to test for randomness

by a continuous sampling plan, shown in [Figure 2-7](#) (CSP-V from MIL-STD-1235, AOQL = 10 percent).

For each split sample evaluated, three fractions of the same aliquot size were sorted and compared by the chi-square test according to the following procedure. The counts of the three splits (including any quality control [QC] finds) were averaged to obtain the expected value for the sample. Chi-square was calculated as:

$$chi\ square = \frac{(O_1 - E)^2}{E} + \frac{(O_2 - E)^2}{E} + \frac{(O_3 - E)^2}{E}$$

where

O_1 , O_2 , and O_3 = Observed counts for splits 1, 2, and 3.

E = Expected value for the sample (average of O_1 , O_2 , and O_3).

If the calculated value for chi-square was less than 5.99, then the splits of that sample were considered random, and the sample passed the split QC (5.99 was the critical value of chi-square with two degrees of freedom at an alpha level of 0.05). If a sample was split for both eggs and larvae, then both stages were tested separately. The sample passed the split QC only if chi-square was below the critical value for both life stages.

Eggs and larvae were separated from detrital material, sorted by major taxonomic group and life stage, counted, and placed in vials containing 5 percent formalin or in ethyl alcohol. Sorted samples were evaluated by a trained technician under magnification and all organisms were identified and enumerated. The following life stage designations were used in identification:

Life Stage	Description
Egg	Embryonic stage from spawning to hatching,
YSL	From hatching to development of a complete and functional digestive system,
PYSL	From development of a complete digestive system to transformation to juvenile form, and
YOY	From completed transformation to Age 1.

Whenever possible, a maximum of 30 striped bass, 30 white perch, 30 American shad, 30 Atlantic tomcod, and 30 bay anchovy per sample were measured. Organisms were chosen at random from each taxon regardless of life stage until the required numbers were obtained; life stages to be included were YSL, PYSL, and YOY. The total length of YSL and PYSL was measured to the nearest 0.1 mm and to the nearest 1 mm for YOY. Measurements were recorded on the laboratory data sheet. Selection of specimens for measuring was randomized by spreading them uniformly in a gridded container, selecting a starting point in the grid by means of a random number table, and then measuring the first 30 measurable specimens encountered in a predetermined pattern commencing at the starting point. Every grid space had an equal probability of being selected as the starting point, so every specimen had an equal probability of being included in the subsample.

Continuous sampling inspection was employed during the sort and identification procedures to ensure an average outgoing quality limit of 10 percent or better. Two sampling modes were required in the continuous sampling plan (CSP-1):

Mode 1—The first eight samples sorted or analyzed for larval identification by an individual are subject to 100 percent QC reanalysis. If all eight pass the reanalysis, i.e., if ≤ 10 percent of the ichthyoplankton are missed or misidentified per sample, the individual is placed in CSP Mode 2. If any sample fails during Mode 1, then Mode 1 is continued until eight consecutive samples pass. For example, if a sample with QC No. 7 fails, then samples with QC Nos. 8 through 15 are subject to QC resorting.

Mode 2—Lots of seven consecutive samples per individual are assigned for identification QC and per laboratory facility for sort QC. One sample from each lot is randomly chosen for QC analysis. If a sample fails (>10 percent of organisms missed or misidentified) during Mode 2, the individual is placed back into Mode 1. For example, if a sample with QC No. 6 fails in a lot of seven samples, then samples with QC Nos. 7 through 14 are subject to QC reanalysis. If samples 7 through 14 pass, the individual is again placed in Mode 2.

Results of the 2010 CSP-1 Quality Control Program are contained in [Appendix A](#).

2.3 FALL JUVENILE SURVEY

2.3.1 Field Methods

The 2010 FJS biweekly sampling program extended from RM 1 to 152 and covered 22 weeks from 5 July to 5 December ([Figure 2-3](#)). Samples were collected at night for the first 8 river runs from 5 July through 17 October, and during the day for last 3 river runs from 18 October through 5 December. These last river runs, which were conducted with a modified sampling design, were intended to examine Atlantic tomcod distribution. [Table 2-7](#) presents the distribution of the FJS sampling effort among the 13 river regions by stratum. Of the 2130 samples scheduled for collection, 2130 were actually collected, yielding 100 percent completion.

A 1.0-m² Tucker trawl and a 3.0-m beam trawl were used to collect YOY fish in the 2010 FJS. The Tucker trawl with 3.0-mm mesh was used to collect samples in the channel stratum, while the beam trawl ([Figure 2-8](#)) was used to sample the shoal and bottom strata. The latter gear was first used in this capacity in the 1985 FJS; prior to 1985, an epibenthic sled-mounted Tucker trawl was used. With the modified sampling design of the last 3 river runs from 18 October through 5 December, no channel samples or Tucker trawl samples were scheduled for collection. Only beam trawl samples in the shoal and bottom strata were taken during these river runs. Design specifications for FJS gear currently in use are listed in [Table 2-8](#).

Both gear types were towed against the prevailing current for approximately 5 minutes. For the Tucker trawl, vessel speed was adjusted as necessary to achieve and maintain a 45° wire angle; the resultant tow speed was recorded. The beam trawl was towed at a speed of approximately 1.5 m/second. Tow speed was established and maintained by use of an electronic flowmeter mounted along the side of the research vessel and equipped with an on-deck readout display. Tucker trawl samples taken in greater than 20 ft of river depth were

remotely opened and closed at sampling depth. A calibrated digital flowmeter mounted in the center of the net mouth was used to calculate the volume of water filtered for each sample.

Calibrated water quality instruments were used to measure water temperature (°C), dissolved oxygen (mg/L), and specific conductance (microsiemen/cm at 25°C) at fixed river mile and strata stations in conjunction with field sampling. Sampling locations were the same as those used for the 2010 LRS sampling program (Table 2-5). Measurements of physical/chemical parameters were recorded from surface, mid-, and bottom water depths at channel stations and from surface and bottom water depths at shoal stations. During the 2010 FJS, of the 2002 samples scheduled for collection, 1999 were actually collected, yielding 99.9 percent completion.

Because of the difficulty in differentiating some species, especially YOY *Morone* (striped bass, white perch) and *Alosa* (alewife, blueback herring), samples collected during the first three sampling periods (River Runs 1 through 3) for the 2010 FJS program were preserved with 10 percent formalin at the time of collection and returned to the laboratory for analysis. Before preservation, samples were examined for fish determined to be yearling or older, based on length categorization; live fish were returned to the river after count data were determined.

Beginning with the fourth biweekly sampling period, samples were evaluated in the field; only fish required to fill length measurement and food habit quotas were returned to the laboratory. The quota was to be 20 specimens of a selected species from each river region per river run; because of the necessity of returning fish to the river alive, the first 20 specimens of a selected species were brought to the laboratory for length measurements. The Hyde Park through Albany regions were considered one region for the purpose of filling length measurement quotas during the entire FJS and during River Runs 4 through 10 of the BSS. Also for the BSS during River Runs 1 through 3, the Yonkers through West Point regions were considered as one region for the same purpose. In river regions where fewer than 10 samples were collected per survey, no more than 10 specimens of each selected species from an individual sample were used to fill the length measurement quota. This criterion was used in the following surveys for the specified river regions:

<u>Sampling Program</u>	<u>Region</u>
BSS	YK, IP, WP, CW, PK
FJS	WP, PK

In all other regions, when the sample schedule resulted in 10 or more samples per survey, no more than 5 specimens per species in a sample were used to fill the length measurement quotas. If more specimens of a species were collected than needed, the individuals used to fill the quotas were randomly selected.

All fish not returned to the laboratory were identified and enumerated into length classes as described in the following section. All Atlantic sturgeon, shortnose sturgeon, and striped bass were examined for external and internal magnetic tags. All sturgeon were measured to the nearest millimeter, weighed to the nearest gram, and, if alive, returned to the river or, if dead, frozen and saved for the NYSDEC. All striped bass with external streamer tags were measured and a scale sample was taken.

2.3.2 Laboratory Methods

Fish from the FJS in both the field and laboratory were identified and enumerated into the following length classes:

Length Class 1—Less than or equal to the YOY length limit ("Division 1"), which was determined by the field contractor on a weekly basis for each species.

Length Class 2—Greater than Division 1 and less than or equal to the yearling length limit ("Division 2"); set at 150 mm for most species, also determined weekly by the field contractor. From 1 January through 31 May, Division 2 represents the upper length limit for yearling fish for all species. From 1 June through 31 December, Division 2 is assigned a static value of 150 mm total length for all species except alewife, American shad, blueback herring, striped bass, Atlantic tomcod, and white perch. For these species, Division 2 is maintained as a dynamic upper length limit for yearling fish throughout the year.

Length Class 3—Greater than Division 2 and less than or equal to 250 mm.

Length Class 4—Greater than 250 mm.

Twenty specimens of the following selected species collected in each river region per river run were measured for total length (nearest millimeter) in the laboratory (except for sturgeon species which were measured in the field):

- Alewife
- American shad
- Atlantic sturgeon
- Atlantic tomcod
- Bay anchovy
- Blueback herring
- Shortnose sturgeon
- Spottail shiner
- Striped bass
- Weakfish
- White catfish
- White perch.

2.4 BEACH SEINE SURVEY

2.4.1 Field Methods

The 2010 BSS utilized a 30.5-m (nominal 100 ft) total length beach seine to collect YOY fish in the shorezone of each region, except the Battery region. [Table 2-9](#) presents specifications for the beach seine. One end of the net was held on shore and the other end was towed perpendicularly away from the shore by boat. The seine was then hauled, clockwise if possible, in a semicircular path toward shore. The complete beach seine deployment swept an area of approximately 450 m² (TI 1981). All BSS samples were collected on a diurnal schedule during alternate weeks of the FJS.

The 2010 BSS biweekly sampling program was conducted from 14 June through 24 October ([Figure 2-3](#)). Ten of the 19 weeks in this time period were collection weeks with 100 beach seine samples per week scheduled for collection. Allocation of the total number of samples by river region collected for the 2010 BSS is presented in [Table 2-10](#). Of the 1000 samples projected for collection in 2010, 1000 were collected, yielding 100 percent completion.

Measurements of water temperature (°C), dissolved oxygen (mg/L), and specific conductance (microsiemen/cm at 25°C) were taken with each beach seine sample using *in-situ* water quality instrumentation. Physical/chemical measurements were taken 1 ft below the water surface and approximately 50 ft from the shoreline. During the 10 collection weeks of the 2010 BSS, all of the 1000 scheduled water quality samples were collected.

YOY fishes collected during the first four beach seine river runs in 2010 were processed in the laboratory because of the difficulty in distinguishing species at the YOY life stage; adults were processed in the field. Beginning with River Run 5, all samples were field processed; 20 specimens of the selected species from each region per run were collected (as described in Section 2.3.1) for length determination in the laboratory. Samples maintained for laboratory analysis were preserved using 10 percent formalin. Fish from the BSS in both the field and laboratory were identified and enumerated into length classes as described in Section 2.3.2. Any sturgeon collected during the BSS were measured to the nearest 1 mm and weighed to the nearest 1 g. Sturgeon that remained alive were returned to the Hudson River estuary; dead fish were frozen and held for NYSDEC. All sturgeon and striped bass were examined for external and internal magnetic tags. Striped bass with external tags were measured and a scale sample was taken.

2.4.2 Laboratory Methods

All fish returned to the laboratory were measured for total length to the nearest 1.0 mm. Laboratory analysis was conducted in the same manner as described for samples collected during the FJS.

2.5 ANALYTICAL METHODS

2.5.1 Physical/Chemical Parameters

To display the spatial and temporal patterns of temperature, salinity, and dissolved oxygen, a mean of each parameter for each sampling location and sampling week, weighted by stratum volume, was calculated. Equation 1 was used to compute these means for the standard physical/chemical stations sampled in conjunction with the LRS and FJS. Equation 2 was used for data collected in conjunction with the BSS. Salinity data were computed from conductivity data (microsiemen/cm at 25°C) using Equation 3 (TI 1976). This equation differs from that used in some of the previous Year Class reports in that pressure data are not required. The maximum deviation between this equation and the previous equation is 0.1 percent (TI 1976).

$$W_{lw} = \sum_{k=1}^{n_{lw}} P_{kr} \left[\frac{1}{n_{klw}} \sum_{d=1}^{n_{klw}} \left(\frac{1}{n_{dklw}} \sum_{i=1}^{n_{dklw}} W_{idklw} \right) \right] \quad (1)$$

where

W_{lw} = Weighted mean of a physical/chemical parameter at sampling location l during week w of the LRS and FJS.

W_{idklw} = Physical/chemical measurement for location i at depth d in stratum k at sampling location l during week w.

P_{kr} = Proportion of the river volume of region r containing sampling location l that is contained by stratum k (bottom and channel strata were combined for water quality analysis).

n_{dklw} = Number of sites at which measurements were made at depth d in stratum k at sampling location l during week w.

n_{klw} = Number of depths sampled in stratum k at sampling location l during week w.

n_{lw} = Number of strata sampled at sampling location l during week w.

$$W_{rw} = 1/n_{rw} \sum_{i=1}^{n_{rw}} W_{irw} \quad (2)$$

where

W_{rw} = Mean of a physical/chemical parameter at river mile r during biweek w of the BSS.

W_{irw} = Physical/chemical measurement for location i at river mile r during biweek w.

n_{rw} = Number of physical/chemical measurements taken at river mile r during biweek w.

$$\text{Salinity} = -100 \ln (1 - C_{25}/178.5) \quad (3)$$

where

C_{25} = Conductivity (millisiemen/cm at 25°C).

2.5.2 Spatiotemporal Distribution Indices

2.5.2.1 Density and Catch-Per-Unit-Effort Estimates

Estimates of population densities were made for the LRS and FJS. For the LRS and FJS, the number of fish (by species and life stage) captured in individual samples was first converted to density (no./m³ of water sampled) using Equation 4. The mean density and the standard error of the mean were calculated for each stratum, region, and sampling week using Equations 5 and 6. To obtain a mean density and standard error for each region during each sampling week, the stratum densities were weighted by the proportion of the regional river volume found in the stratum (Equations 7 and 8). If a stratum was not sampled, its volume was added to the volume of an adjacent stratum that was sampled. Stratum volume adjustments were made according to the following rules:

<u>If This Stratum Was Not Sampled</u>	<u>Its Volume Was Added To This Stratum</u>
Shoal Bottom Channel	Bottom Channel Bottom

$$D_{ikrw} = \frac{C_{ikrw}}{V_{ikrw}} \quad (4)$$

where

- D_{ikrw} = Density (for a life stage and species)/m³ for sample i in stratum k in region r during week w.
- C_{ikrw} = Number of fish caught in sample i in stratum k in region r during week w.
- V_{ikrw} = Volume sampled (m³) by sample i in stratum k in region r during week w.

$$D_{krw} = \frac{1}{n_{krw}} \sum_{i=1}^{n_{krw}} D_{ikrw} \quad (5)$$

where

- D_{krw} = Average density in stratum k in region r during week w.
- D_{ikrw} = Sample density calculated in Equation 4.
- n_{krw} = Number of samples taken in stratum k in region r during week w.

$$SE(D_{krw}) = \sqrt{\frac{\sum_{i=1}^{n_{krw}} (D_{ikrw} - D_{krw})^2}{(n_{krw})(n_{krw} - 1)}} \quad (6)$$

where

$SE(D_{krw})$ = Standard error of the average density in stratum k in region r during week w.

D_{ikrw} = Sample density calculated in Equation 4.

D_{krw} = Average stratum density calculated in Equation 5.

$$D_{rw} = \sum_{k=1}^{n_{rw}} (D_{krw})(P_k) \quad (7)$$

where

D_{rw} = Average density in region r during week w.

D_{krw} = Average stratum density calculated in Equation 5.

P_k^* = Proportion of the regional river volume found in stratum k ([Table 2-11](#)).

n_{rw} = Number of strata sampled in region r during week w.

$$SE(D_{rw}) = \sqrt{\sum_{k=1}^{n_{rw}} [SE(D_{krw})^2 (P_k)^2]} \quad (8)$$

where

$SE(D_{rw})$ = Standard error of average density in region r during week w.

$SE(D_{krw})$ = Standard error of the average stratum density calculated in Equation 6.

Catches from the BSS were reported as number caught per seine haul (catch-per-unit-effort [CPUE]) by life stage and species. The average CPUE for a region and its standard error were calculated using Equations 9 and 10:

* When a stratum is missing, P_k for the sampled stratum is equal to the sum of the P_k for the sampled stratum and the P_k for the unsampled stratum.

$$C_{rw} = \frac{1}{n_{rw}} \sum_{i=1}^{n_{rw}} C_{irw} \quad (9)$$

where

- C_{rw} = Average CPUE in region r during week w.
- C_{irw} = CPUE for sample i in region r during week w.
- n_{rw} = Number of samples taken in region r during week w.

$$SE(C_{rw}) = \frac{\sum_{i=1}^{n_{rw}} (C_{irw} - C_{rw})^2}{n_{rw}(n_{rw} - 1)} \quad (10)$$

where

- $SE(C_{rw})$ = Standard error of average CPUE in region r during week w.
- C_{rw} = Average regional CPUE calculated in Equation 9.

2.5.2.2 Standing Crop Estimates

An index of standing crop (the number of fish in an area at a particular time) was estimated by life stage and species for each of the three surveys. Standing crop indices and the associated standard errors were calculated for each stratum in a region by taking the product of the average stratum density (or the standard error) and the volume of water contained in that stratum (Equations 11 and 12 for the LRS and FJS) ([Table 2-11](#)). The regional standing crop index was then estimated as the sum of the stratum index values (Equations 13 and 14). Similarly, an estimate of the standing crop index for the Hudson River estuary for each week was calculated by summing the standing crops for the 13 (12 for the BSS) river regions (Equations 15 and 16). This value is an index rather than an absolute standing crop value because no adjustment was applied for collection efficiency.

$$SC_{krw} = (V_{kr})(D_{krw}) \quad (11)$$

where

- SC_{krw} = Standing crop index for stratum k in region r during week w.
- V_{kr} = River volume contained by stratum k in region r.
- D_{krw} = Average stratum density calculated in Equation 5.

$$SE(SC_{krw}) = (V_{kr})[SE(D_{krw})] \quad (12)$$

where

$SE(SC_{krw})$ = Standard error of the standing crop index for stratum k in region r during week w.

$SE(D_{krw})$ = Standard error of average stratum density calculated in Equation 6.

$$SC_{rw}^{**} = \sum_{k=1}^3 SC_{krw} \quad (13)$$

where

SC_{rw} = Standing crop index for region r during week w.

SC_{krw} = Stratum standing crop index calculated in Equation 11.

$$SE(SC)_{rw}^{**} = \sqrt{\sum_{k=1}^3 [SE(SC_{krw})]^2} \quad (14)$$

where

$SE(SC_{rw})$ = Standard error of standing crop index for region r during week w.

$SE(SC_{krw})$ = Standard error of stratum standing crop index calculated in Equation 12.

$$SC_w = \sum_{r=1}^{12} SC_{rw} \quad (15)$$

where

SC_w = Standing crop index for week w. For the LRS and FJS, regional standing crop indices include the Battery Region (r=0).

** Volumes of unsampled strata were added to the volumes of an adjacent stratum according to the rules for stratum volumes in Section 2.5.2.

SC_{rw} = Regional standing crop index calculated in Equations 13 or 17.

$$SE(SC_w) = \sqrt{\sum_{r=1}^{12} [SE(SC_{rw})]^2} \quad (16)$$

where

$SE(SC_w)$ = Standard error of standing crop index for week w. For the LRS and FJS, regional standing crop indices include the Battery Region ($r=0$).

$SE(SC_{rw})$ = Standard error of regional standing crop index calculated in Equations 14 or 18.

An index of regional standing crop (and standard error) for the BSS was obtained by multiplying CPUE and the surface area of the shorezone and dividing by the empirically derived estimate of the area sampled by the 30.5-m beach seine (Equations 17 and 18). The weekly index of standing crop for the shorezone was calculated as the sum of the 12 regional standing crops (Equations 15 and 16).

$$SC_{rw} = (C_{rw} A_r) / A \quad (17)$$

where

SC_{rw} = Standing crop index for the shorezone in region r during week w.

C_{rw} = Average regional CPUE calculated in Equation 9.

A_r = Surface area (m^2) of the shorezone in region r.

A = Surface area (m^2) sampled by the beach seine ($450 m^2$) (TI 1981).

$$SE(SC_{rw}) = \frac{[SE(C_{rw})] (A_r)}{A} \quad (18)$$

where

$SE(SC_{rw})$ = Standard error of standing crop index for the shorezone in region r during week w.

$SE(C_{rw})$ = Standard error of average regional CPUE calculated in Equation 10.

2.5.2.3 Temporal and Geographic Distribution Indices

Distribution indices were computed to facilitate presentation of changes in distribution of selected species and life stages through time and space. To allow comparisons of 2010 data

with historical data, only data from samples collected from Weeks 18 to 26 (where Week 1 begins with the first Monday in January) were used for LRS (except for bay anchovy which used Weeks 18-40); data from Weeks 33 to 40 were used for the FJS and BSS. In all cases, data were used only when Regions 1-12 were sampled (except for bay anchovy which included Region 0).

The LRS was used for calculating the temporal and geographic indices for early life stages of striped bass, white perch, Atlantic tomcod, bay anchovy, American shad, *Alosa* spp., and rainbow smelt. The FJS was used to calculate geographical distribution indices for hogchoker, white catfish, and weakfish. The BSS was used to calculate geographical distribution indices for striped bass, white perch, bay anchovy, American shad, alewife, blueback herring, gizzard shad, spottail shiner, and bluefish.

The periods used for the LRS and BSS spanned 1974-2010, whereas the time period for the FJS extended from 1979 (when the FJS sampled the river from RM 12 to RM 152) through 2010. Temporal and geographic indices for bay anchovy from the LRS used the period from 1988 to 2010, when the sampling design included the Battery region.

A geographic index that collapses data over weeks was calculated for LRS, FJS, and BSS data as the relative standing crop in each region. This geographic index was calculated as follows:

$$G_{ry} = \frac{\sum_{w=1}^{n_y} SC_{rwy}}{\sum_{r=1}^{12} \sum_{w=1}^{n_y} SC_{rwy}} \quad (19)$$

where

G_{ry} = Geographic index for region r in year y .

SC_{rwy} = Regional standing crop index for region r in week w in year y calculated in Equations 13 or 17.

n_y = Number of weeks sampled in year y .

A temporal index that collapses data for the entire Hudson River estuary was computed for early life stages from LRS standing crop indices (Equation 20):

$$T_{wy} = \frac{SC_{wy}}{\sum_{w=1}^{n_y} SC_{wy}} \quad (20)$$

where

T_{wy} = Temporal index for week w in year y .

SC_{wy} = Weekly standing crop index in year y calculated in Equation 15.

n_y = Number of weeks sampled in year y.

[Link to Chapter 3](#)

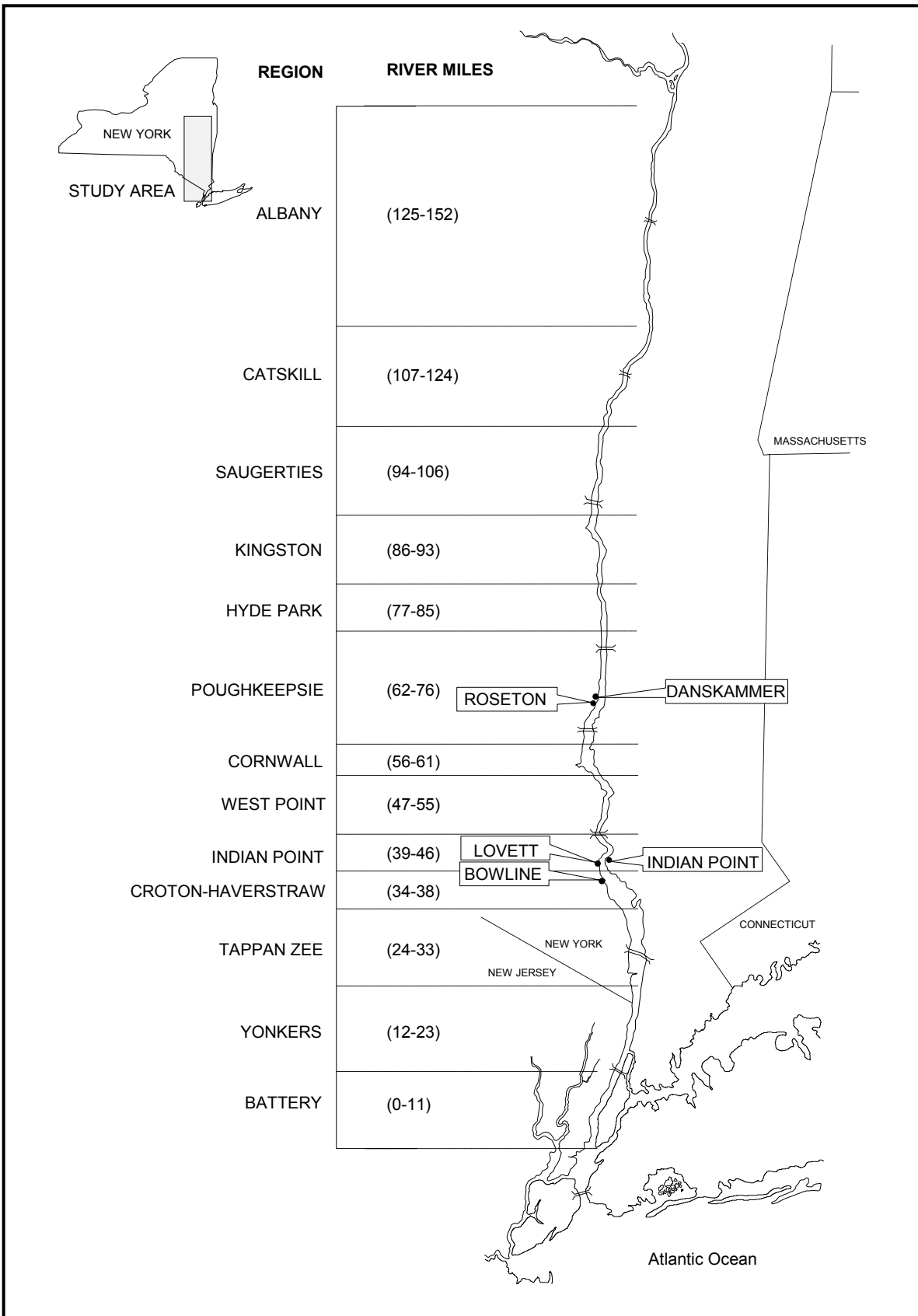


Figure 2-1. Location of 13 geographic regions (with river mile boundaries) sampled during the 2010 biological monitoring program in the Hudson River estuary.

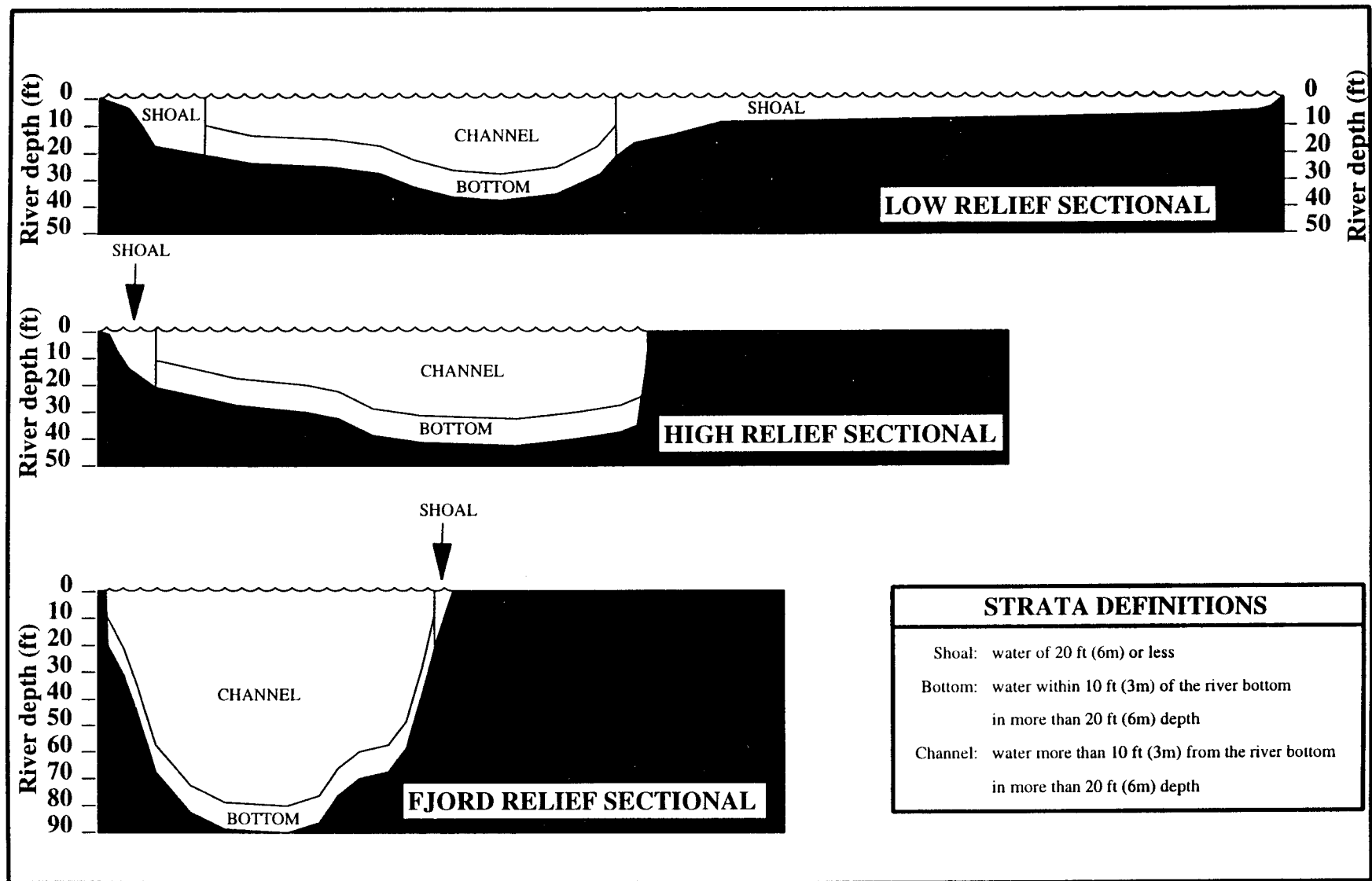


Figure 2-2. Cross sections of the Hudson River estuary showing locations and typical proportional relationships of the shoal, bottom, and channel strata.

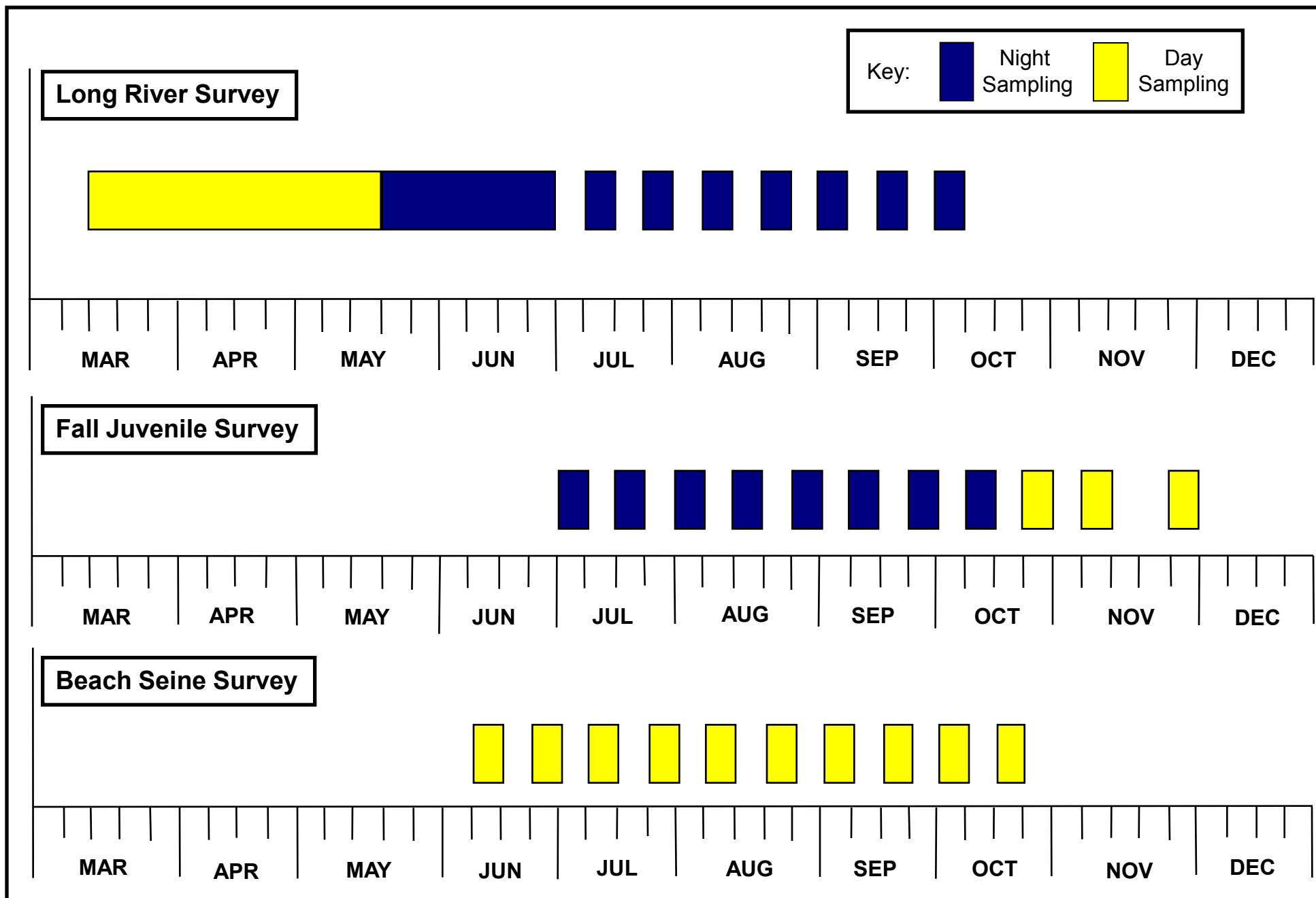


Figure 2-3. Completed sampling schedule for 2010.

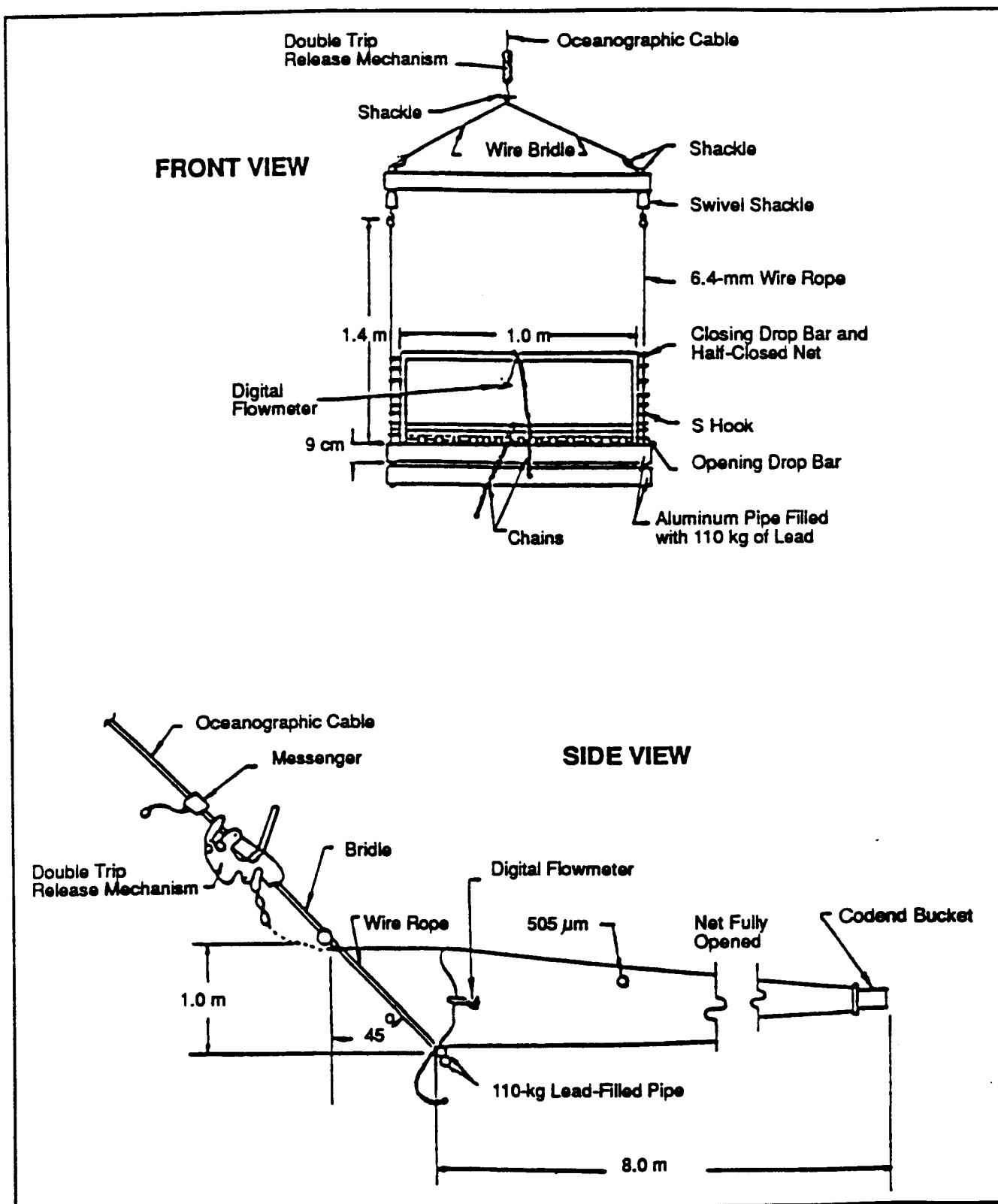


Figure 2-4. Design and dimensions of 1.0-m² Tucker trawl.

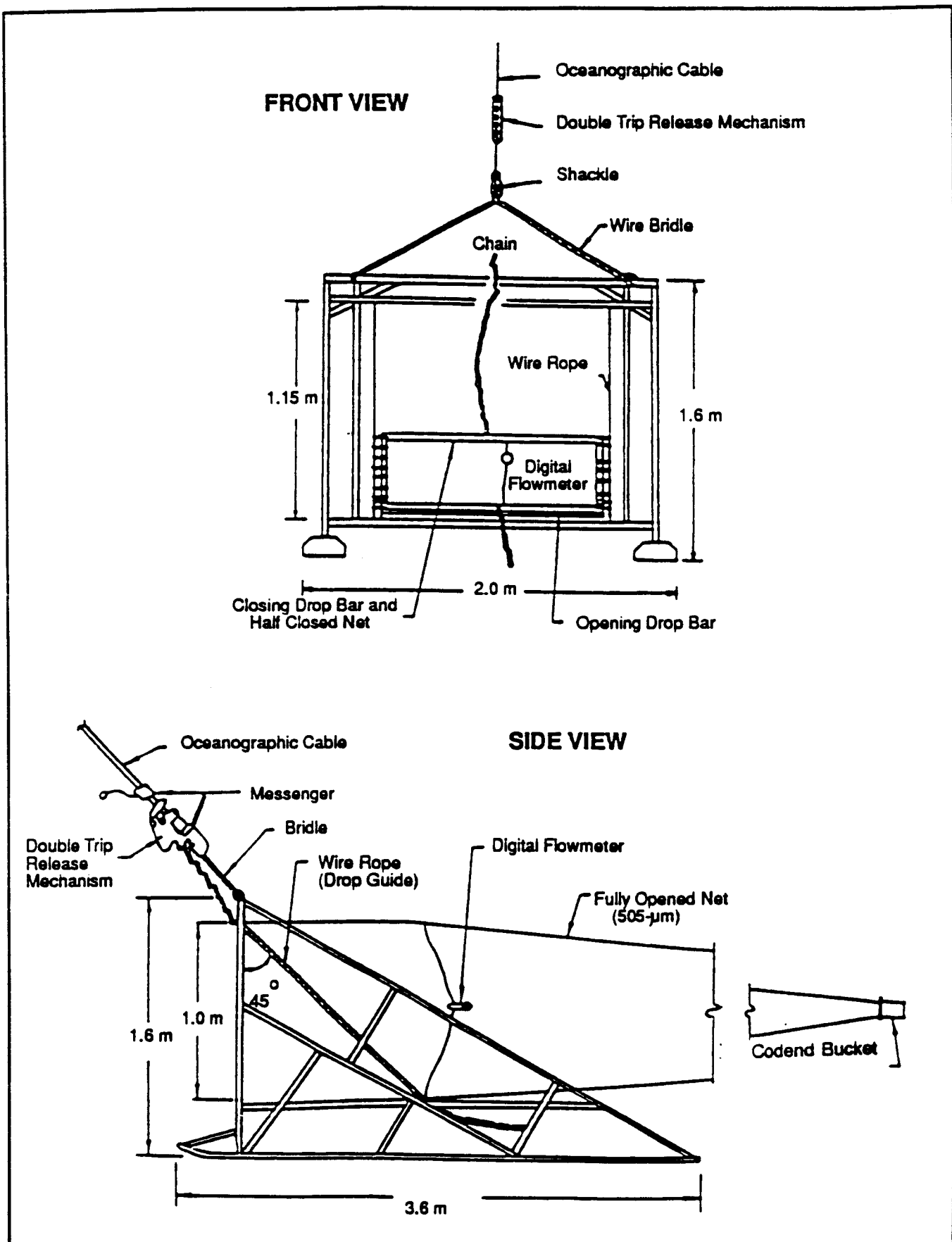


Figure 2-5. Design and dimensions of 1.0-m² Tucker trawl mounted on an epibenthic sled.

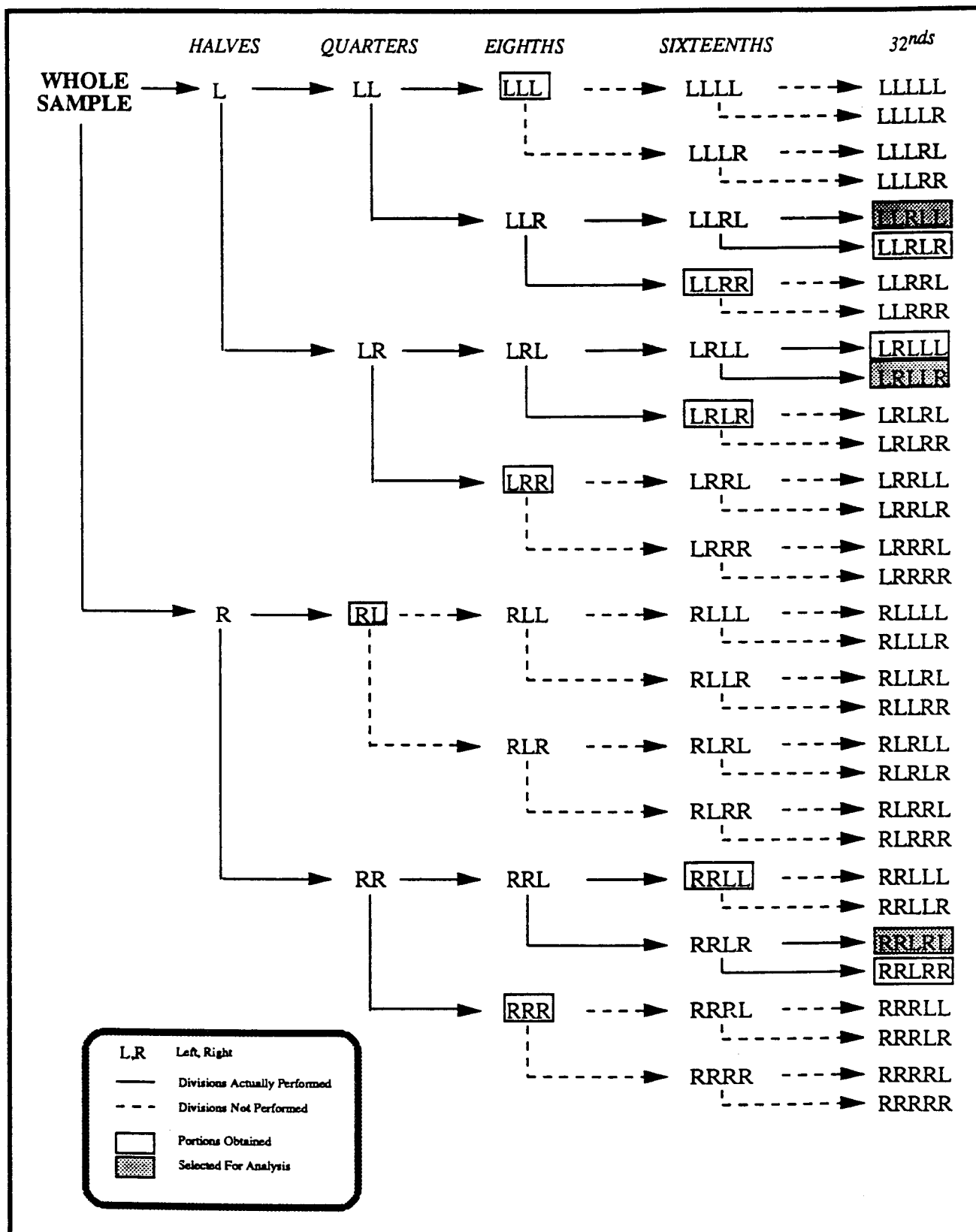


Figure 2-6. Conceptual diagram of the splitting process.

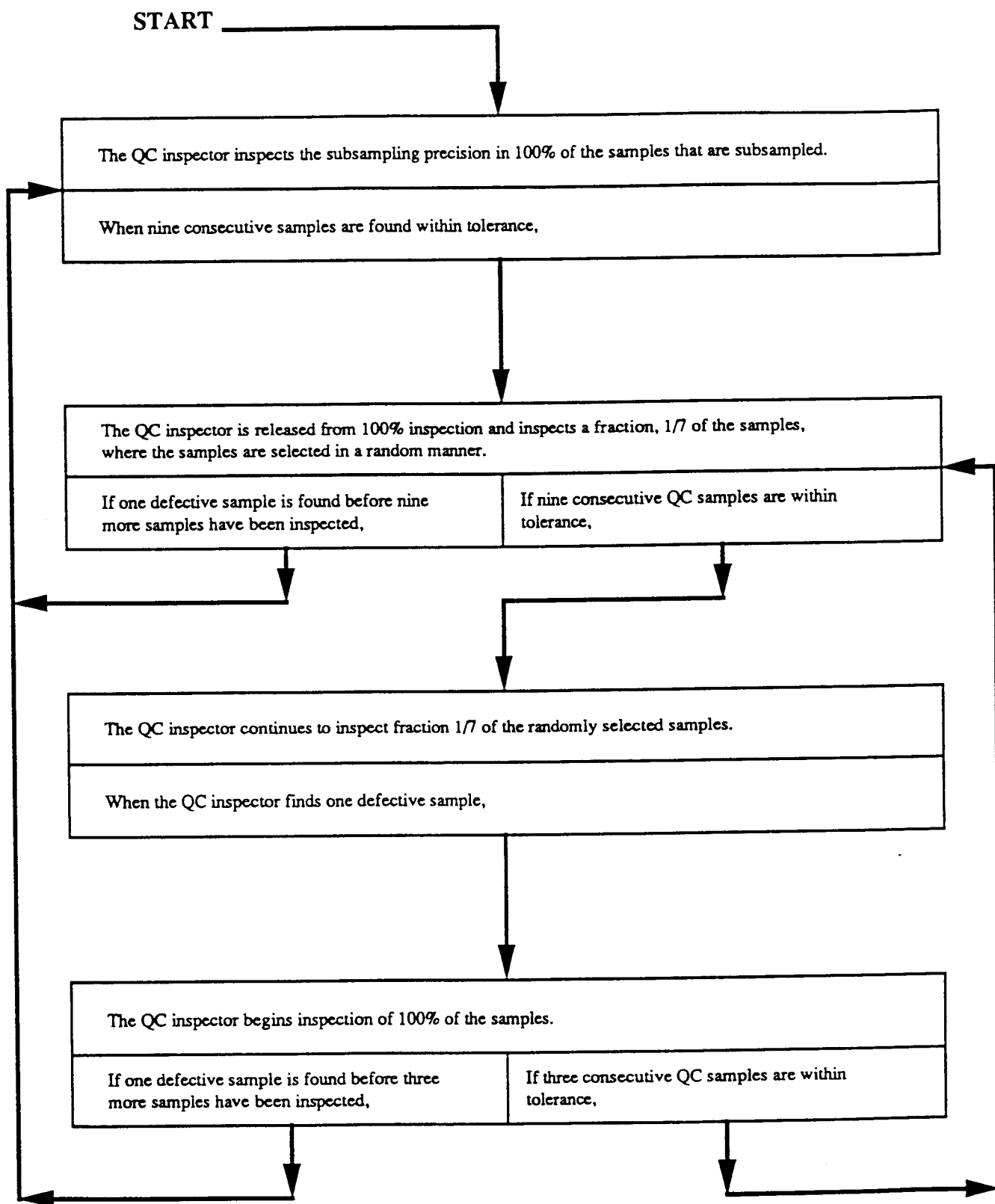


Figure 2-7. Inspection plan for evaluation of splitting precision.

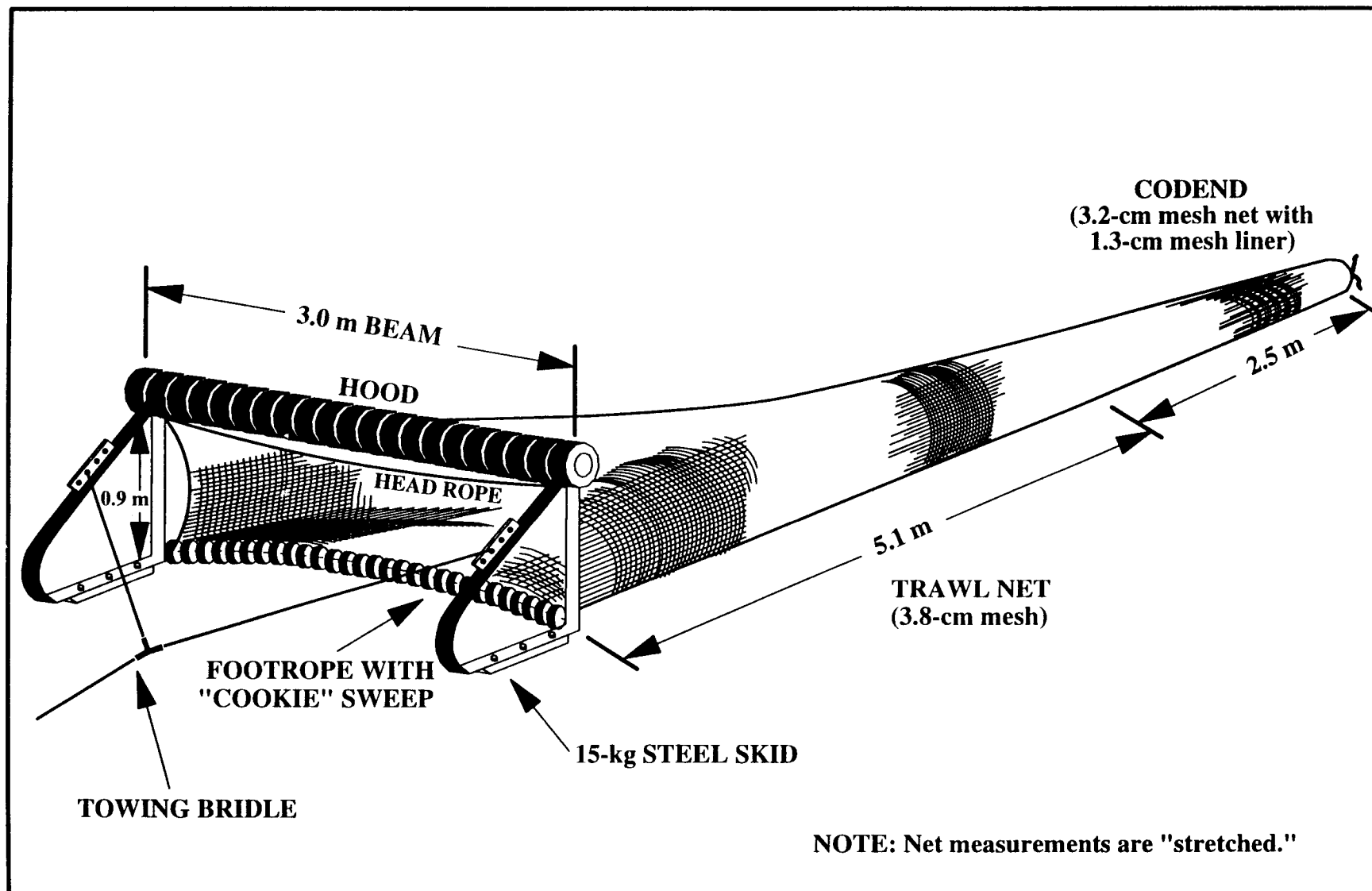


Figure 2-8. Design and dimensions of the 3.0-m beam trawl.

Table 2-1 Strata Sampled within the 13 Geographic Regions of the Hudson River Estuary During 2010

<u>Region</u>	<u>Abbreviation</u>	<u>River Miles</u>	<u>River Kilometers</u>	<u>2010 Surveys</u>			
				<u>Shore</u>	<u>Shoal</u>	<u>Channel</u>	<u>Bottom</u>
Battery	BT	1-11	1-19	--	--	X	X
Yonkers	YK	12-23	19-39	X	X	X	X
Tappan Zee	TZ	24-33	39-55	X	X	X	X
Croton-Haverstraw	CH	34-38	55-63	X	X	X	X
Indian Point	IP	39-46	63-76	X	X	X	X
West Point	WP	47-55	76-90	X	--	X	X
Cornwall	CW	56-61	90-100	X	X	X	X
Poughkeepsie	PK	62-76	100-124	X	--	X	X
Hyde Park	HP	77-85	124-138	X	--	X	X
Kingston	KG	86-93	138-151	X	--	X	X
Saugerties	SG	94-106	151-172	X	--	X	X
Catskill	CS	107-124	172-201	X	--	X	X
Albany	AL	125-152	201-246	X	--	X	X

NOTE: Dashes (--) indicate no sampling scheduled.

Table 2-2 Summary of 2010 Hudson River Surveys

<u>Program Phase</u>	<u>Sampling Schedule</u>		<u>Number of River Runs</u>	<u>Sampling Frequency</u>	<u>Strata Sampled</u>	<u>Sample Number Collection</u>		<u>Lab Analysis</u>	<u>Sampling Gear</u>
	<u>Start Week</u>	<u>End Week</u>				<u>Projected</u>	<u>Actual</u>		
Longitudinal River Ichthyoplankton Survey	15 MAR	10 OCT	23	Weekly/ Biweekly	Shoal	588	587	555	1.0-m ² net on epibenthic sled, or 1.0-m ² Tucker trawl
					Channel	1,545	1,544	957	1.0-m ² Tucker trawl
					Bottom	1,389	1,388	928	1.0-m ² net on epibenthic sled
Fall Juvenile Survey	5 JUL	5 DEC	11	Biweekly	Shoal	427	427		3.0-m beam trawl, or 1.0-m ² Tucker trawl
					Channel	648	648		1.0-m ² Tucker trawl
					Bottom	1,055	1,055		3.0-m beam trawl
Beach Seine Survey	14 JUN	24 OCT	10	Biweekly	Shore	1,000	1,000		30.5-m beach seine

Table 2-3 Summary of 2010 Sample Collection Information by River Region and Stratum for the Longitudinal River Ichthyoplankton Survey

Region	3-Week Period from 15 MAR to 4 APR					3-Week Period from 5 APR to 25 APR					3-Week Period from 26 APR to 16 MAY				
	Shoal		Bottom	Channel		Shoal		Bottom	Channel		Shoal		Bottom	Channel	
	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total
Battery	--	--	15	15	30	--	--	24	18	42	--	--	18	18	36
Yonkers	6	6	18	18	48	6	6	21	15	48	6	6	21	15	48
Tappan Zee	9	6	18	18	51	18	12	12	12	54	18	12	12	12	54
Croton-Haverstraw	9	6	18	18	51	12	9	12	12	45	12	9	12	12	45
Indian Point	6	6	18	18	48	6	6	12	12	36	6	6	18	30	60
West Point	--	--	15	15	30	--	--	15	15	30	--	--	18	45	63
Cornwall	6	6	12	12	36	9	6	9	9	33	9	6	24	15	54
Poughkeepsie	--	--	--	--	--	--	--	9	9	18	--	--	30	30	60
Hyde Park	--	--	--	--	--	--	--	9	21	30	--	--	27	33	60
Kingston	--	--	--	--	--	--	--	24	18	42	--	--	18	21	39
Saugerties	--	--	--	--	--	--	--	24	18	42	--	--	9	15	24
Catskill	--	--	--	--	--	--	--	48	21	69	--	--	9	15	24
Albany	--	--	--	--	--	--	--	60	30	90	--	--	15	15	30
Total	36	30	114	114	294	51	39	279	210	579	51	39	231	276	597

Region	3-Week Period from 17 MAY to 6 JUN					4-Week Period from 7 JUN to 4 JUL					13-Week Period from 12 JUL to 10 OCT				
	Shoal		Bottom	Channel		Shoal		Bottom	Channel		Shoal		Bottom	Channel	
	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total
Battery	--	--	24	12	36	--	--	24	16	40	--	--	42	42	84
Yonkers	6	3	18	12	39	8	8	24	28	68	14	14	42	28	98
Tappan Zee	12	6	12	12	42	8	8	20	20	56	21	21	28	28	98
Croton-Haverstraw	12	6	12	12	42	12	8	24	24	68	21	21	28	28	98
Indian Point	6	6	18	36	66	12	8	20	64	104	21	21	28	28	98
West Point	--	--	21	45	66	--	--	32	95	127	--	--	28	28	56
Cornwall	9	6	24	15	54	7	8	49	48	112	14	14	20	21	69
Poughkeepsie	--	--	36	54	90	--	--	28	60	88	--	--	20	21	41
Hyde Park	--	--	21	30	51	--	--	20	36	56	--	--	--	--	--
Kingston	--	--	12	18	30	--	--	16	24	40	--	--	--	--	--
Saugerties	--	--	15	9	24	--	--	16	8	24	--	--	--	--	--
Catskill	--	--	9	9	18	--	--	12	12	24	--	--	--	--	--
Albany	--	--	9	9	18	--	--	12	12	24	--	--	--	--	--
Total	45	27	231	273	576	47	40	297	447	831	91	91	236	224	642

NOTE: Dashes (--) indicate no sampling scheduled.

Table 2-4 Specifications of Sampling Gear Used During the 2010 Longitudinal River Ichthyoplankton Survey

1.0-m ² Tucker Trawl	
Length	8.0 m
Mouth (width)	1.0 m
Mouth (height)	1.4 m
Mesh size	500 µm
Net material	Nytex (monofilament nylon)
Collection cup	
Length	30 cm
Length with net-retaining ring	37 cm
Mesh size	500 µm
Net material	Nytex (monofilament nylon)
1.0-m ² Net Mounted on Epibenthic Sled	
Length	8.0 m
Mouth (width)	1.0 m
Mouth (height)	1.4 m
Mesh size	500 µm
Net material	Nytex (monofilament nylon)
Collection cup	
Length	30 cm
Length with net-retaining ring	37 cm
Mesh size	500 µm
Net material	Nytex (monofilament nylon)

Table 2-5 Water Quality Sampling Locations During the 2010 Longitudinal River Ichthyoplankton and Fall Juvenile Surveys

River Region	Scheduled Sampling Locations (RM)		Number of Water Quality Samples Scheduled Per Region Per River Run			
	Shoals ¹	Channel	LRS River Runs 1-3	LRS River Runs 4-16	LRS River Runs 17-23	FJS River Runs 1-11
Battery	--	1, 3, 6, 9	12	12	12	12
Yonkers	19	12, 14, 17, 19, 22	19	19	19	19
Tappan Zee	29	25, 27, 29, 32	16	16	16	16
Croton-Haverstraw	36	35, 36, 37, 38	16	16	16	16
Indian Point	43	40, 42, 43, 46	16	16	16	16
West Point	--	49, 51, 53, 55	12	12	12	12
Cornwall	59	56, 57, 59, 61	16	16	16	16
Poughkeepsie	--	63, 67, 71, 75	--	12	12	12
Hyde Park	--	78, 80, 82, 84	--	12	--	12
Kingston	--	87, 89, 91, 93	--	12	--	12
Saugerties	--	96, 99, 102, 105	--	12	--	12
Catskill	--	109, 114, 118, 122	--	12	--	12
Albany	--	126, 131, 135, 138, 142	--	15	--	15
Total per River Run			107	182	119	182

NOTE: Dashes (--) indicate no sampling scheduled.

¹ Sample collected from east and west shoals at designated river mile.

Table 2-6 Summary of 2010 Sample Analysis Information by River Region and Stratum for the Longitudinal River Ichthyoplankton Survey

Region	3-Week Period from 15 MAR to 4 APR					3-Week Period from 5 APR to 25 APR					3-Week Period from 26 APR to 16 MAY				
	Shoal		Bottom	Channel		Shoal		Bottom	Channel		Shoal		Bottom	Channel	
	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total
Battery	--	--	15	15	30	--	--	12	9	21	--	--	9	9	18
Yonkers	6	6	9	9	30	6	6	12	15	39	6	6	12	15	39
Tappan Zee	9	6	9	9	33	9	12	12	12	45	9	12	12	12	45
Croton-Haverstraw	9	6	9	9	33	12	9	12	12	45	12	9	12	12	45
Indian Point	6	6	9	9	30	6	6	12	12	36	6	6	9	15	36
West Point	--	--	15	15	30	--	--	15	15	30	--	--	9	9	18
Cornwall	6	6	12	12	36	9	6	9	9	33	9	6	12	15	42
Poughkeepsie	--	--	--	--	--	--	--	9	9	18	--	--	15	15	30
Hyde Park	--	--	--	--	--	--	--	9	12	21	--	--	15	18	33
Kingston	--	--	--	--	--	--	--	12	9	21	--	--	9	12	21
Saugerties	--	--	--	--	--	--	--	12	9	21	--	--	9	15	24
Catskill	--	--	--	--	--	--	--	9	12	21	--	--	9	15	24
Albany	--	--	--	--	--	--	--	12	15	27	--	--	15	15	30
Total	36	30	78	78	222	42	39	147	150	378	42	39	147	177	405

Region	3-Week Period from 17 MAY to 6 JUN					4-Week Period from 7 JUN to 4 JUL					13-Week Period from 12 JUL to 10 OCT				
	Shoal		Bottom	Channel		Shoal		Bottom	Channel		Shoal		Bottom	Channel	
	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total	Sled	Trawl	Sled	Trawl	Total
Battery	--	--	12	12	24	--	--	12	16	28	--	--	21	21	42
Yonkers	6	3	9	12	30	8	8	12	16	44	14	14	21	28	77
Tappan Zee	12	6	12	12	42	8	8	20	20	56	14	21	28	28	91
Croton-Haverstraw	12	6	12	12	42	12	8	12	12	44	21	21	28	28	98
Indian Point	6	6	9	18	39	12	8	20	12	52	14	21	28	28	91
West Point	--	--	12	9	21	--	--	16	20	36	--	--	28	28	56
Cornwall	9	6	12	15	42	7	8	25	24	64	14	14	20	21	69
Poughkeepsie	--	--	18	12	30	--	--	16	12	28	--	--	20	21	41
Hyde Park	--	--	12	15	27	--	--	20	20	40	--	--	--	--	--
Kingston	--	--	12	9	21	--	--	16	12	28	--	--	--	--	--
Saugerties	--	--	15	9	24	--	--	16	8	24	--	--	--	--	--
Catskill	--	--	9	9	18	--	--	12	12	24	--	--	--	--	--
Albany	--	--	9	9	18	--	--	12	12	24	--	--	--	--	--
Total	45	27	153	153	378	47	40	209	196	492	77	91	194	203	565

NOTE: Dashes (--) indicate no sampling scheduled.

Table 2-7 Summary of 2010 Sample Collection by River Region and Stratum for the Fall Juvenile Survey

Region	15-Week Period from 5 JUL to 17 OCT					6-Week Period from 25 OCT to 5 DEC				
	Shoal		Bottom	Channel		Shoal		Bottom	Channel	Total
	Beam	Tucker	Beam	Tucker	Total	Beam	Tucker	Beam	Tucker	
Battery	--	1	64	48	113	--	--	35	--	35
Yonkers	16	15	64	48	143	15	--	34	--	49
Tappan Zee	48	48	48	48	192	15	--	24	--	39
Croton-Haverstraw	40	40	48	48	176	15	--	18	--	33
Indian Point	32	32	56	55	175	15	--	30	--	45
West Point	--	--	80	98	178	--	--	35	--	35
Cornwall	40	40	48	48	176	15	--	31	--	46
Poughkeepsie	--	--	88	88	175	--	--	30	--	30
Hyde Park	--	--	64	48	112	--	--	30	--	30
Kingston	--	--	32	48	80	--	--	24	--	24
Saugerties	--	--	32	16	48	--	--	30	--	30
Catskill	--	--	24	24	48	--	--	30	--	30
Albany	--	--	32	31	64	--	--	24	--	24
Total	176	176	680	648	1680	75	--	375	--	450

NOTE: Dashes (--) indicate no sampling scheduled.

Table 2-8 Specifications of Sampling Gear Used During the 2010 Fall Juvenile Survey

1.0-m ² Tucker Trawl	
Length	8.0 m
Mouth (width)	1.0 m
Mesh size	3.0 mm
Collection cage (codend)	
Length	81 cm
Diameter	41 cm
Mesh size	3.0 mm
3.0-m Beam Trawl	
Length	7.6 m
Beam width	3.0 m
Net body	3.8-cm mesh (stretch)
Codend	3.2-cm mesh (stretch) net with 1.3-cm mesh (stretch) liner
Hood	3.8-cm mesh (stretch)
Footrope	Equipped with 5.1-cm rollers
Headrope	Equipped with three floats
Mouth area	2.7 m ²

Table 2-9 Specifications of Sampling Gear Used During the 2010 Beach Seine Survey

30.5-m Beach Seine	
Number of wings	2
Length of wings	12.0 m
Depth of wings	2.4 m
Wing mesh (bar)	1.0 cm
Length of bag	6.1 m
Depth of bag	3.0 m
Bag mesh (bar)	0.5 cm
Sampling area	450 m ²

Table 2-10 Summary of 2010 Sample Collection by River Region for the Beach Seine Survey

<u>Region</u>	<u>5-Week Period from 14 JUN to 18 JUL</u>	<u>13-Week Period from 26 JUL to 24 OCT</u>	<u>Total</u>
Yonkers	9	35	44
Tappan Zee	33	168	201
Croton-Haverstraw	21	98	119
Indian Point	9	35	44
West Point	9	35	44
Cornwall	9	42	51
Poughkeepsie	24	35	59
Hyde Park	24	35	59
Kingston	24	35	59
Saugerties	45	63	108
Catskill	57	70	127
Albany	36	49	85
Total	300	700	1000

Table 2-11 Stratum and Region Volumes (m³) and Surface Areas (m²) Used in Analysis of 2010 Hudson River Estuary Data

<u>Geographic Region</u>	<u>Channel Volume</u>	<u>Bottom Volume</u>	<u>Shoal Volume</u>	<u>Region Volume</u>	<u>Shorezone Surface Area</u>
Battery	141,809,822	48,455,129	18,747,833	209,012,784	(a)
Yonkers	143,452,543	59,312,978	26,654,767	229,420,288	3,389,000
Tappan Zee	138,000,768	62,125,705	121,684,992	321,811,465	20,446,000
Croton-Haverstraw	61,309,016	32,517,633	53,910,105	147,736,754	12,101,000
Indian Point	162,269,471	33,418,632	12,648,163	208,336,266	4,147,000
West Point	178,830,022	25,977,862	2,647,885	207,455,769	1,186,000
Cornwall	94,882,267	36,768,629	8,140,123	139,791,019	4,793,000
Poughkeepsie	228,975,052	63,168,132	5,990,260	298,133,444	3,193,000
Hyde Park	131,165,041	32,012,000	2,307,625	165,484,666	558,000
Kingston	93,657,021	35,479,990	12,332,868	141,469,879	3,874,000
Saugerties	113,143,296	42,845,077	20,307,338	176,295,711	7,900,000
Catskill	83,924,081	42,281,206	34,526,456	160,731,743	8,854,000
Albany	32,025,080	13,517,183	25,606,842	71,149,105	6,114,000
Total	1,603,443,480	527,880,156	345,505,257	2,476,828,893	76,555,000

a. Shorezone surface area is unknown and not used in data analysis as no beach seine sampling is performed in the Battery region.

CHAPTER 3

PHYSICAL/CHEMICAL PARAMETERS

This chapter provides graphs on the parameters of temperature, salinity, and dissolved oxygen as measured during the 2010 surveys. In addition, freshwater flow data obtained from the U.S. Geological Survey (USGS) for the Green Island Dam near Troy, New York, and daily water temperature data from Poughkeepsie's Water Treatment Facility and the near-by USGS gaging site are also graphed. Supporting tables are presented in [Appendix B](#).

3.1 GREEN ISLAND DAM FLOWS

During 2010, daily freshwater flow for Green Island, New York was estimated from discharge data provided by the USGS for the Hudson River above Lock 1, the Mohawk River at Cohoes, and the Mohawk River diversion at Crescent Dam. At the time of publication, the data from October through December 2010 were incomplete and provisional.

Links to Graphs	Figure	Supporting Appendix Table
Daily freshwater flow rates for 2010	3-1	B-1
Monthly freshwater flow rates for 2010	3-1	B-2
Monthly average freshwater flow rates for 1974 to 2010	3-1	B-3
Average annual freshwater flow for 1947 to 2010	3-2	B-4

3.2 HUDSON RIVER WATER TEMPERATURES NEAR POUGHKEEPSIE

Long-term (since 1951) daily temperature records are available from Poughkeepsie's Water Treatment Facility, located just north of the City of Poughkeepsie, New York, at RM 77. In addition, water temperature records dating back to 1993 are available from the USGS gaging site (#01372058) on the Hudson River 2.3 miles below Poughkeepsie, New York, at RM 72. Because of the consistency and verification of the USGS records, they were substituted for the Water Treatment Facility records beginning with 1993 and continuing to 2010. Temperature records from the Water Treatment Facility were retained for 1951 through 1992.

Links to Graphs	Figure	Supporting Appendix Table
Daily water temperatures for 2010	3-3	B-5
Average, minimum, and maximum temperatures for 1951 to 2009	3-3	B-5
Average annual water temperature for 1951 to 2010	3-4	B-6

3.3 HUDSON RIVER SURVEYS

In situ measurements of water temperature (°C), dissolved oxygen (mg/L), and specific conductance (microsiemen/cm at 25°C) were taken with calibrated meters at fixed river mile and strata stations in conjunction with biological sampling for the LRS and FJS. These three parameters were also measured with each sample of the BSS. Salinity data were computed from conductivity data as detailed in Chapter 2.

Links to Graphs	Figure	Supporting Appendix Table
Weekly temperatures for LRS/FJS for 2010	3-5	B-7
Weekly average, minimum, and maximum temperatures for LRS/FJS for 1974 to 2009	3-5	---
Average annual temperature for LRS/FJS for 1974 to 2010	3-5	B-8
Weekly temperatures for BSS for 2010	3-6	B-9
Weekly average, minimum, and maximum temperatures for BSS for 1974 to 2009	3-6	---
Average annual temperature for BSS for 1974 to 2010	3-6	B-10
Average weekly salinity for LRS/FJS for 2010	3-7	B-11
Weekly dissolved oxygen for LRS/FJS for 2010	3-8	B-13
Weekly average, minimum, and maximum dissolved oxygen for LRS/FJS for 1974 to 2009	3-8	---
Average annual dissolved oxygen for LRS/FJS for 1974 to 2010	3-8	B-14
Weekly dissolved oxygen for BSS for 2010	3-9	B-15
Weekly average, minimum, and maximum dissolved oxygen for BSS for 1974 to 2009	3-9	---
Average annual dissolved oxygen for BSS for 1974 to 2010	3-9	B-16

[Link to Chapter 4](#)

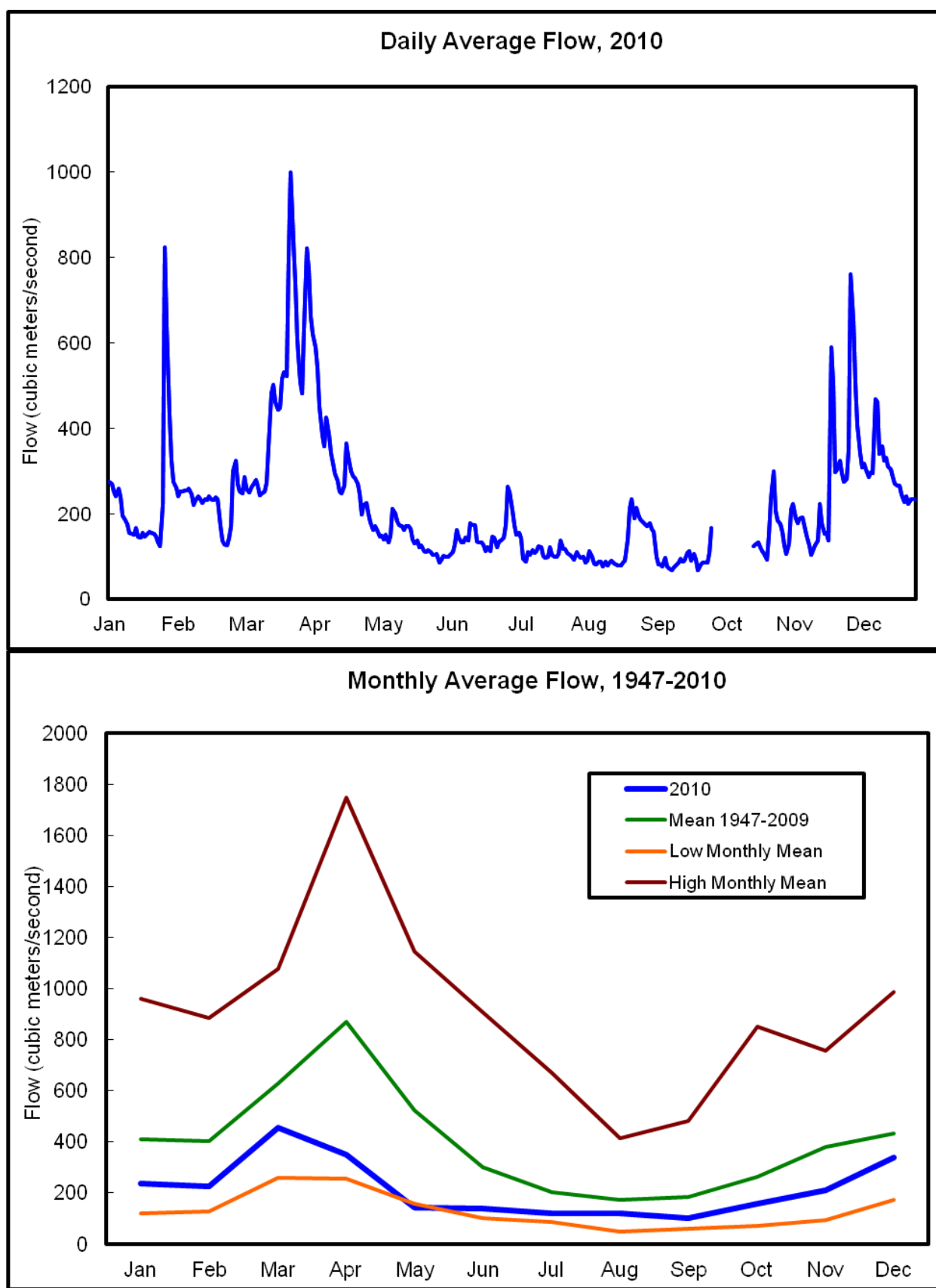


Figure 3-1. Hudson River daily average flow rate in 2010 and monthly average flow rates from 1947 to 2010, Green Island, New York. (Note: Data for October through December 2010 are incomplete and provisional.)

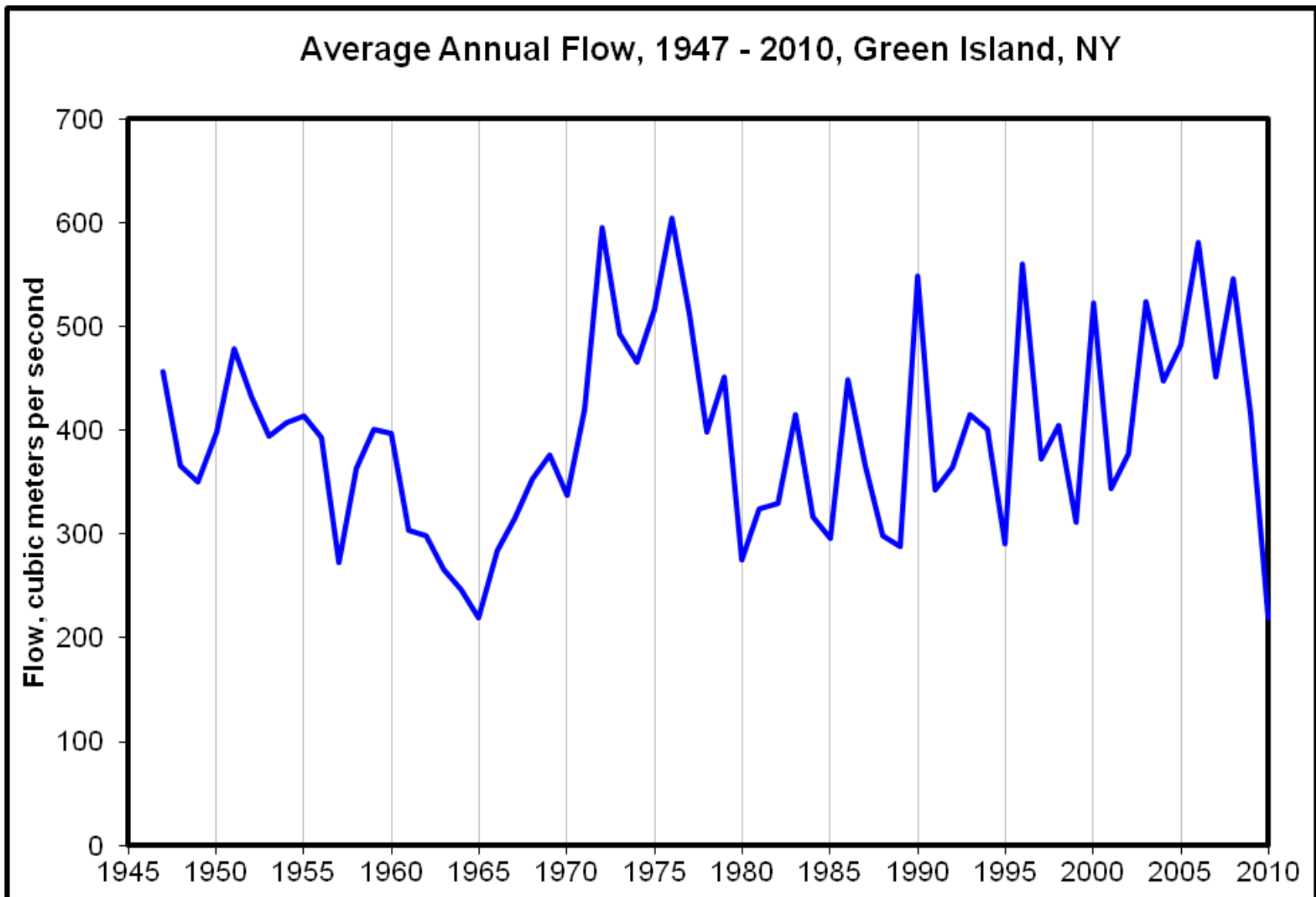


Figure 3-2. Average annual Hudson River flow from 1947 to 2010, Green Island, New York. (Note: Data for 2010 are incomplete and provisional.)

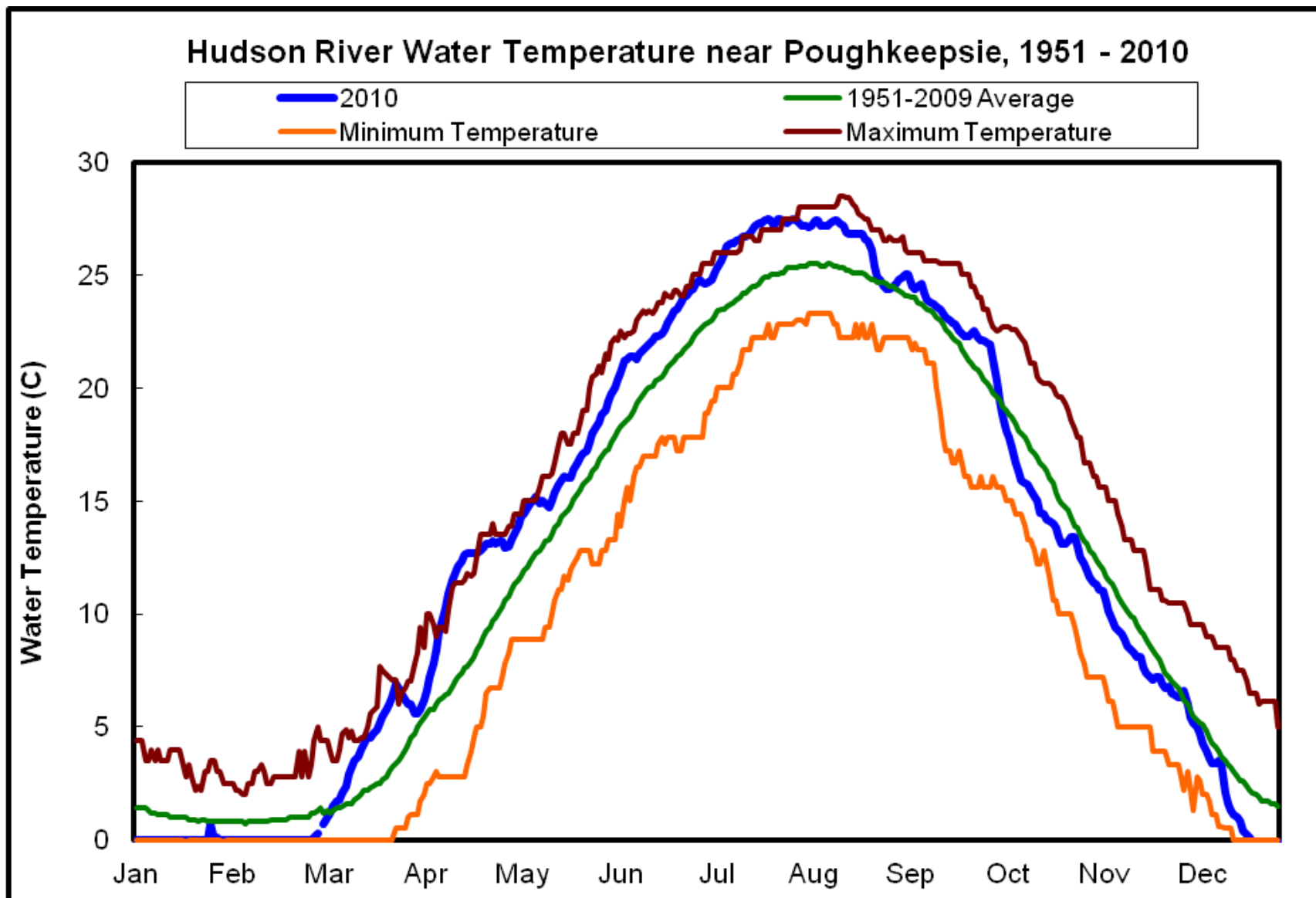


Figure 3-3. Seasonal variations in water temperature from 1951 to 2010 from Hudson River near Poughkeepsie. (Data from 1951 through 1992 from Poughkeepsie's Water Treatment Facility. Data from 1993 through 2010 from USGS gaging site 01372058 Hudson River below Poughkeepsie, NY.)

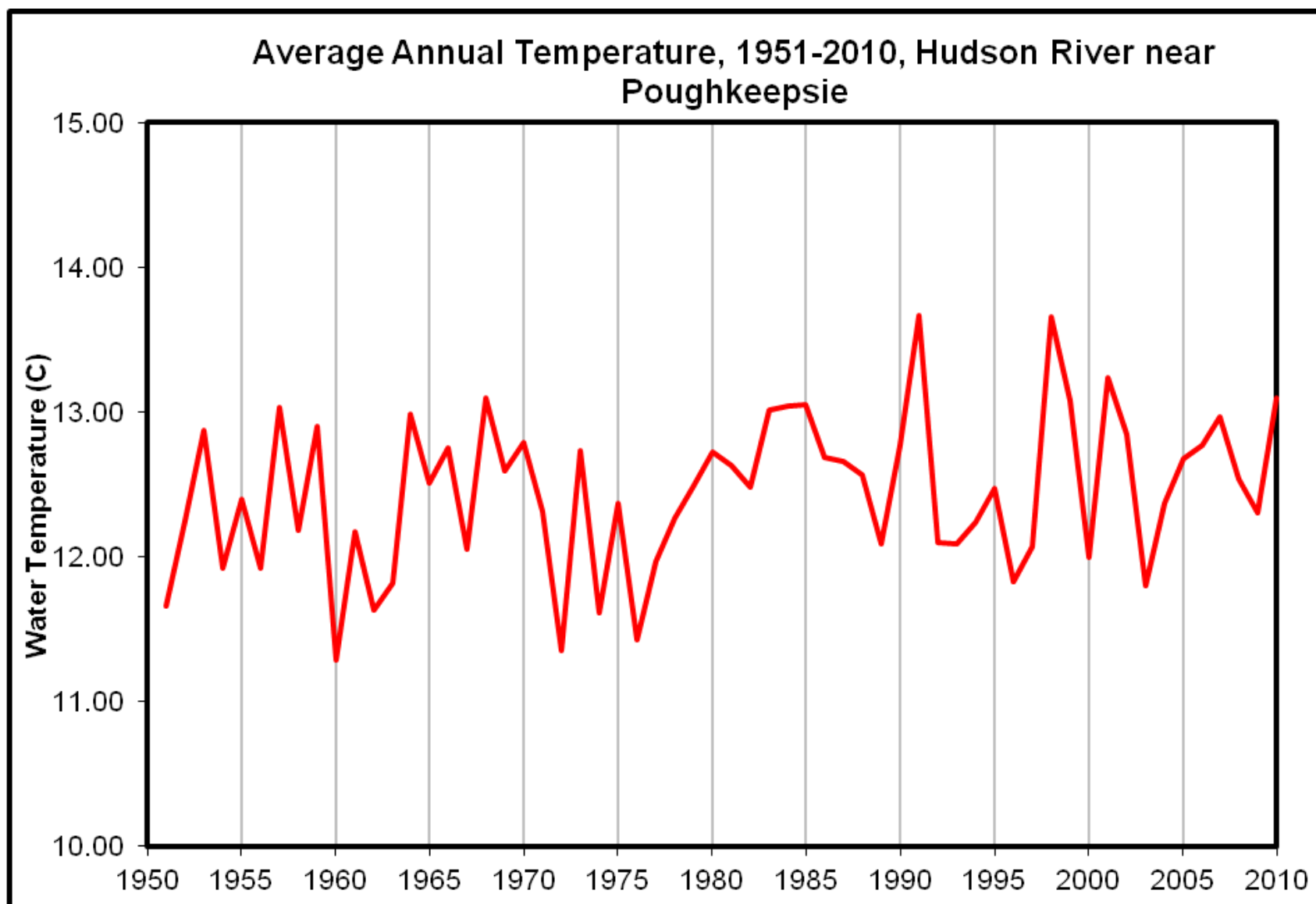


Figure 3-4. Average annual water temperature from 1951 to 2010 from Hudson River near Poughkeepsie. (Data from 1951 through 1992 from Poughkeepsie's Water Treatment Facility. Data from 1993 through 2010 from USGS gaging site 01372058 Hudson River below Poughkeepsie, NY.)

Long River/Fall Juvenile Survey

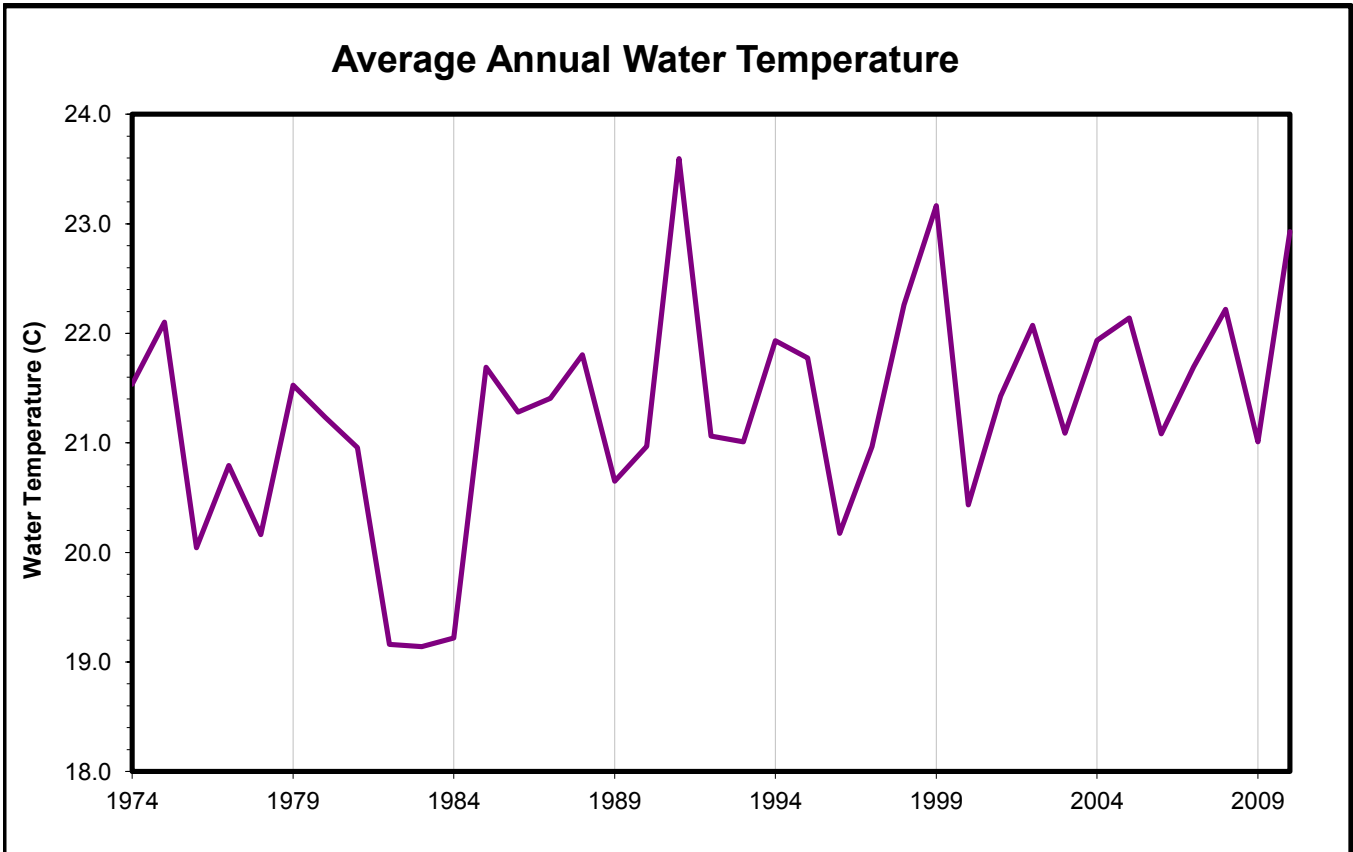
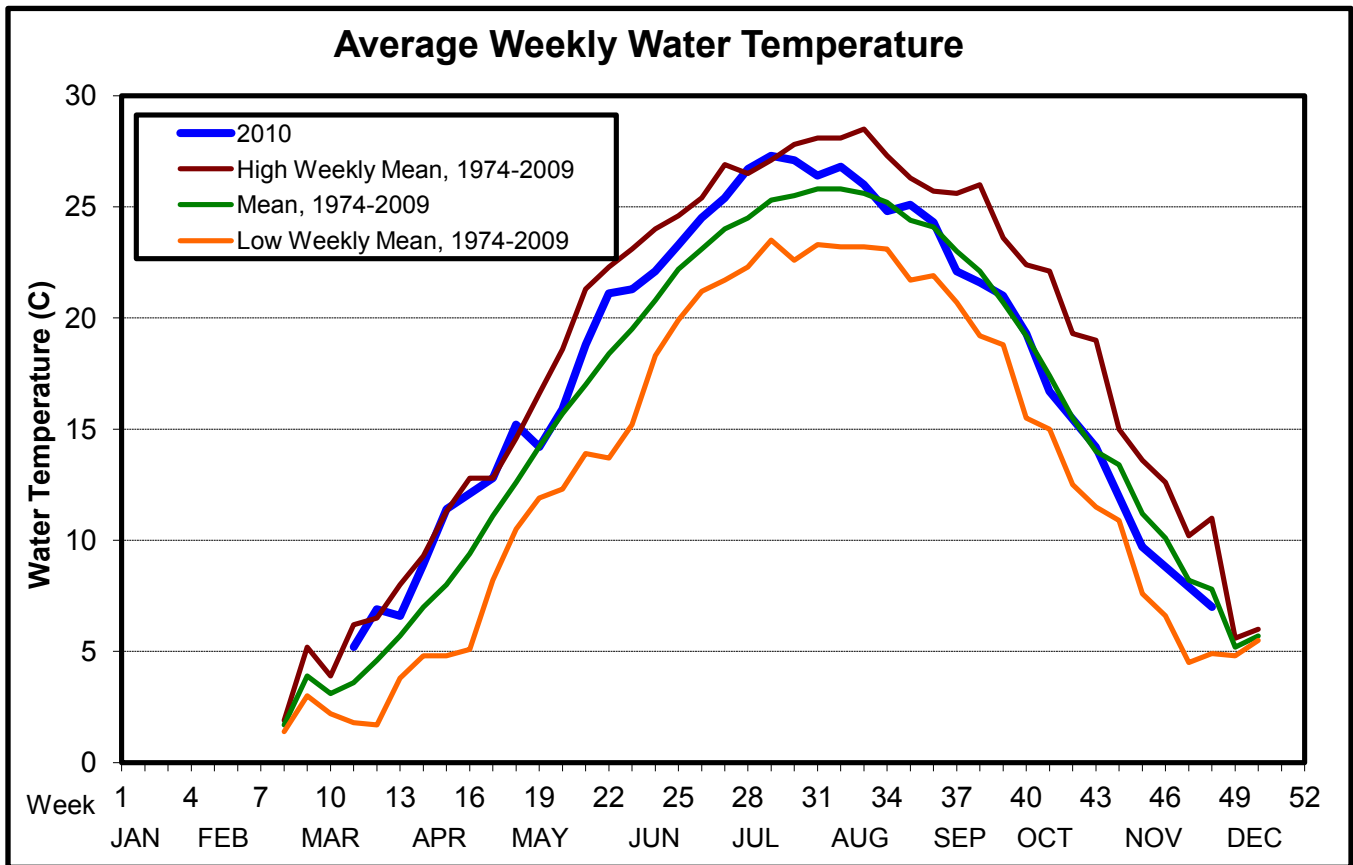


Figure 3-5. Seasonal and annual variations in water temperature from the Long River/Fall Juvenile surveys, 1974 - 2010.

Beach Seine Survey

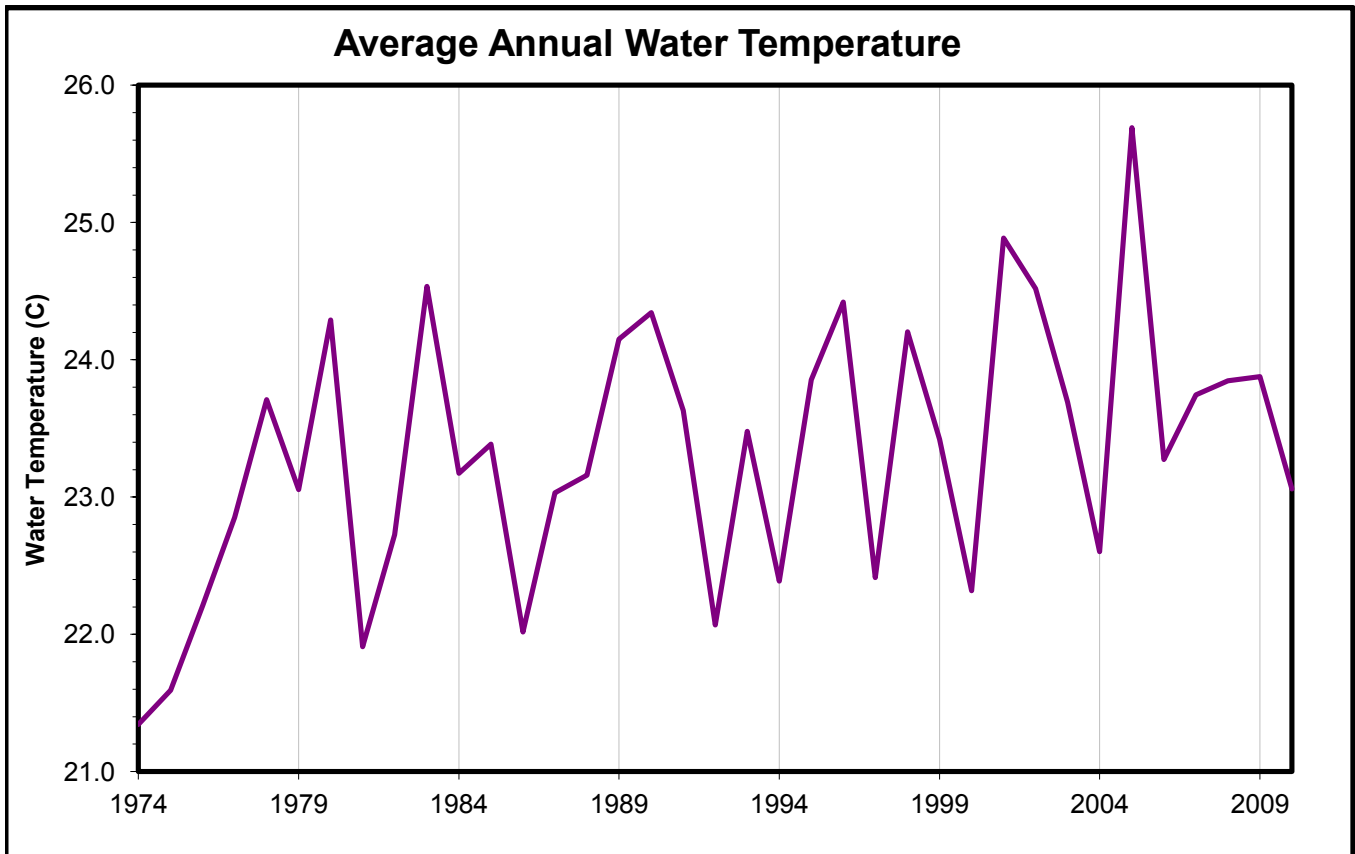
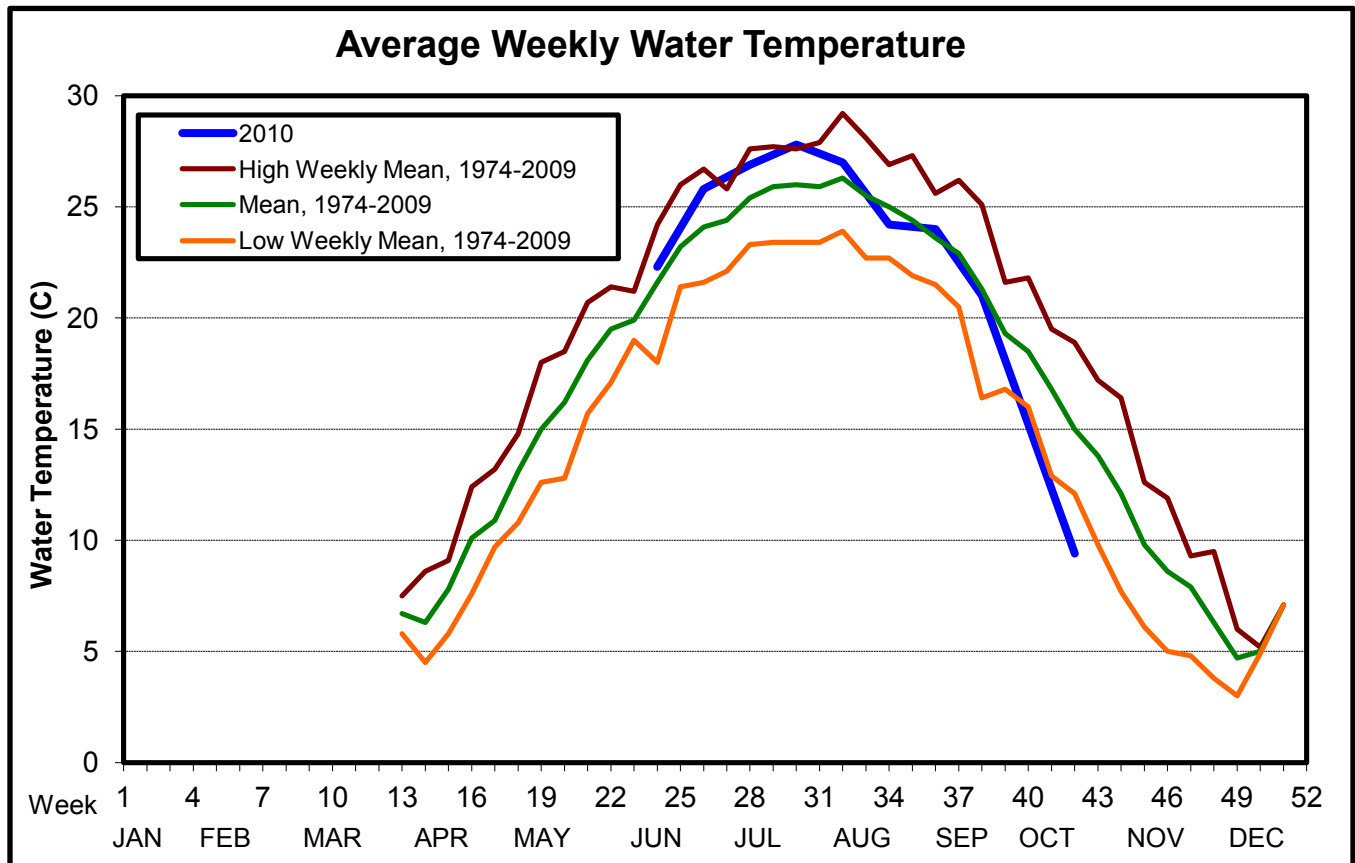


Figure 3-6. Seasonal and annual variations in water temperature from the Beach Seine surveys, 1974 - 2010.

Average Weekly Salinity 2010 Long River/Fall Juvenile Surveys

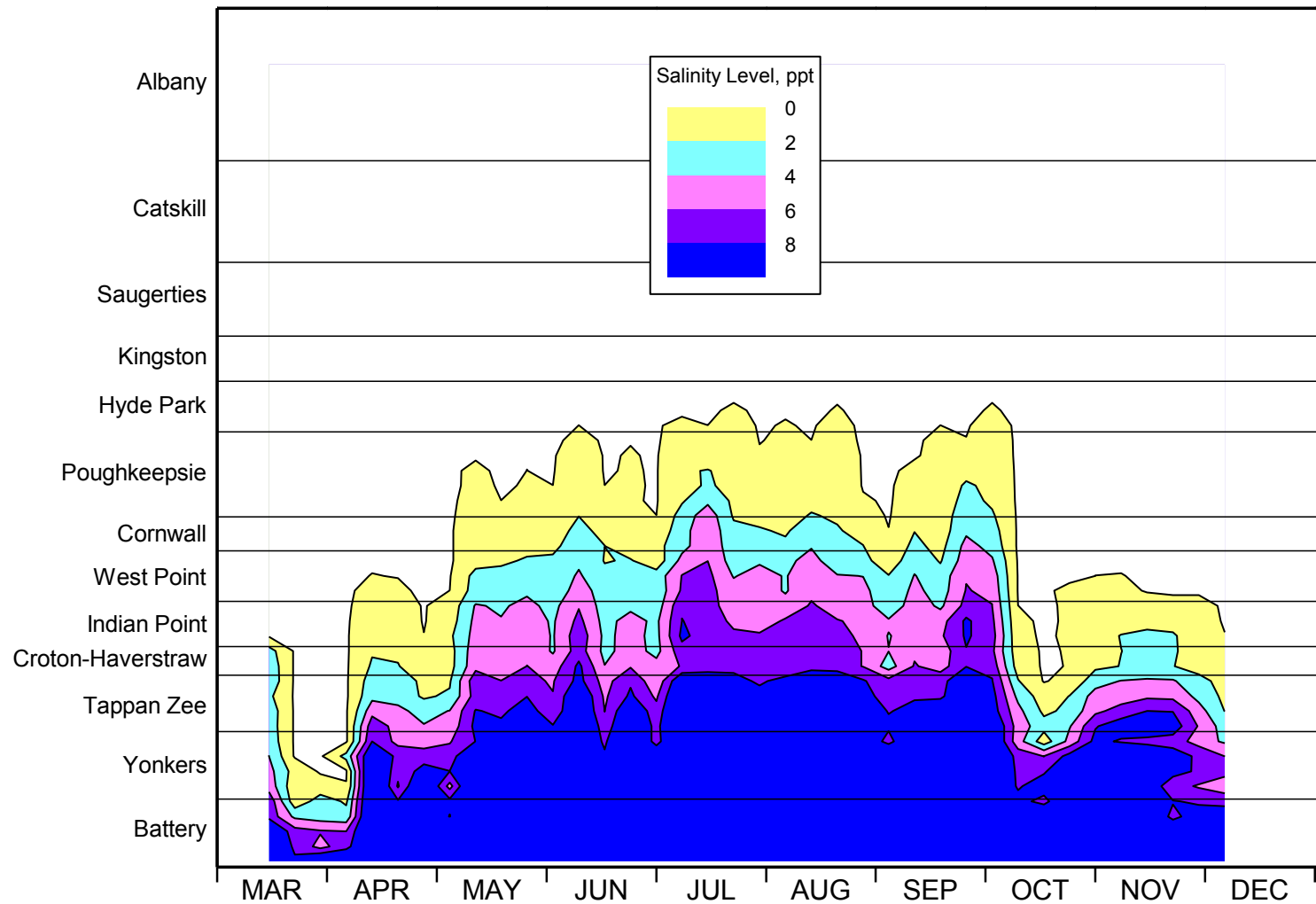


Figure 3-7. Seasonal variations in average weekly salinity from the 2010 Long River/Fall Juvenile surveys.

Long River/Fall Juvenile Survey

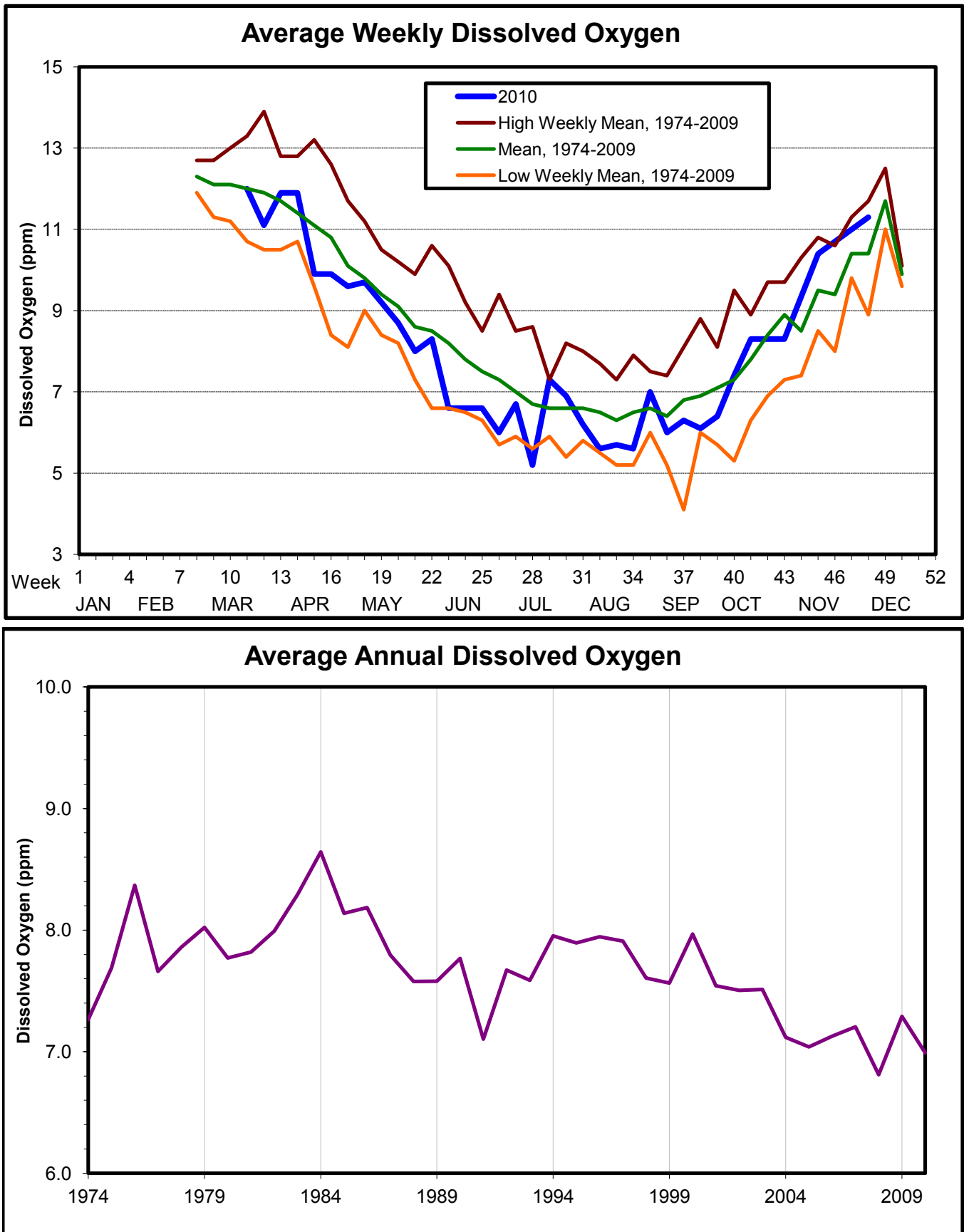


Figure 3-8. Seasonal and annual variations in dissolved oxygen from the Long River/Fall Juvenile surveys, 1974 - 2010.

Beach Seine Survey

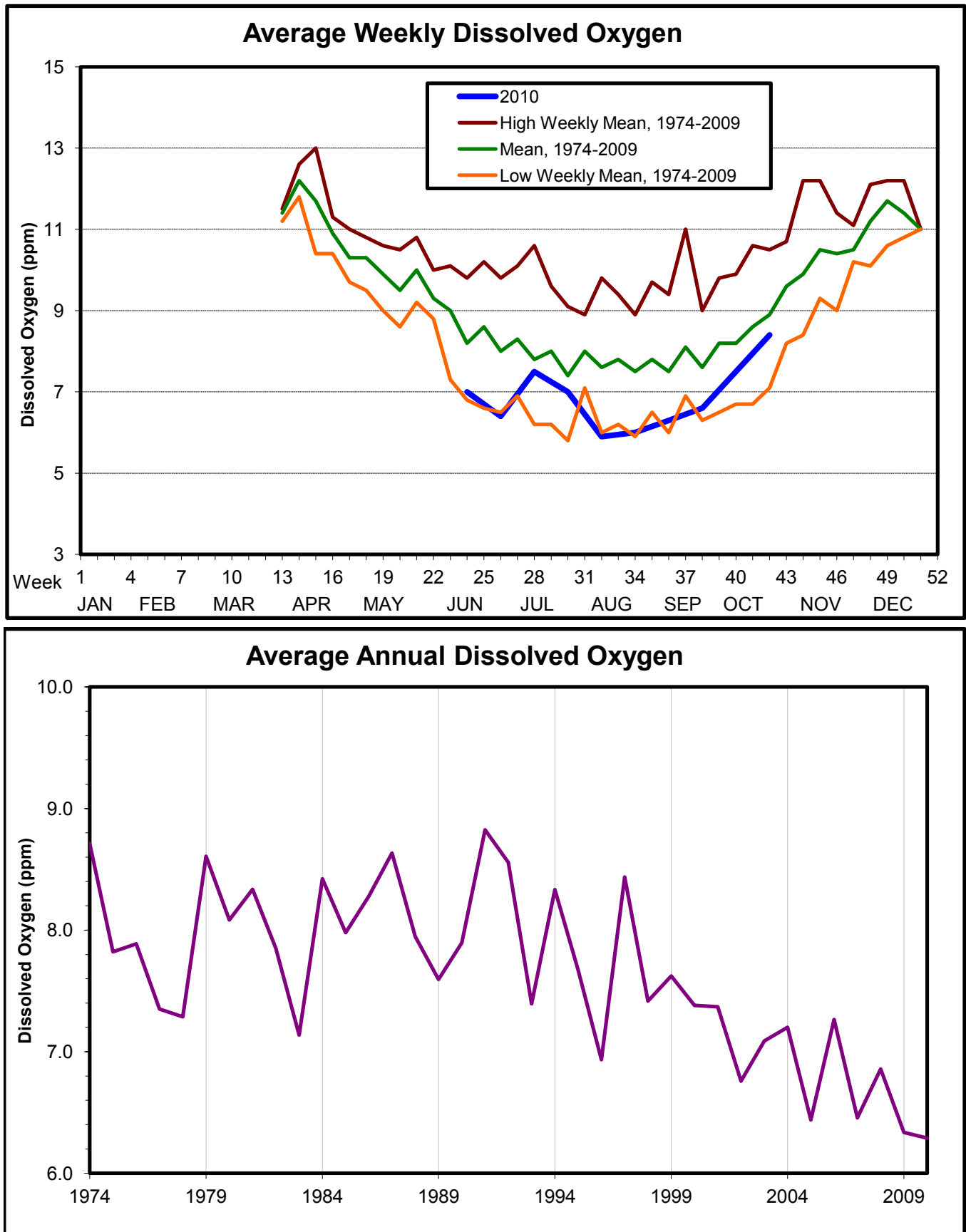


Figure 3-9. Seasonal and annual variations in dissolved oxygen from the Beach Seine surveys, 1974 - 2010.

CHAPTER 4

SPATIOTEMPORAL DISTRIBUTION OF SELECTED SPECIES OF HUDSON RIVER ESTUARY FISHES

This chapter presents graphs of the spatiotemporal distribution within the Hudson River for 16 selected species as well as graphs of the temporal and geographical indices for these species. Length data for young-of-year fish of several species are plotted. Supporting tables for these graphs are provided in Appendices [C \(Species Composition\)](#), [D \(Annual Abundance Indices\)](#), [E \(Density and Standing Crop Estimates\)](#), and [F \(Length Frequency Distribution\)](#).

4.1 SPECIES COLLECTED

Overall species composition for each year from 1974 to 2010 and species composition by survey for 2010 are tabulated. One new species for 2010, silver anchovy, was collected in a LRS sample.

Links to Tables	Table	Supporting Appendix Tables
Species composition of fish for 1974 to 2010	4-1	--
Species composition of fish by survey for 2010	4-2	C-1 , C-2 , C-3

4.2 STRIPED BASS

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-1	D-2
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-1	E-1 to E-6
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-2	E-7 to E-12
Spatiotemporal distribution of yearling fish for 2010 LRS/FJS/BSS	4-3	E-13 to E-18
Spatiotemporal distribution of older-than-yearling fish for 2010 LRS/FJS/BSS	4-4	E-19 to E-24
Temporal distribution indices for LRS for 1974 to 2010	4-5	--
Geographical distribution indices for LRS for 1974 to 2010	4-6	--
Geographical distribution indices for BSS for 1974 to 2010	4-7	--
Weekly length statistics for young-of-year fish for 2010	4-8	F-1 to F-3

4.3 WHITE PERCH

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-2	D-3
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-9	E-25 to E-30
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-10	E-31 to E-36
Spatiotemporal distribution of yearling fish for 2010 LRS/FJS/BSS	4-11	E-37 to E-42
Spatiotemporal distribution of older-than-yearling fish for 2010 LRS/FJS/BSS	4-12	E-43 to E-48
Temporal distribution indices for LRS for 1974 to 2010	4-13	--
Geographical distribution indices for LRS for 1974 to 2010	4-14	--
Geographical distribution indices for BSS for 1974 to 2010	4-15	--
Weekly length statistics for young-of-year fish for 2010	4-16	F-4 to F-6

4.4 ATLANTIC TOMCOD

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-3	D-4
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-17	E-49 to E-54
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-18	E-55 to E-60
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-19	E-61 to E-66
Temporal distribution indices for LRS for 1974 to 2010	4-20	--
Geographical distribution indices for LRS for 1974 to 2010	4-21	--
Geographical distribution indices for FJS for 1974 to 2010	4-22	--
Weekly length statistics for young-of-year fish for 2010	4-23	F-7 to F-9

4.5 BAY ANCHOVY

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-4	D-5
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-24	E-67 to E-72
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-25	E-73 to E-78
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-26	E-79 to E-84
Temporal distribution indices for LRS for 1974 to 2010	4-27	--
Geographical distribution indices for LRS for 1974 to 2010	4-28	--
Geographical distribution indices for BSS for 1974 to 2010	4-29	--
Weekly length statistics for young-of-year fish for 2010	4-30	F-10 to F-12

4.6 AMERICAN SHAD

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-5	D-6
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-31	E-85 to E-90
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-32	E-91 to E-96
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-33	E-97 to E-102
Temporal distribution indices for LRS for 1974 to 2010	4-34	--
Geographical distribution indices for LRS for 1974 to 2010	4-35	--
Geographical distribution indices for BSS for 1974 to 2010	4-36	--
Weekly length statistics for young-of-year fish for 2010	4-37	F-13 to F-15

4.7 RIVER HERRINGS (*Alosa* spp.)

Links to Graphs	Graph	Supporting Appendix Tables
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-38	E-103 to E-108
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-39	E-109 to E-114
Temporal distribution indices for LRS for 1974 to 2010	4-40	--
Geographical distribution indices for LRS for 1974 to 2010	4-41	--
Geographical distribution indices for BSS for 1974 to 2010	4-42	--

4.8 ALEWIFE

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-6	D-7
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-43	E-115 to E-120
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-44	E-121 to E-126
Geographical distribution indices for BSS for 1974 to 2010	4-45	--
Weekly length statistics for young-of-year fish for 2010	4-46	F-16 to F-17

4.9 BLUEBACK HERRING

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-7	D-8
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-47	E-127 to E-132
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-48	E-133 to E-138
Geographical distribution indices for BSS for 1974 to 2010	4-49	--
Weekly length statistics for young-of-year fish for 2010	4-50	F-18 to F-19

4.10 GIZZARD SHAD

Links to Graphs	Graph	Supporting Appendix Tables
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-51	E-139 to E-142
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-52	E-143 to E-146
Geographical distribution indices for BSS for 1974 to 2010	4-53	--

4.11 RAINBOW SMELT

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-8	D-9
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	--	E-147 to E-152
Temporal distribution indices for LRS for 1974 to 2010	4-54	--
Geographical distribution indices for LRS for 1974 to 2010	4-55	--
Geographical distribution indices for FJS for 1974 to 2010	4-56	--

No rainbow smelt were collected in 2010.

4.12 HOGCHOKER

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-9	D-10
Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval fish for 2010 LRS	4-57	E-153 to E-158
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-58	E-159 to E-164
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-59	E-165 to E-170
Geographical distribution indices for FJS for 1974 to 2010	4-60	--

4.13 SPOTTAIL SHINER

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-10	D-11
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-61	E-171 to E-176
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-62	E-177 to E-182
Geographical distribution indices for BSS for 1974 to 2010	4-63	--
Weekly length statistics for young-of-year fish for 2010	4-64	F-20 to F-21

4.14 ATLANTIC STURGEON

Links to Table/Graph	Table/ Graph	Supporting Appendix Tables
Collections of fish for 2010 LRS/FJS/BSS	4-3	--
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-65	E-183 to E-188

4.15 SHORTNOSE STURGEON

Links to Table/Graph	Table/ Graph	Supporting Appendix Tables
Collections of fish for 2010 LRS/FJS/BSS	4-4	--
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-66	E-189 to E-194

4.16 WHITE CATFISH

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-11	D-12
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-67	E-195 to E-200
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-68	E-201 to E-206
Geographical distribution indices for FJS for 1974 to 2010	4-69	--
Weekly length statistics for young-of-year fish for 2010	4-70	F-22 to F-23

4.17 WEAKFISH

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-12	D-13
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-71	E-206 to E-212
Spatiotemporal distribution of yearling and older fish for 2010 LRS/FJS/BSS	4-72	E-213 to E-218
Geographical distribution indices for FJS for 1974 to 2010	4-73	--
Weekly length statistics for young-of-year fish for 2010	4-74	F-24 to F-25

4.18 BLUEFISH

Links to Graphs	Graph	Supporting Appendix Tables
Annual abundance indices	D-13	D-14
Spatiotemporal distribution of young-of-year fish for 2010 LRS/FJS/BSS	4-75	E-219 to E-224
Geographical distribution indices for BSS for 1974 to 2010	4-76	--

[Link to References](#)

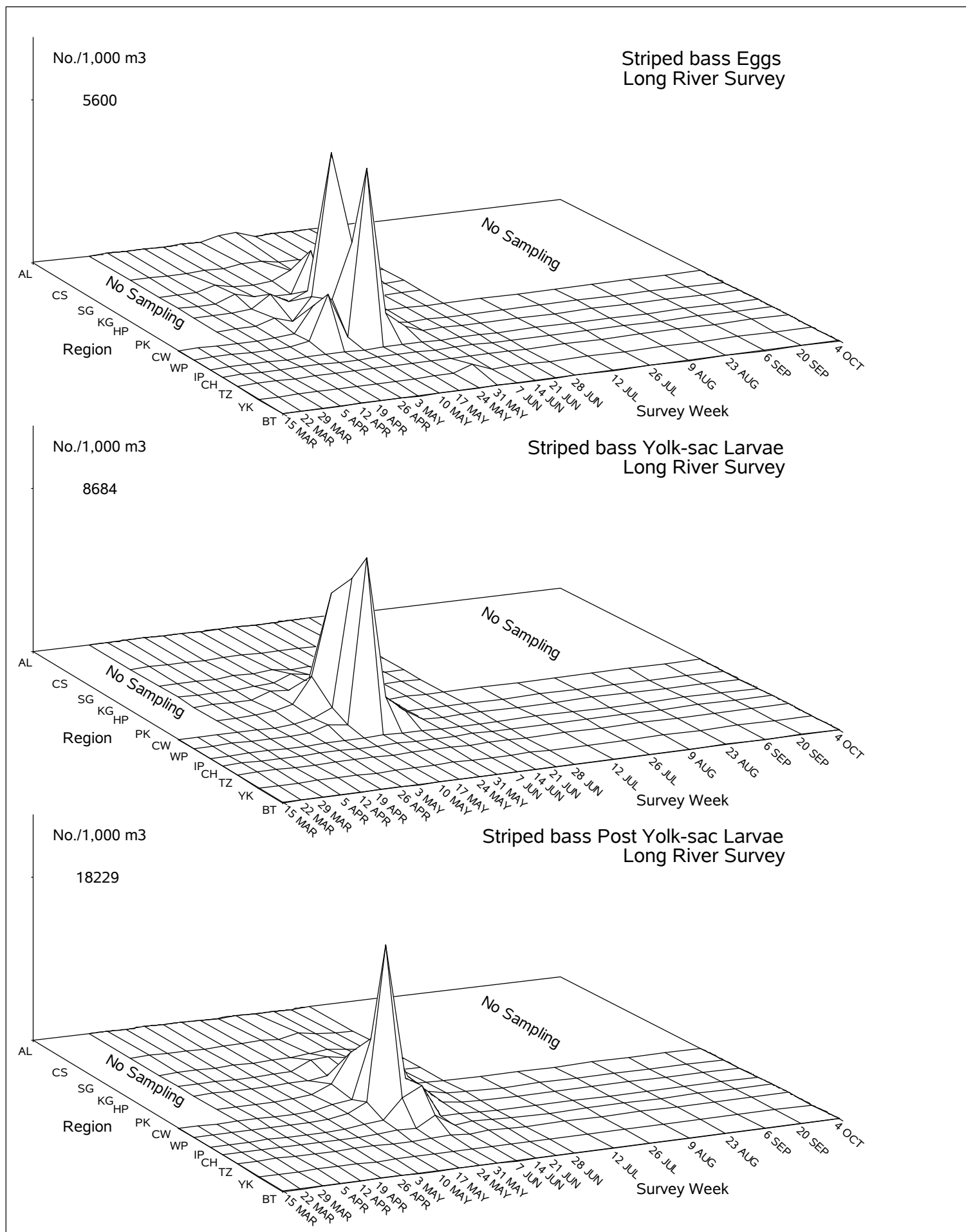


Figure 4-1. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval striped bass in the Hudson River estuary based on the 2010 Long River Survey.

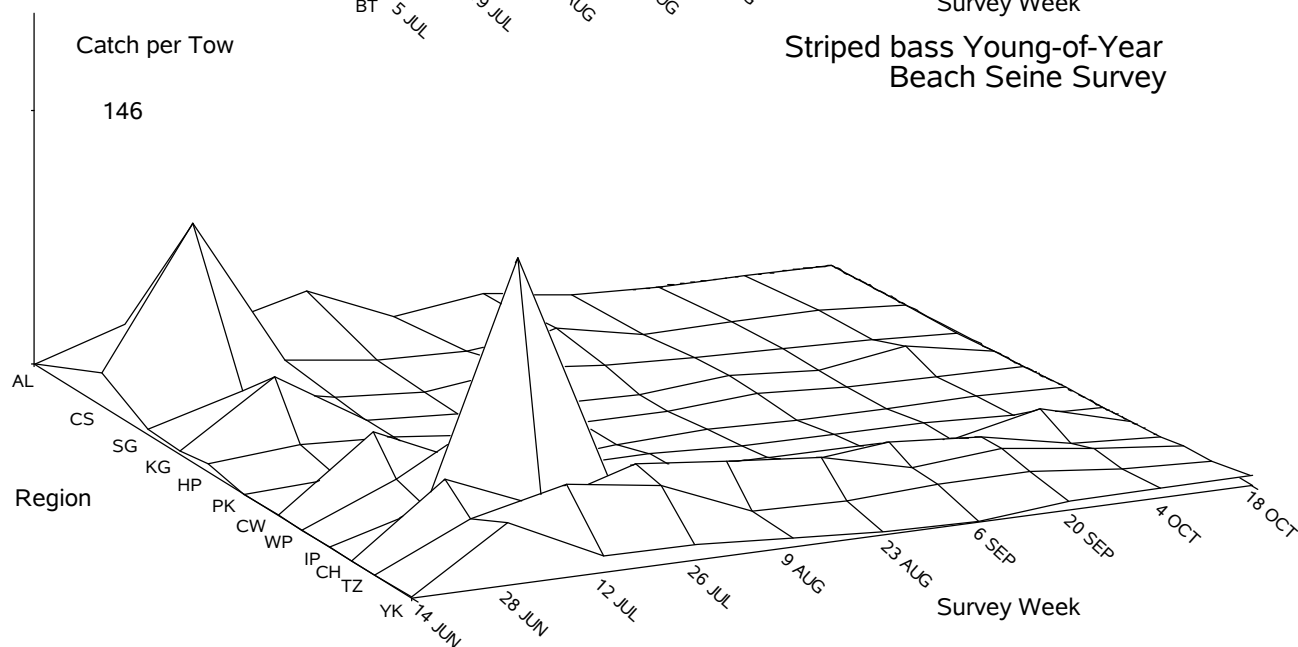
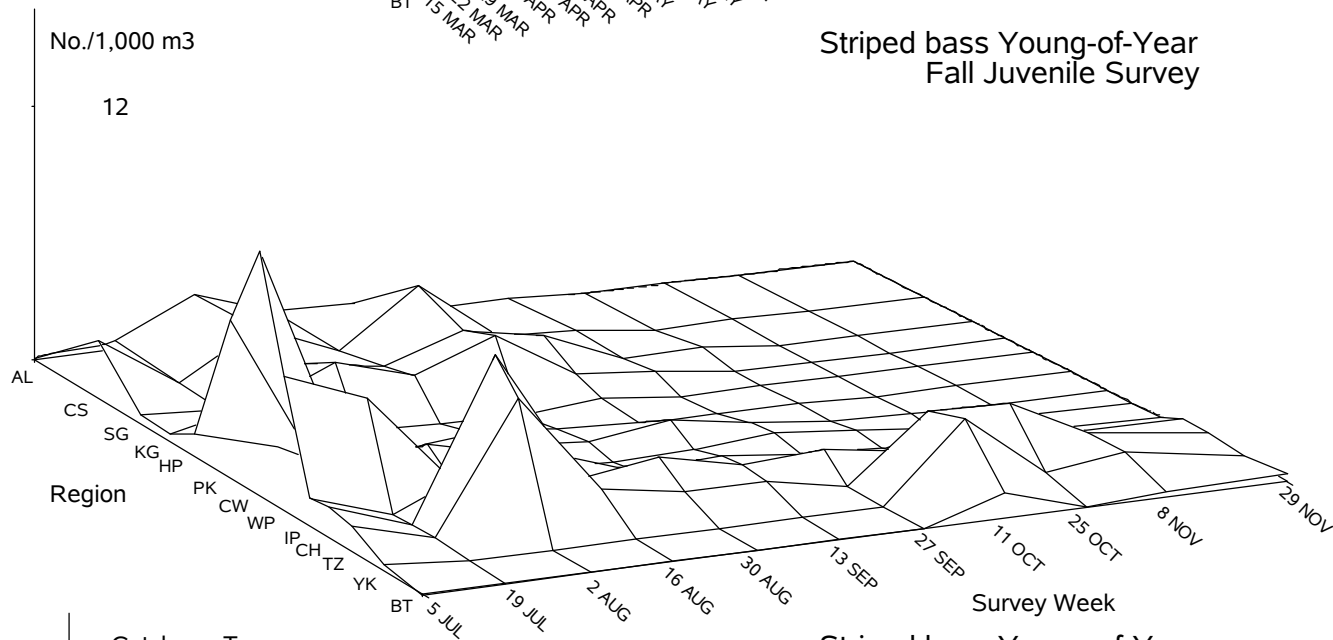
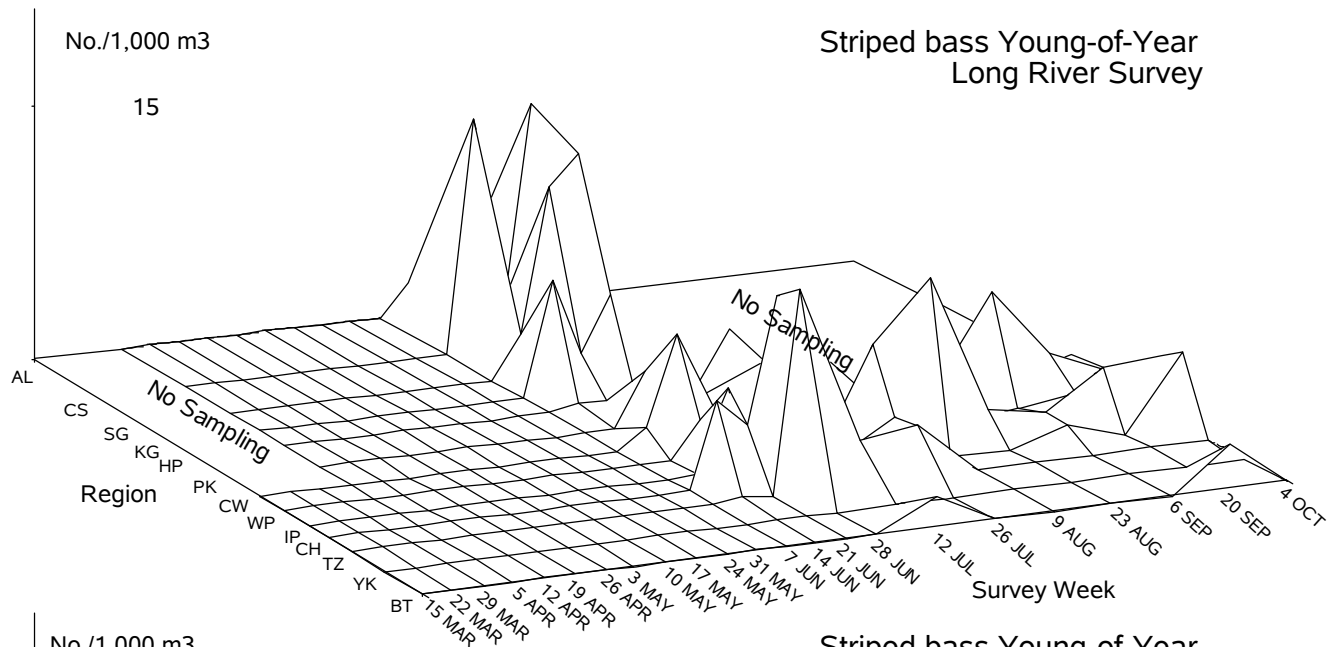


Figure 4-2. Spatiotemporal distribution of young-of-year striped bass in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

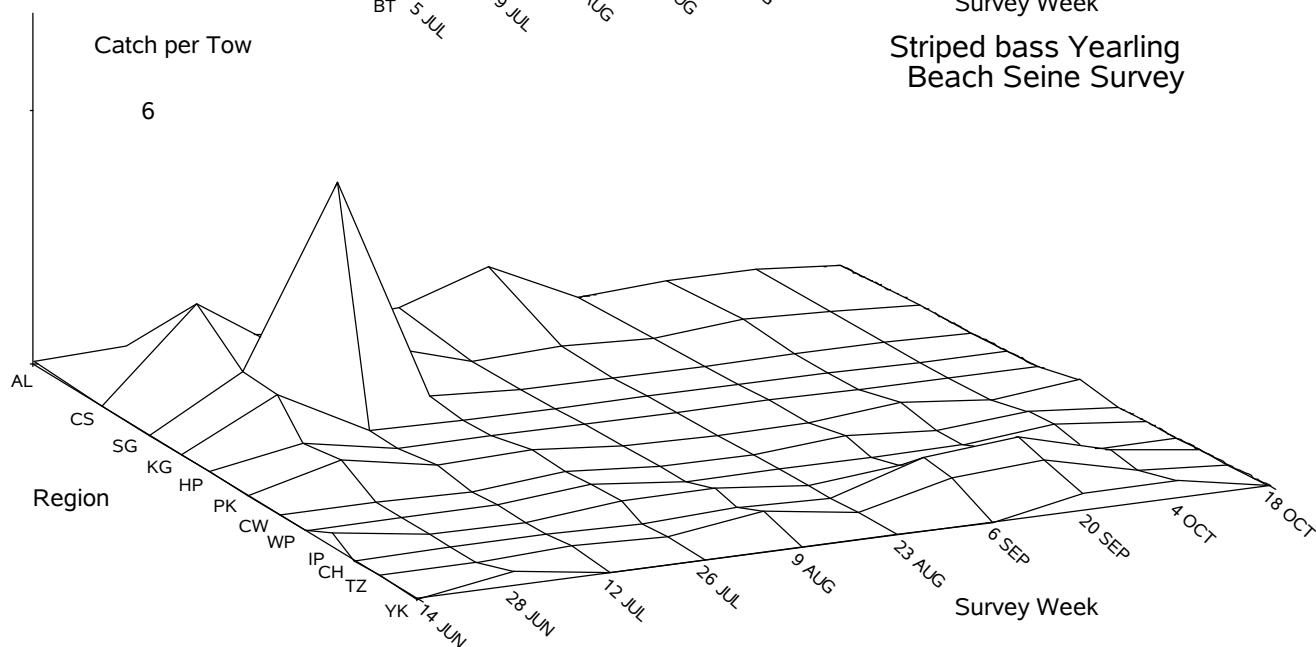
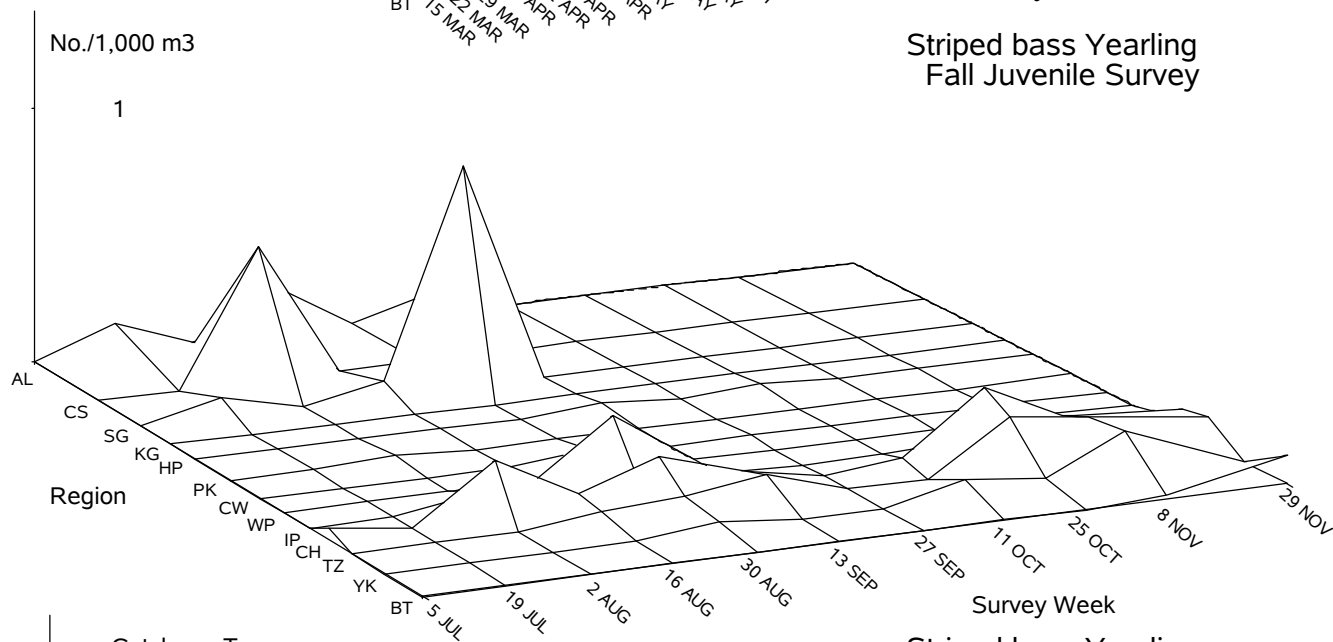
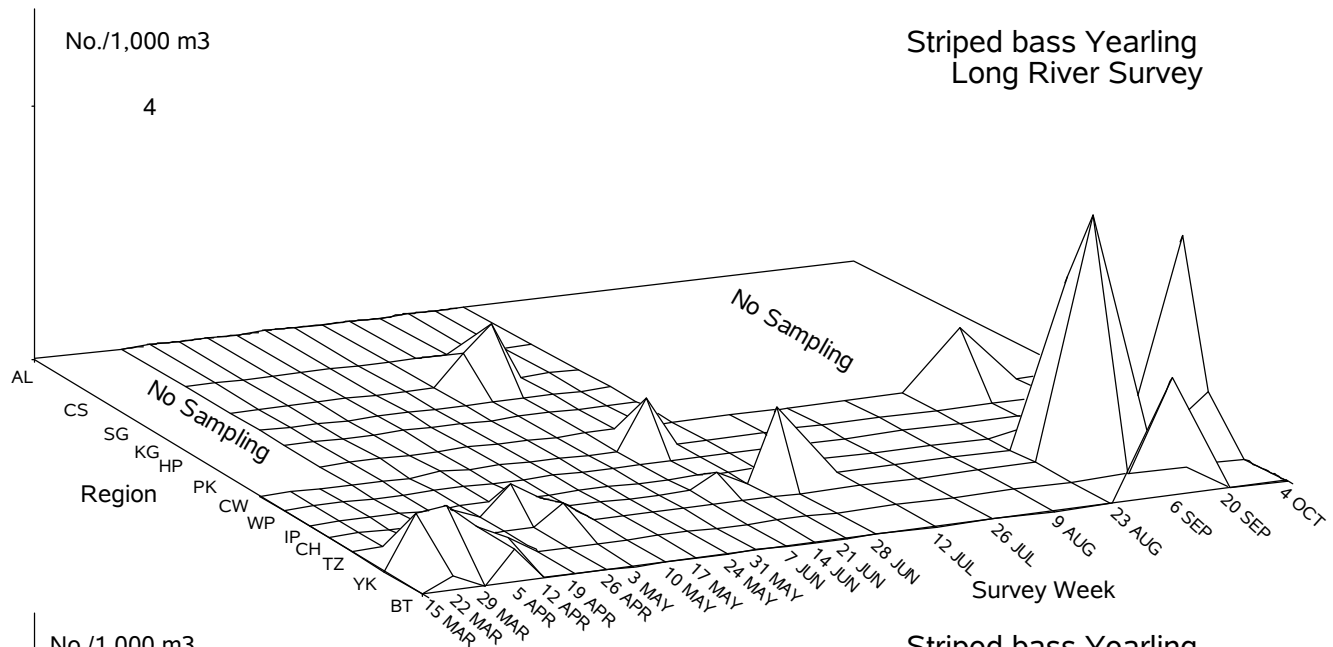


Figure 4-3. Spatiotemporal distribution of yearling striped bass in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

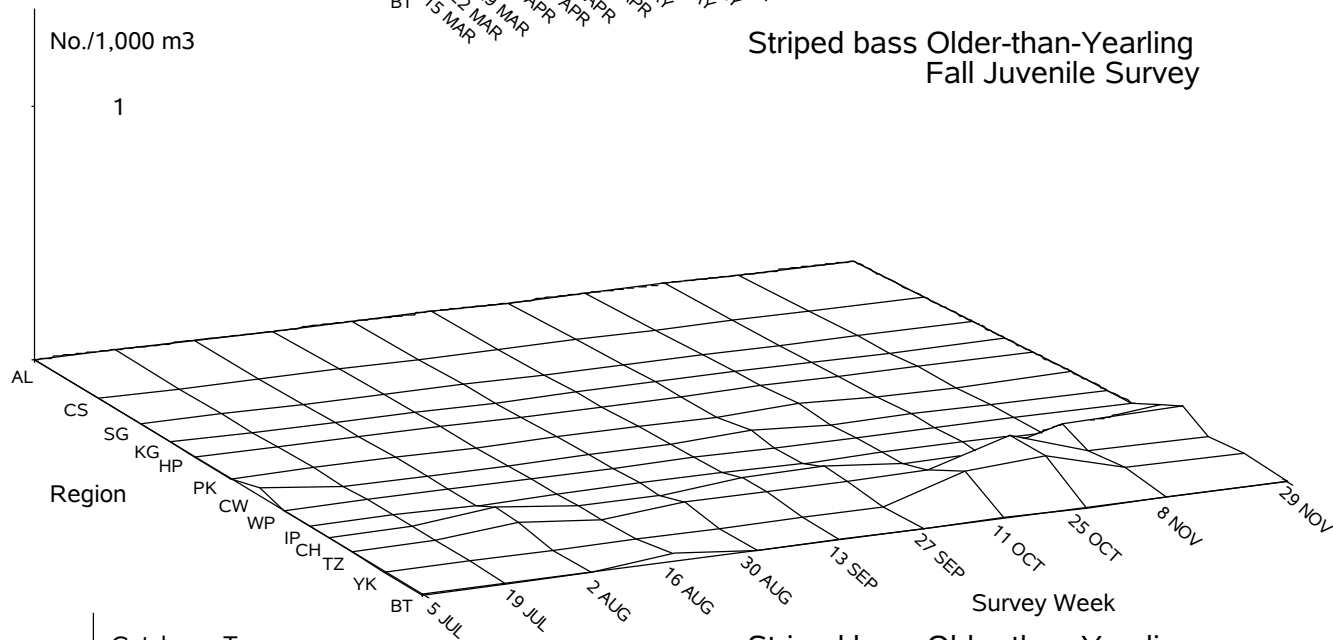


Figure 4-4. Spatiotemporal distribution of older-than-yearling striped bass in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

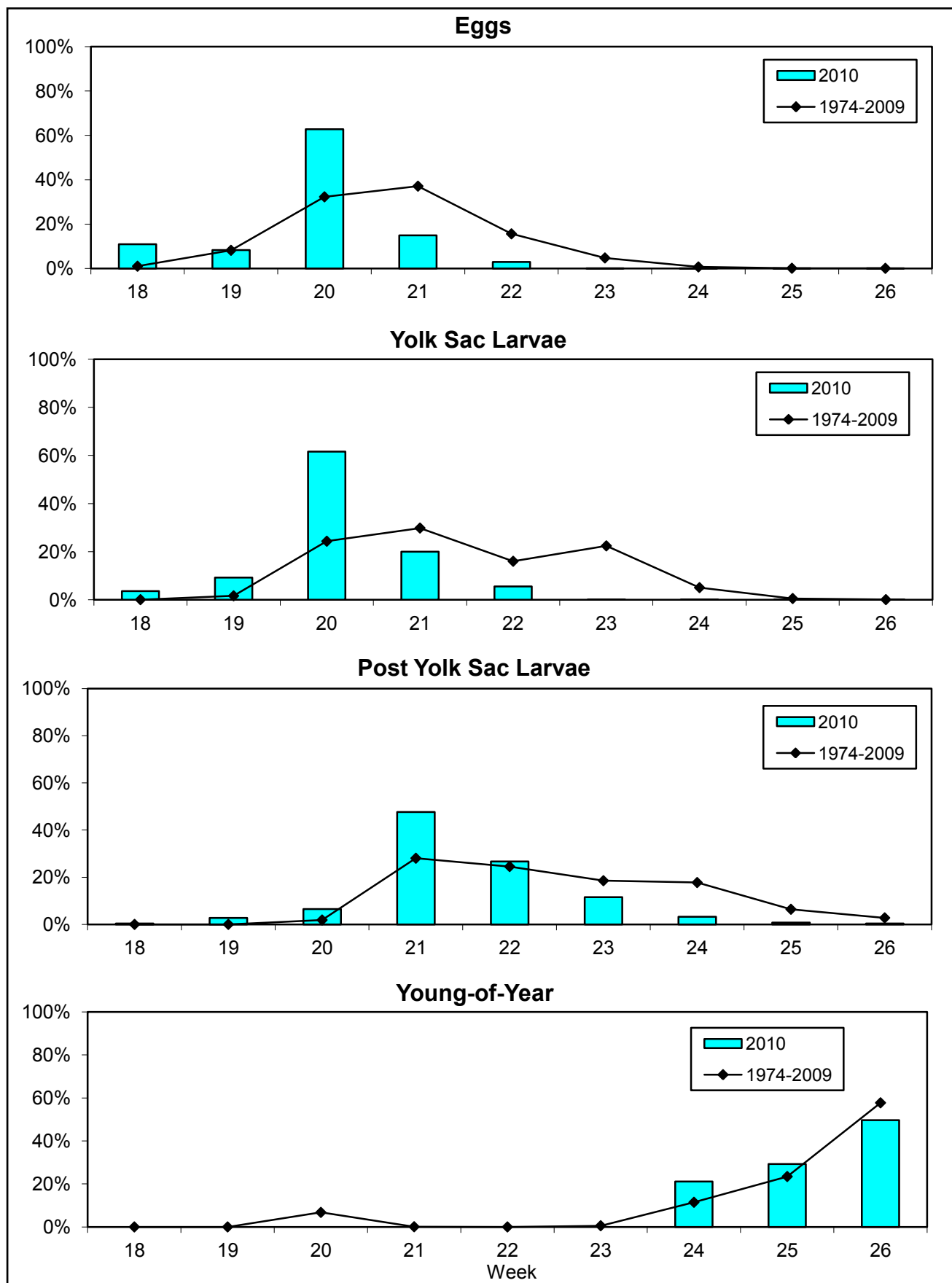


Figure 4-5. Temporal distribution indices for striped bass collected during Long River surveys of the Hudson River estuary, 1974-2010.

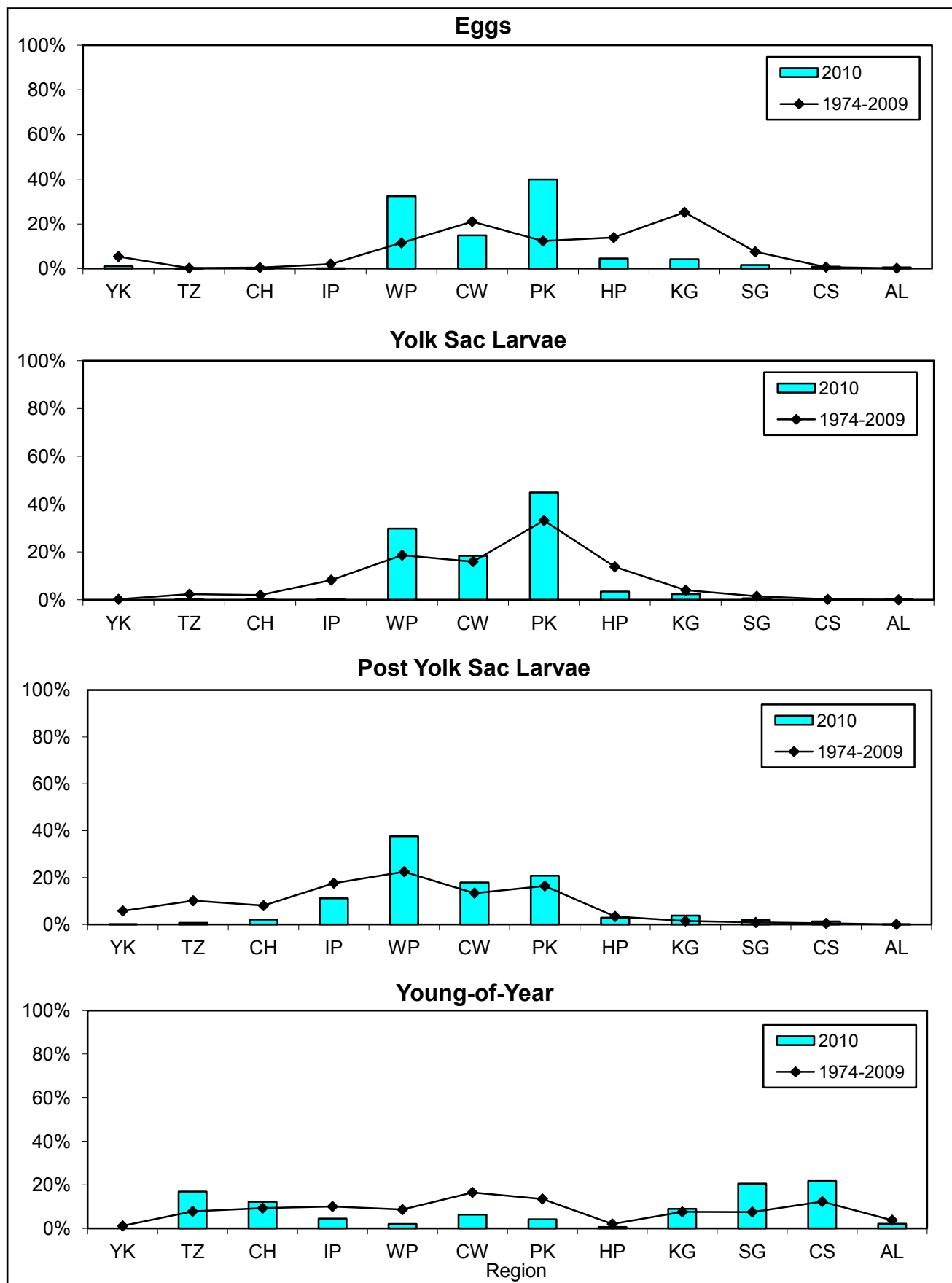


Figure 4-6. Geographic distribution indices for striped bass collected during Long River surveys of the Hudson River estuary, 1974-2010.

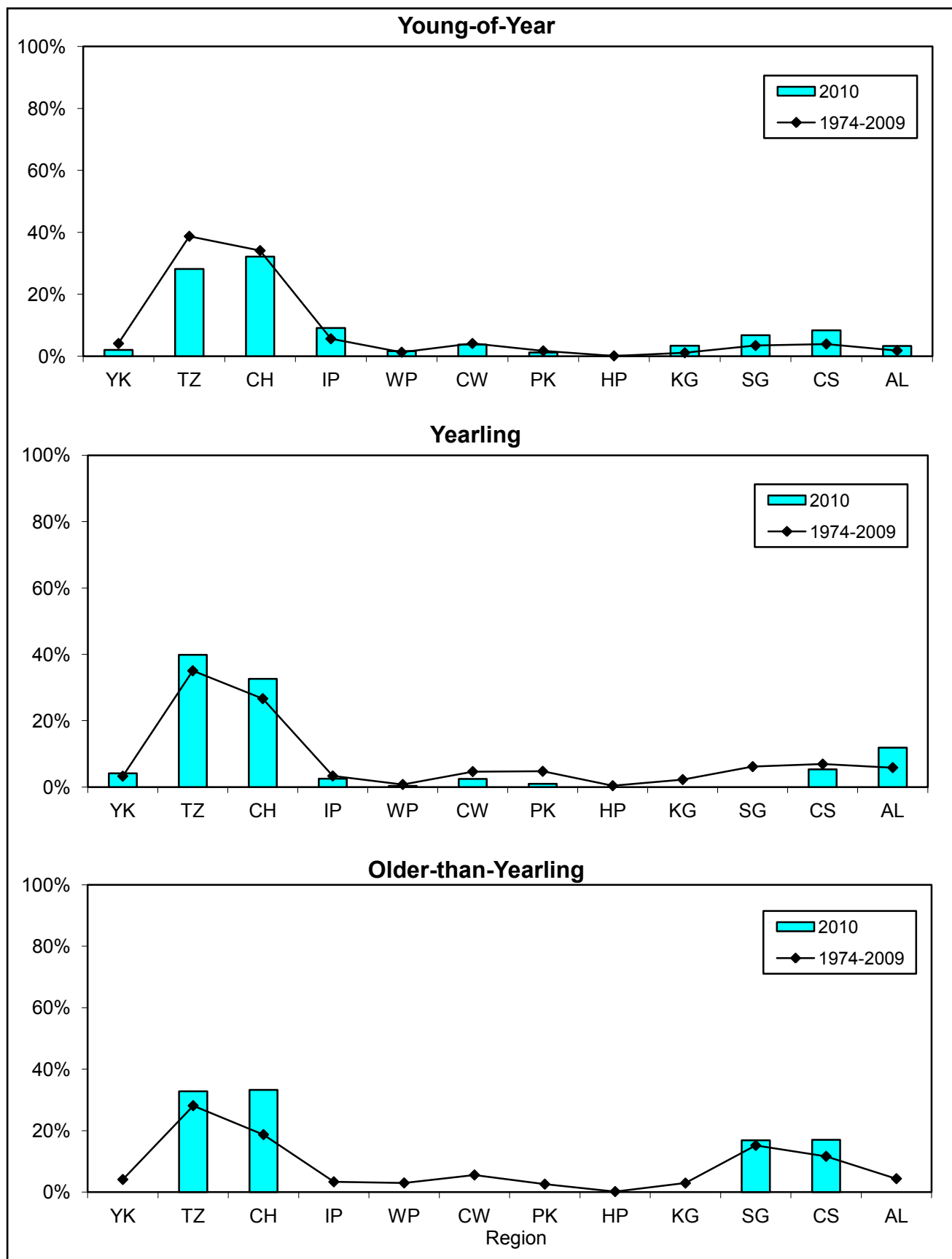


Figure 4-7. Geographic distribution indices for striped bass collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

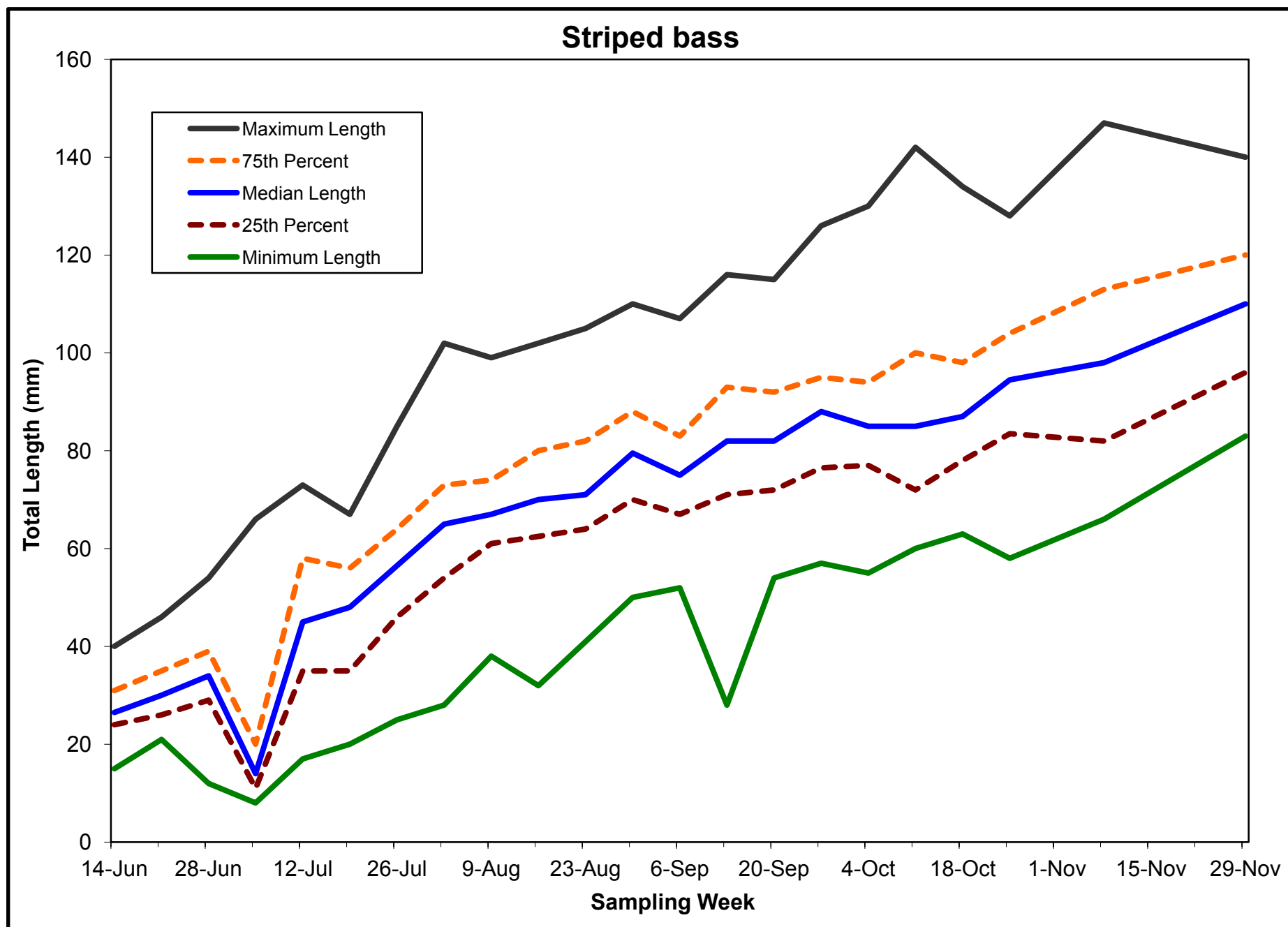


Figure 4-8. Weekly length statistics for young-of-year striped bass in the Hudson River estuary, 2010.

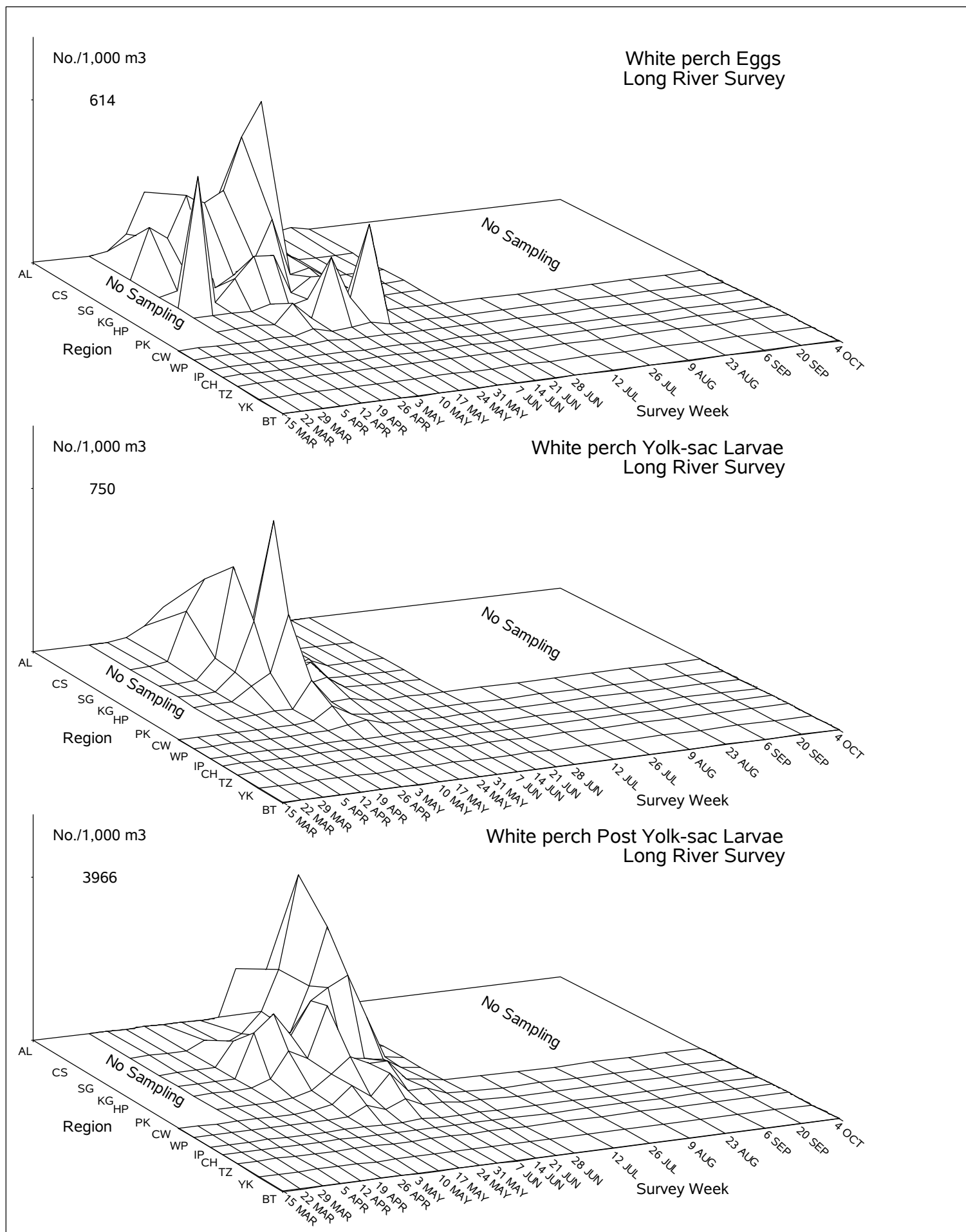


Figure 4-9. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval white perch in the Hudson River estuary based on the 2010 Long River Survey.

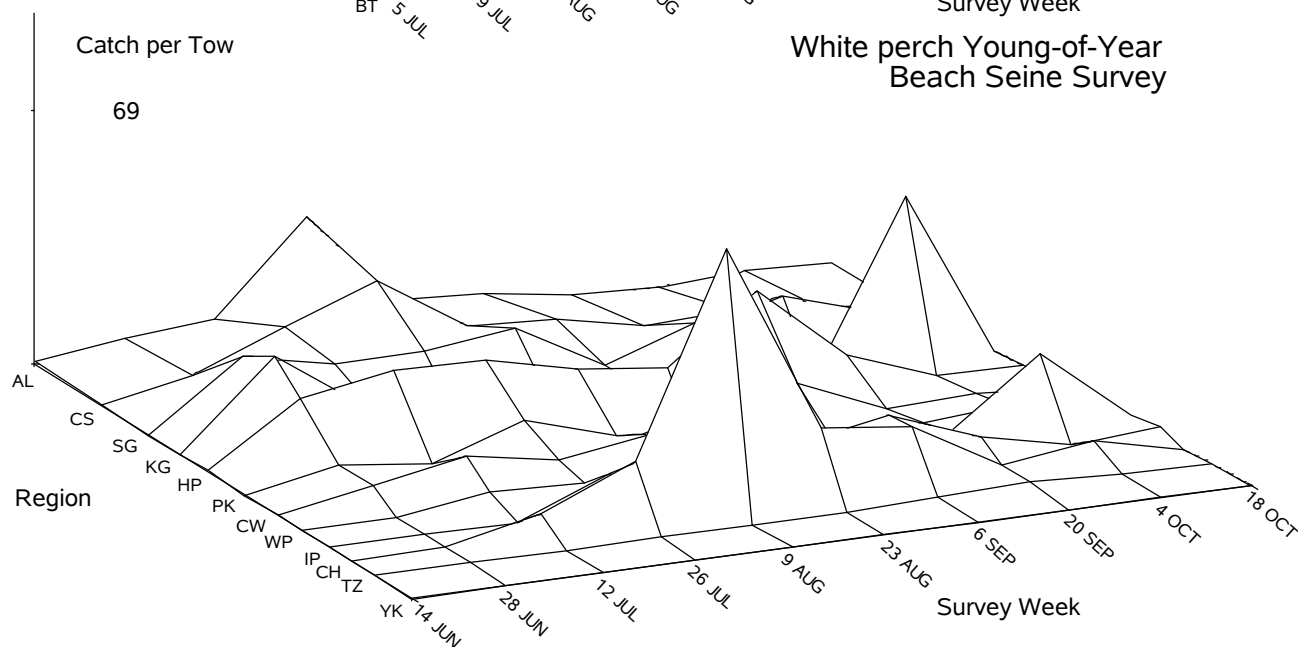
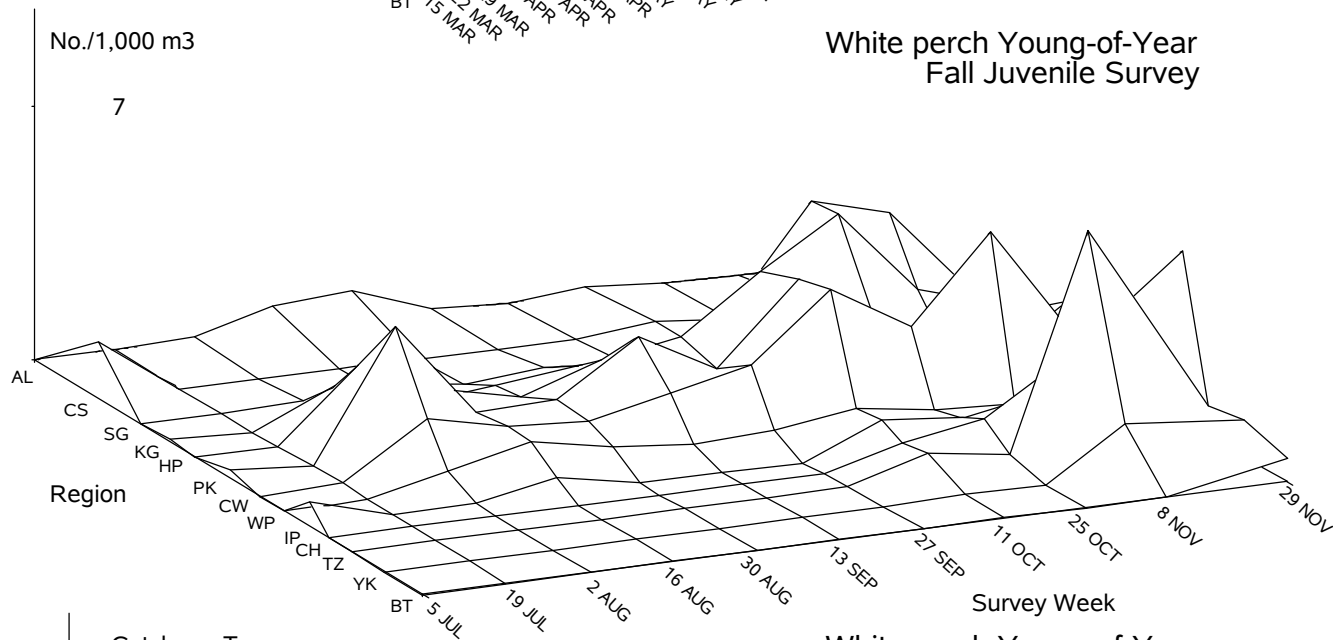
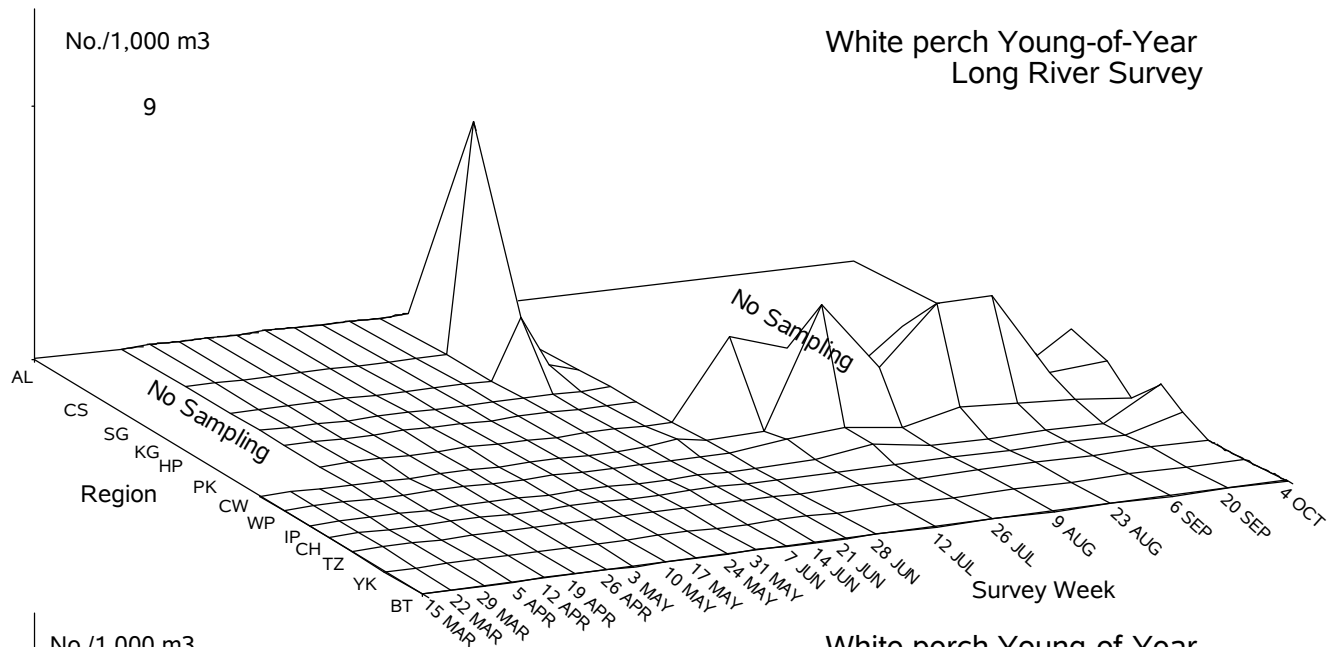


Figure 4-10. Spatiotemporal distribution of young-of-year white perch in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

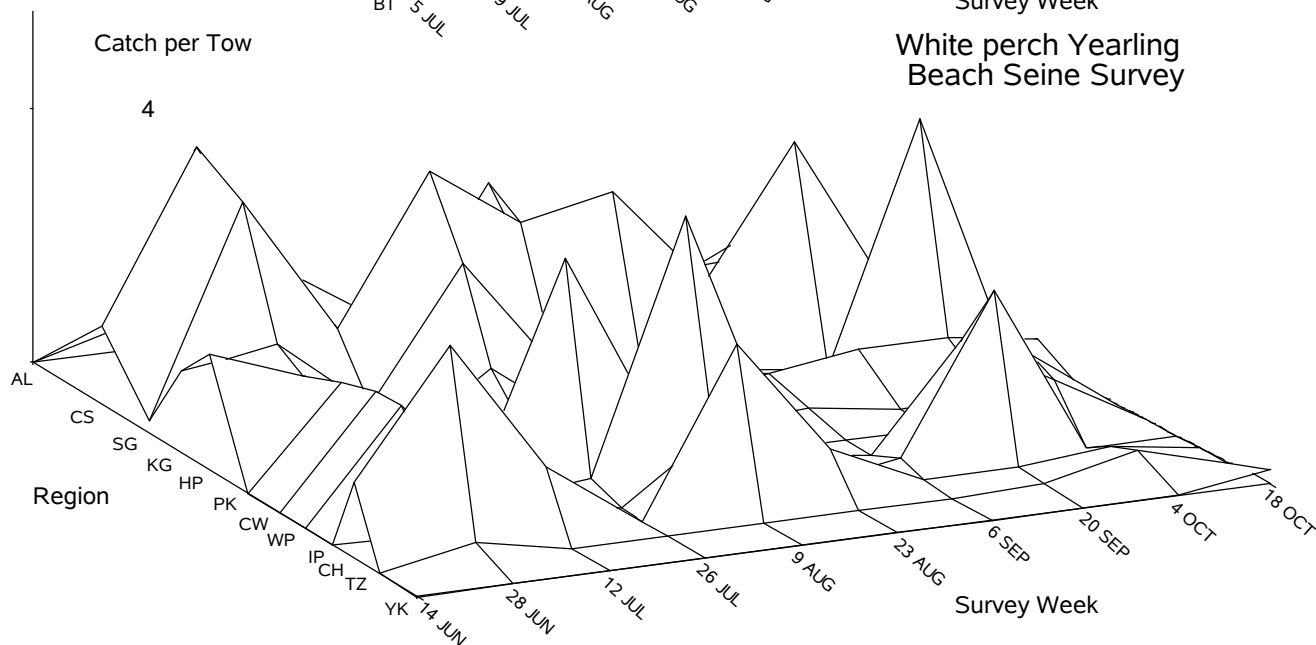
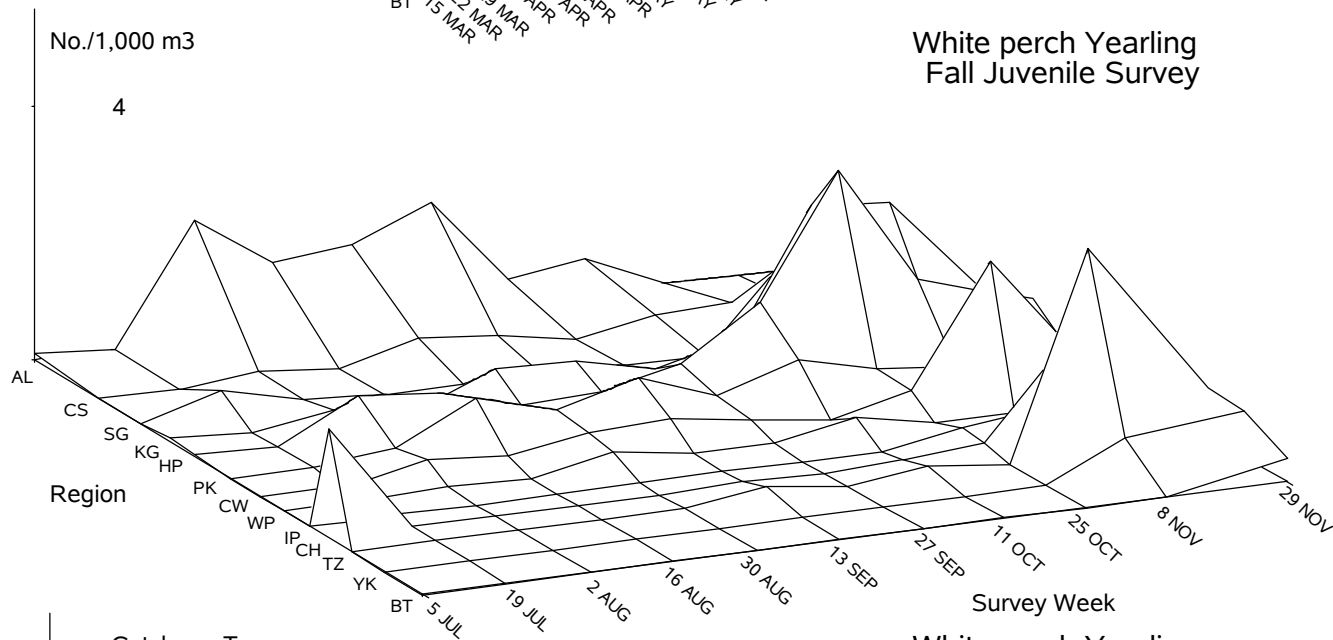
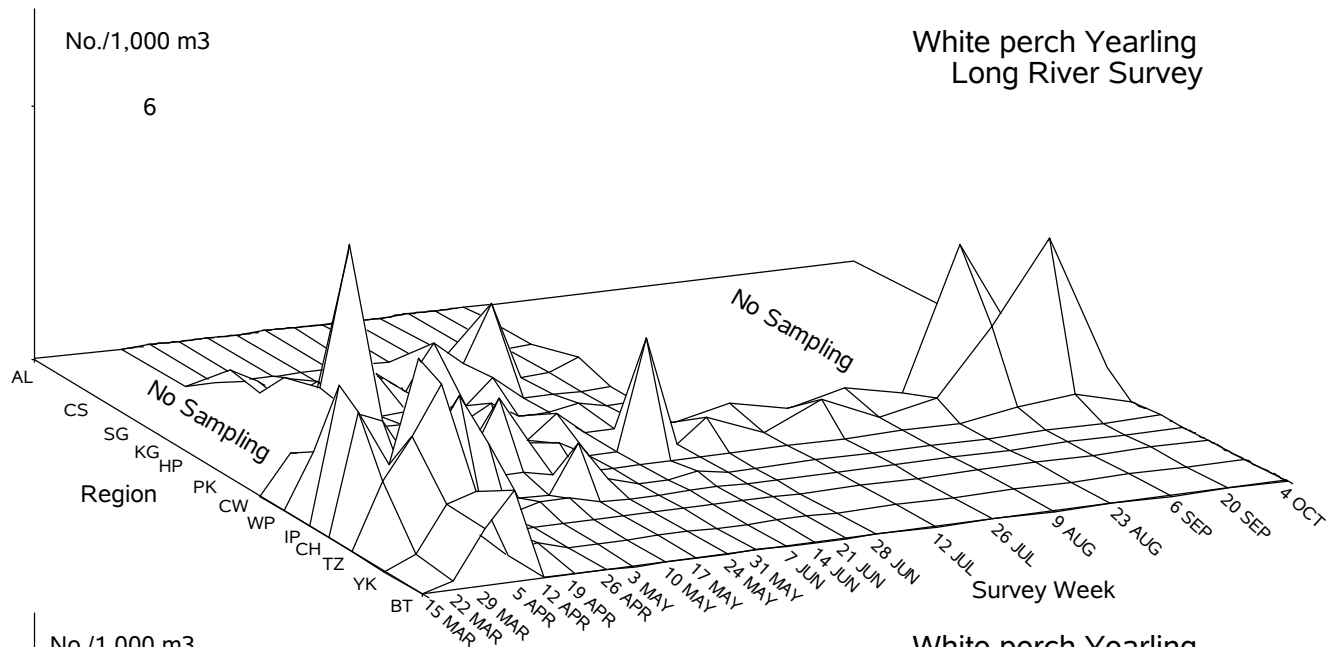


Figure 4-11. Spatiotemporal distribution of yearling white perch in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

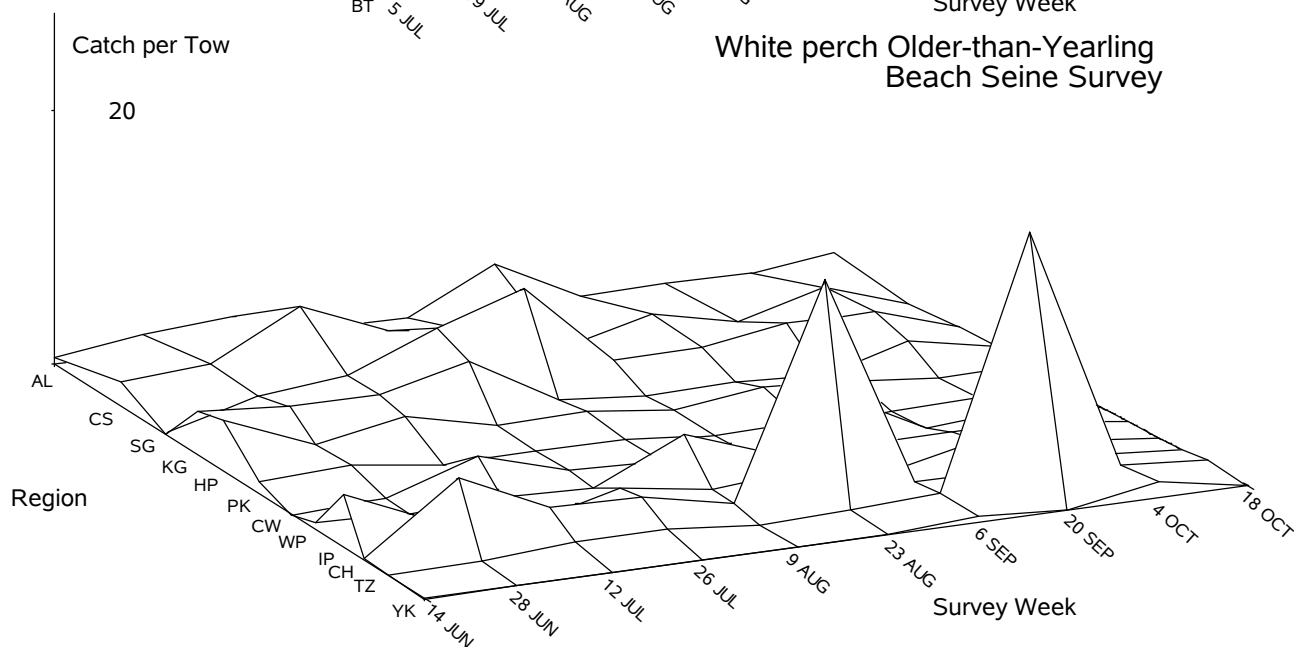
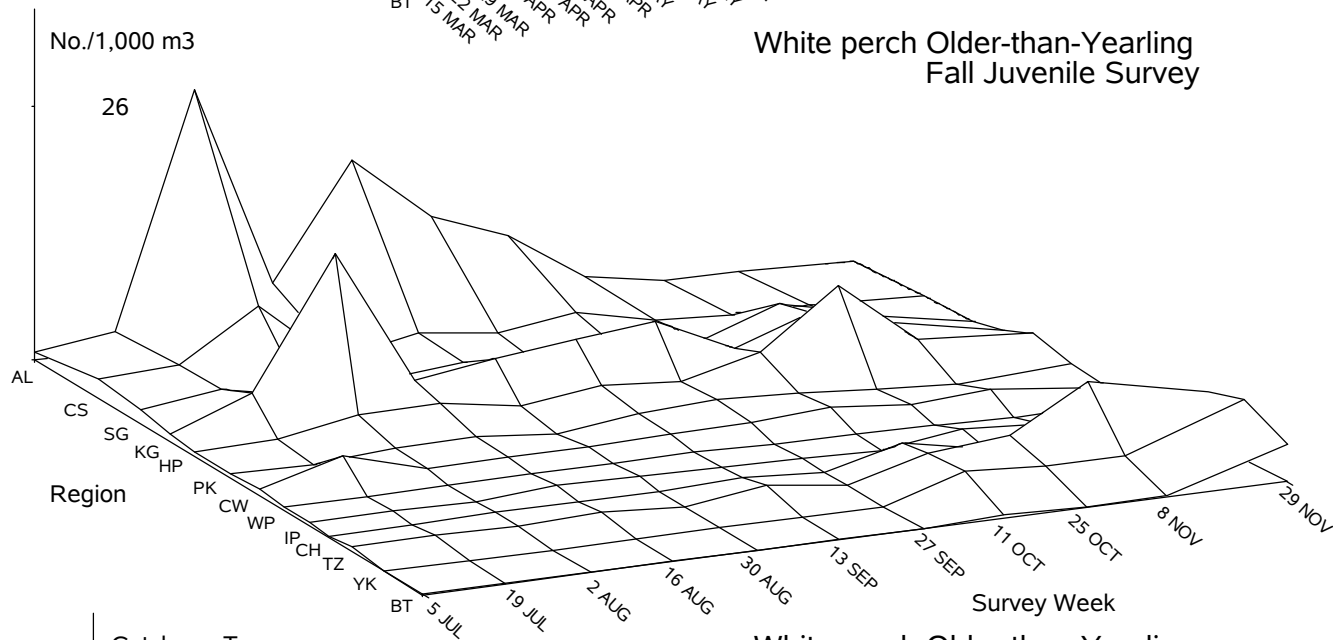
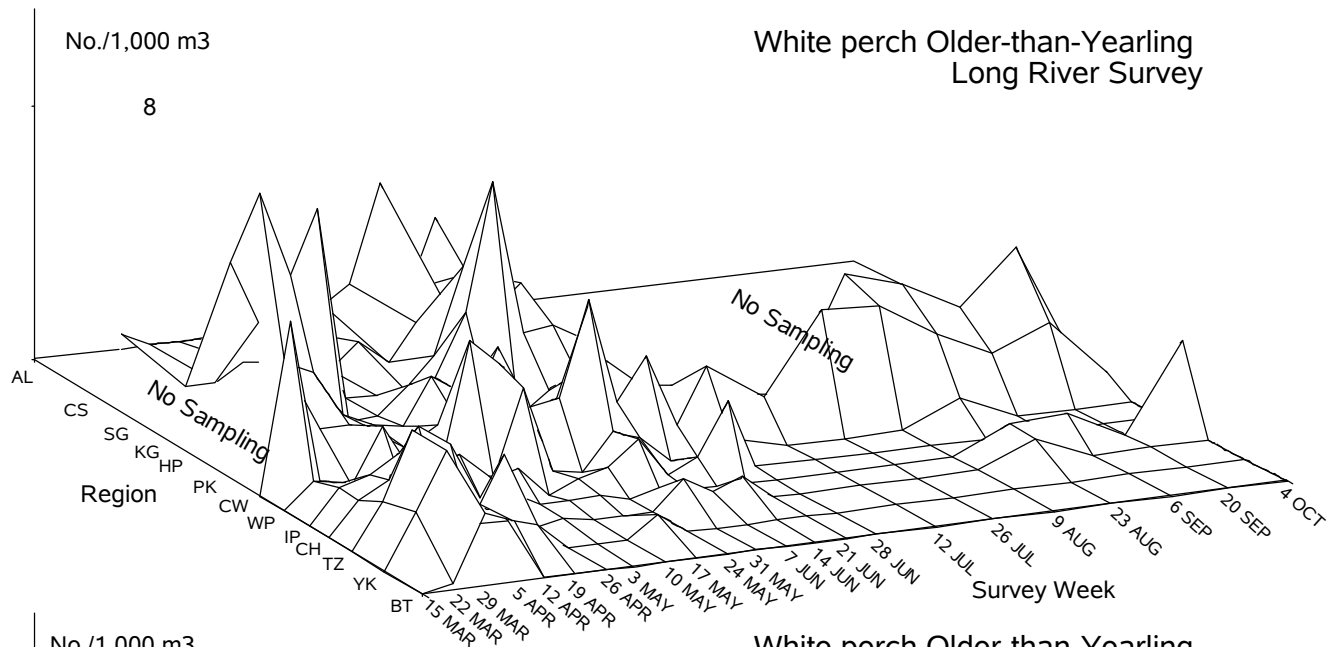


Figure 4-12. Spatiotemporal distribution of older-than-yearling white perch in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

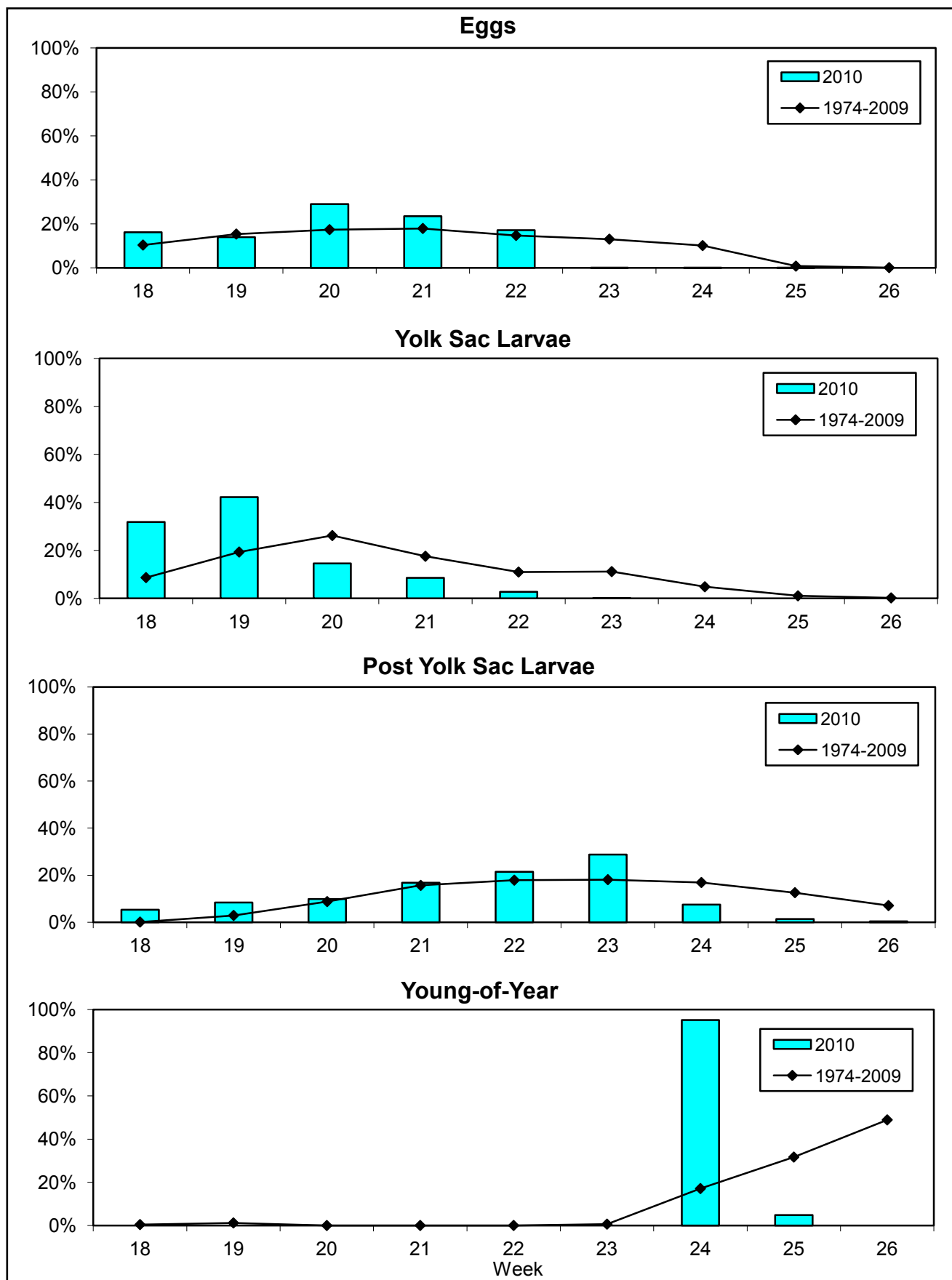


Figure 4-13. Temporal distribution indices for white perch collected during Long River surveys of the Hudson River estuary, 1974-2010.

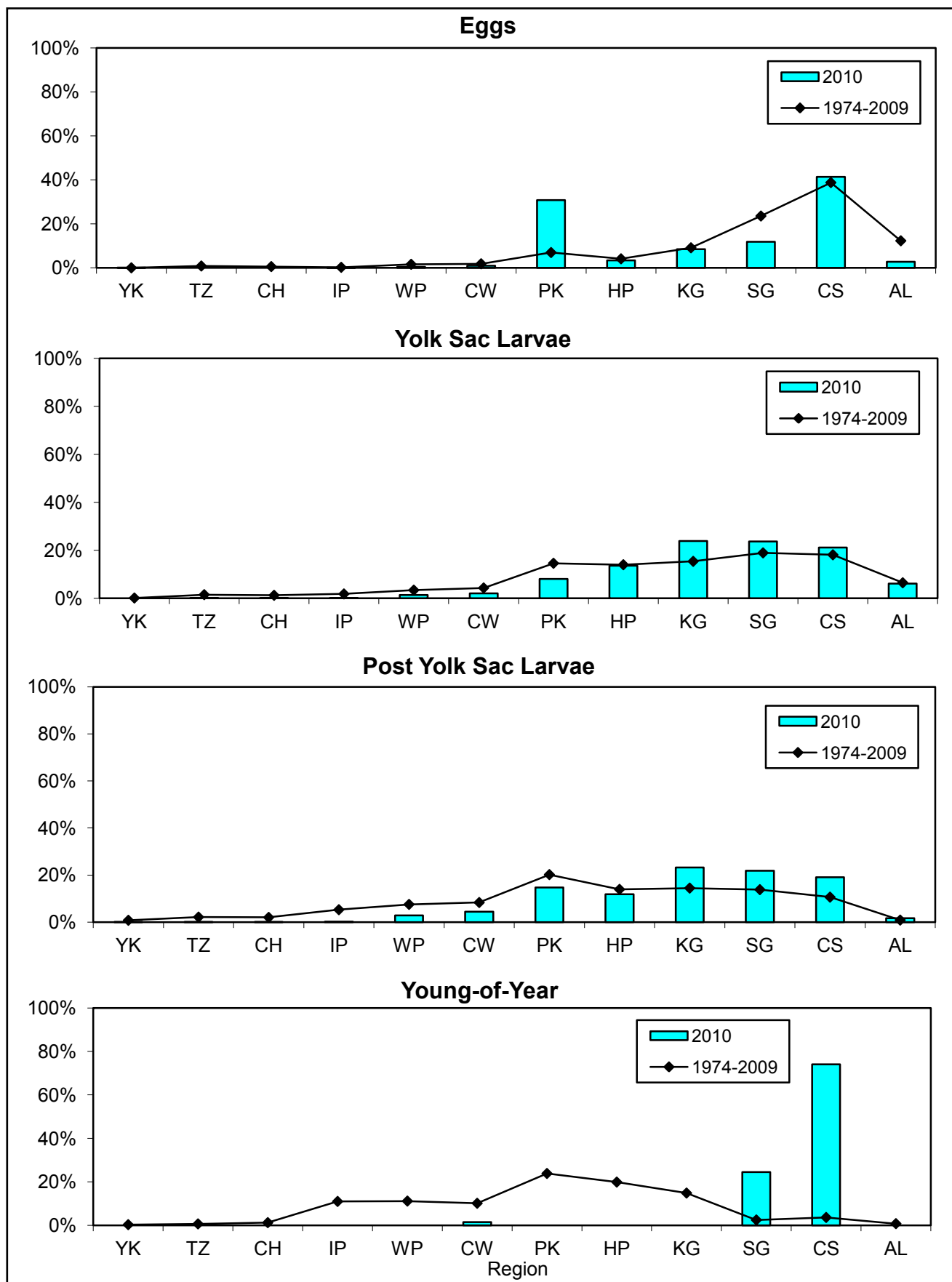


Figure 4-14. Geographic distribution indices for white perch collected during Long River surveys of the Hudson River estuary, 1974-2010.

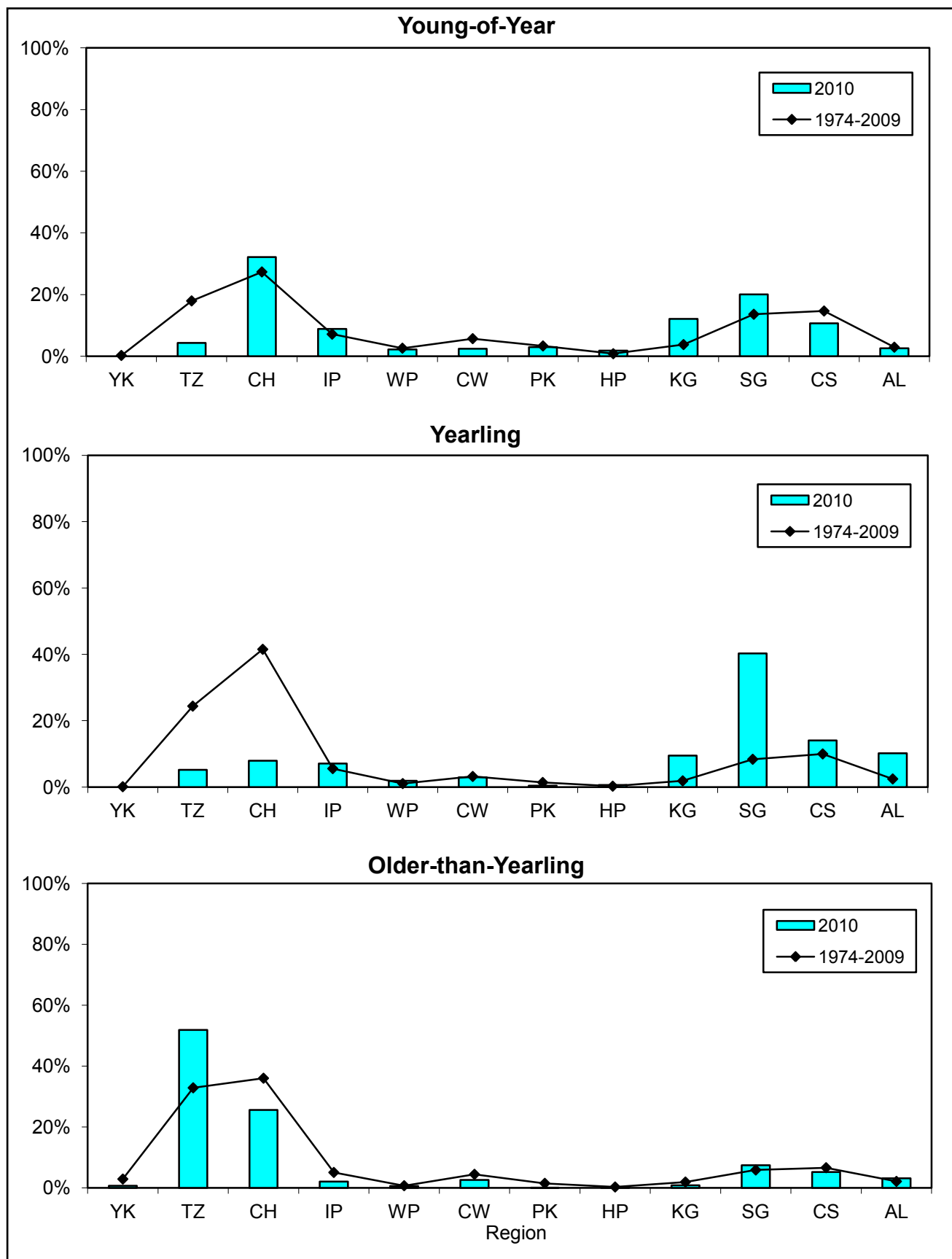


Figure 4-15. Geographic distribution indices for white perch collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

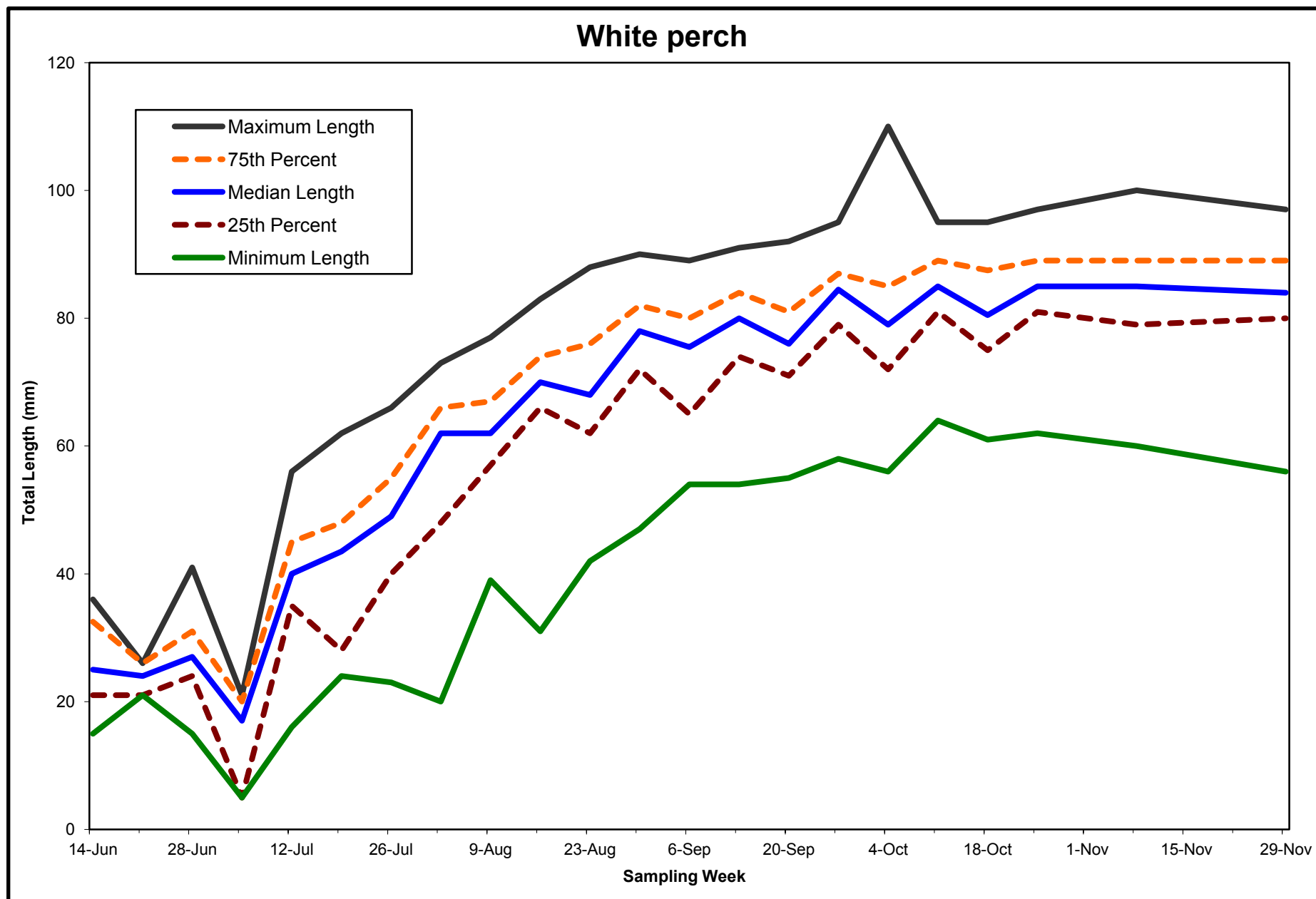


Figure 4-16. Weekly length statistics for young-of-year white perch in the Hudson River estuary, 2010.

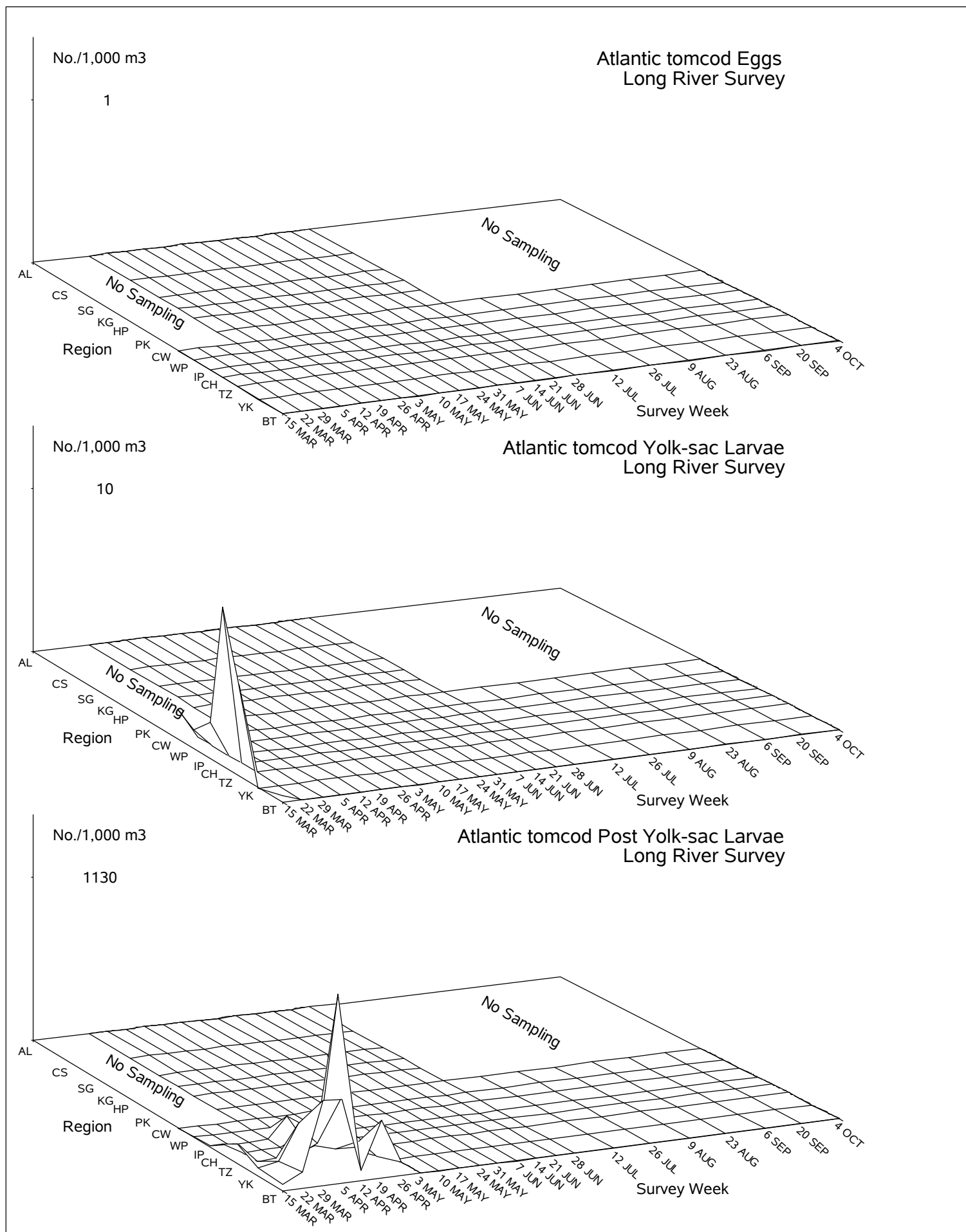


Figure 4-17. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval Atlantic tomcod in the Hudson River estuary based on the 2010 Long River Survey.

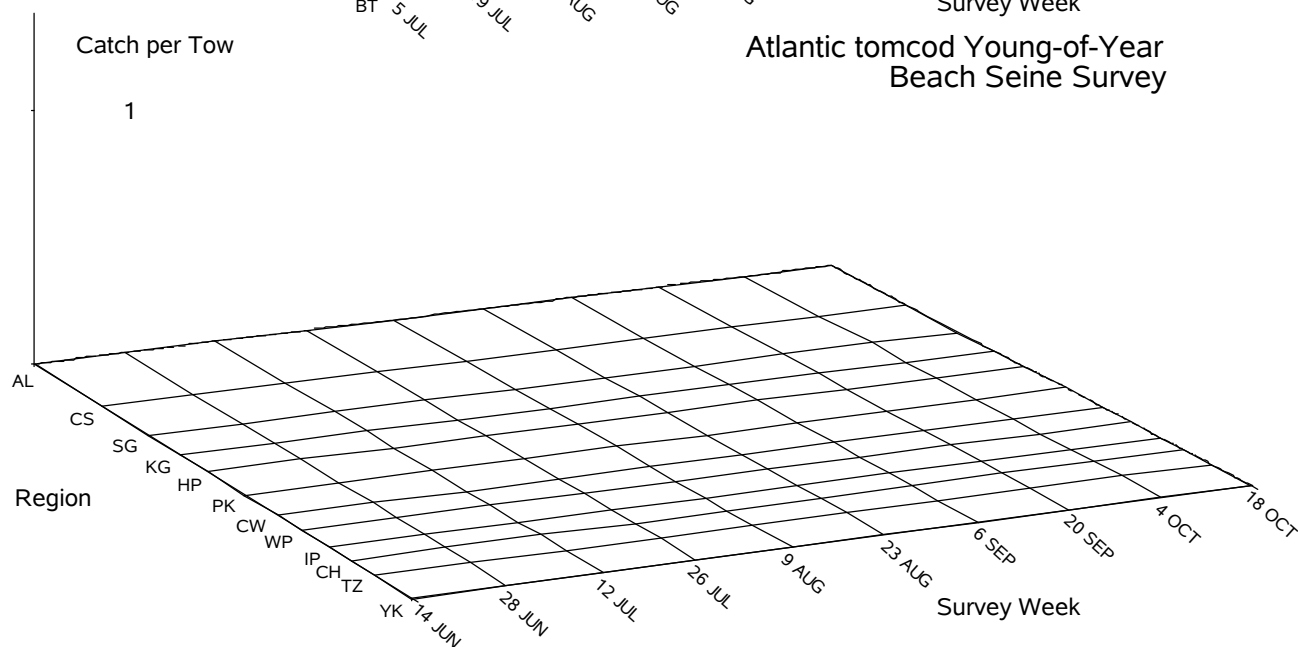
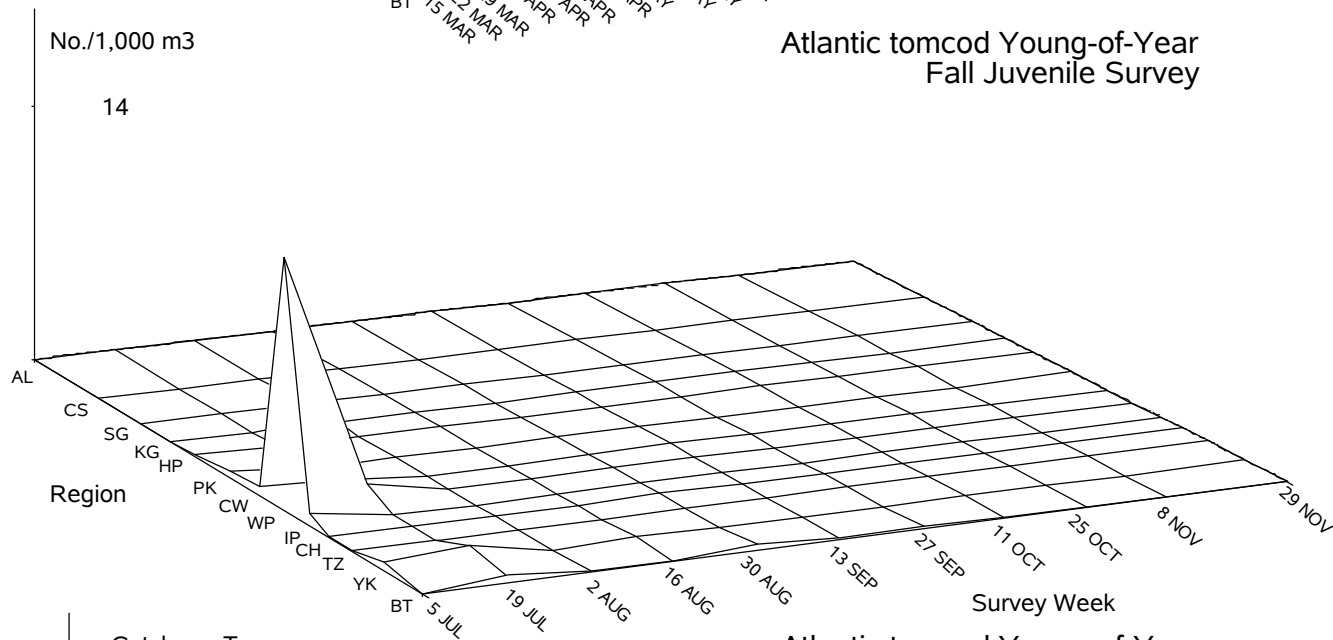
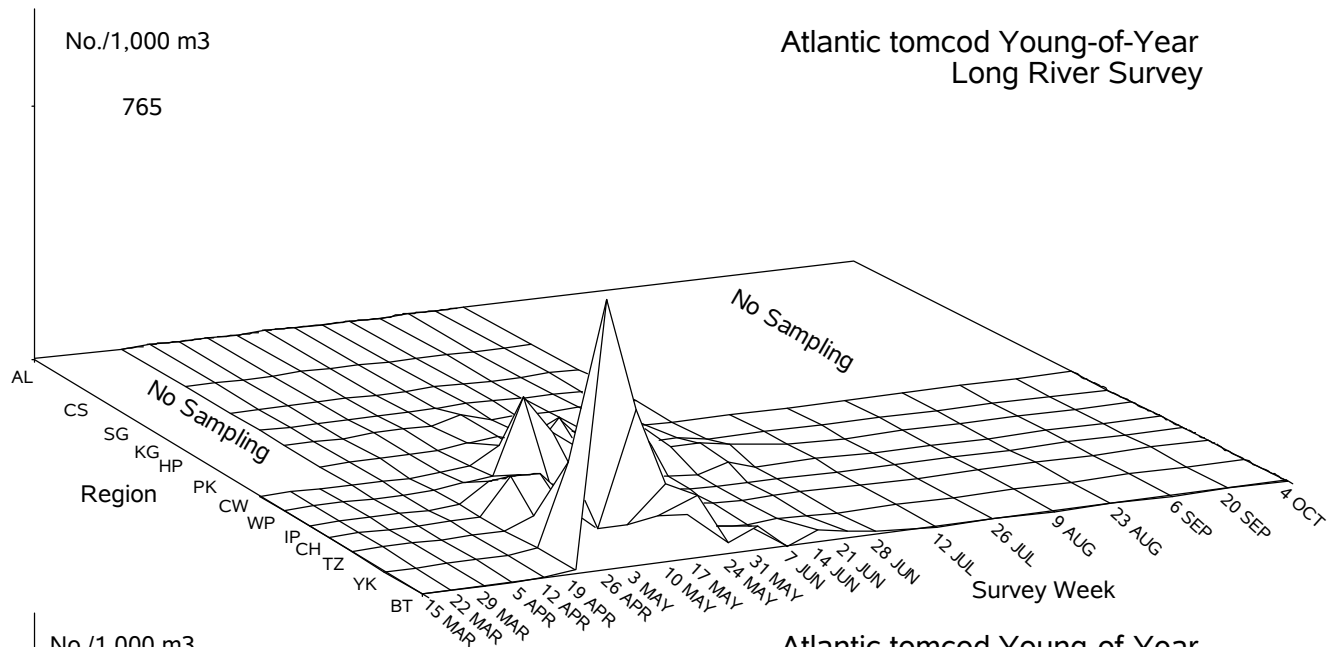


Figure 4-18. Spatiotemporal distribution of young-of-year Atlantic tomcod in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

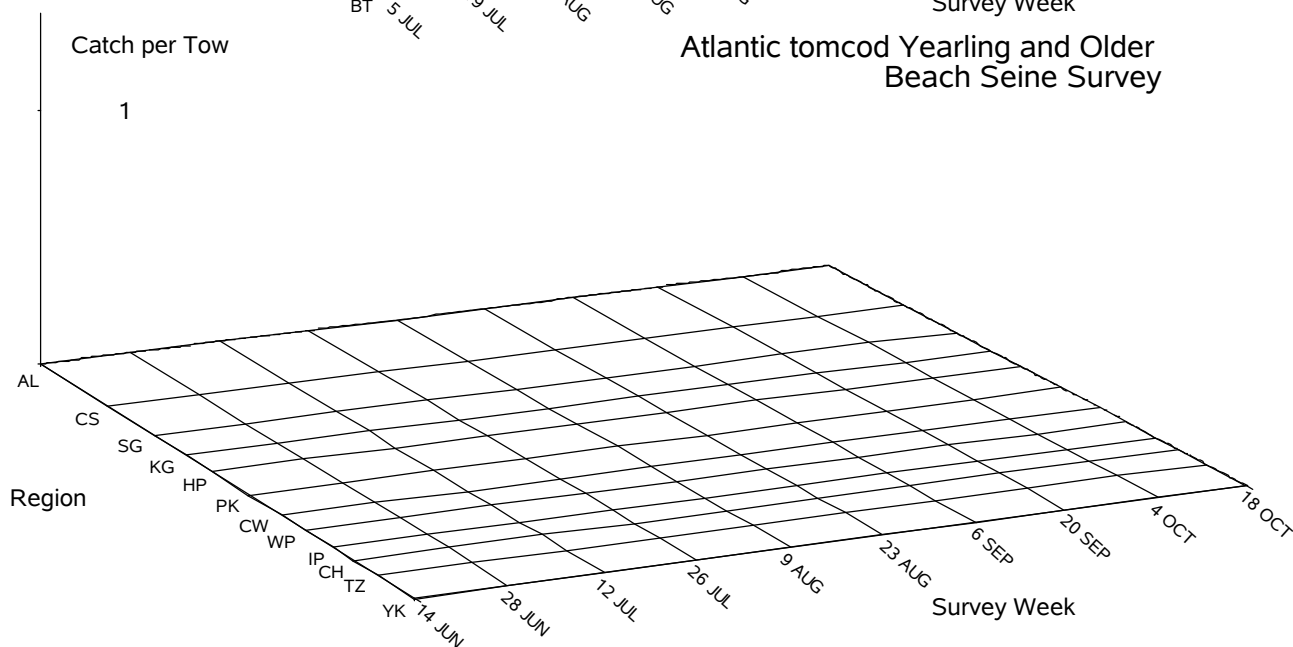
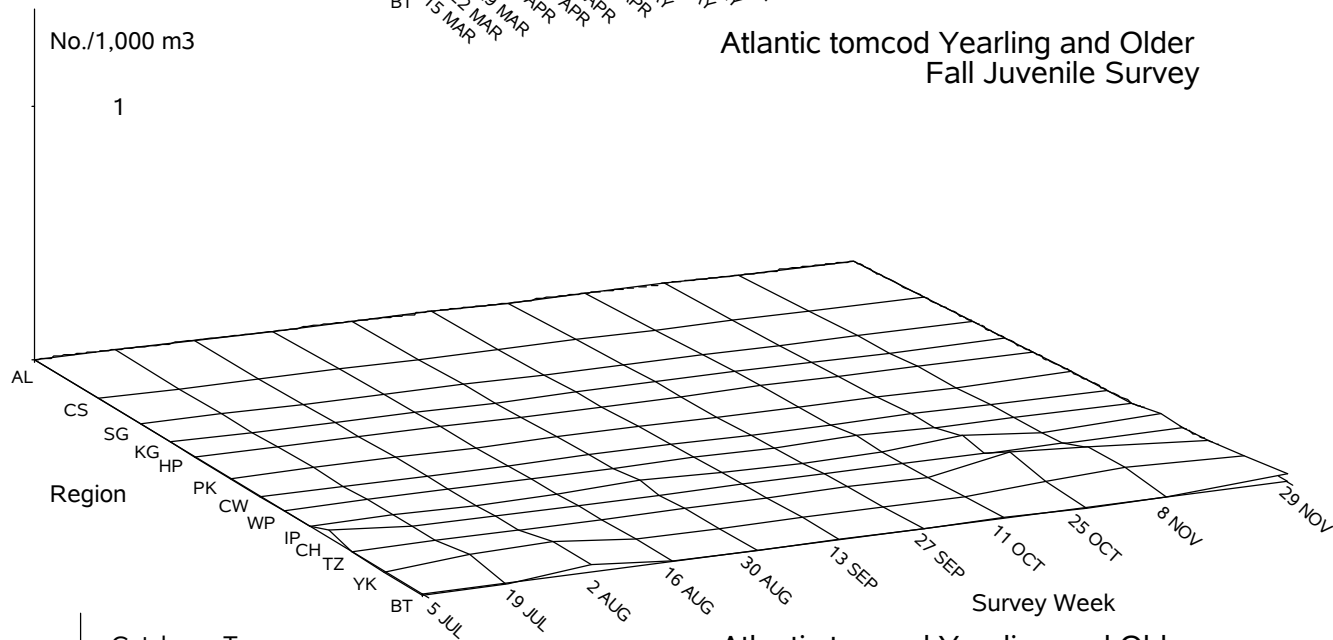
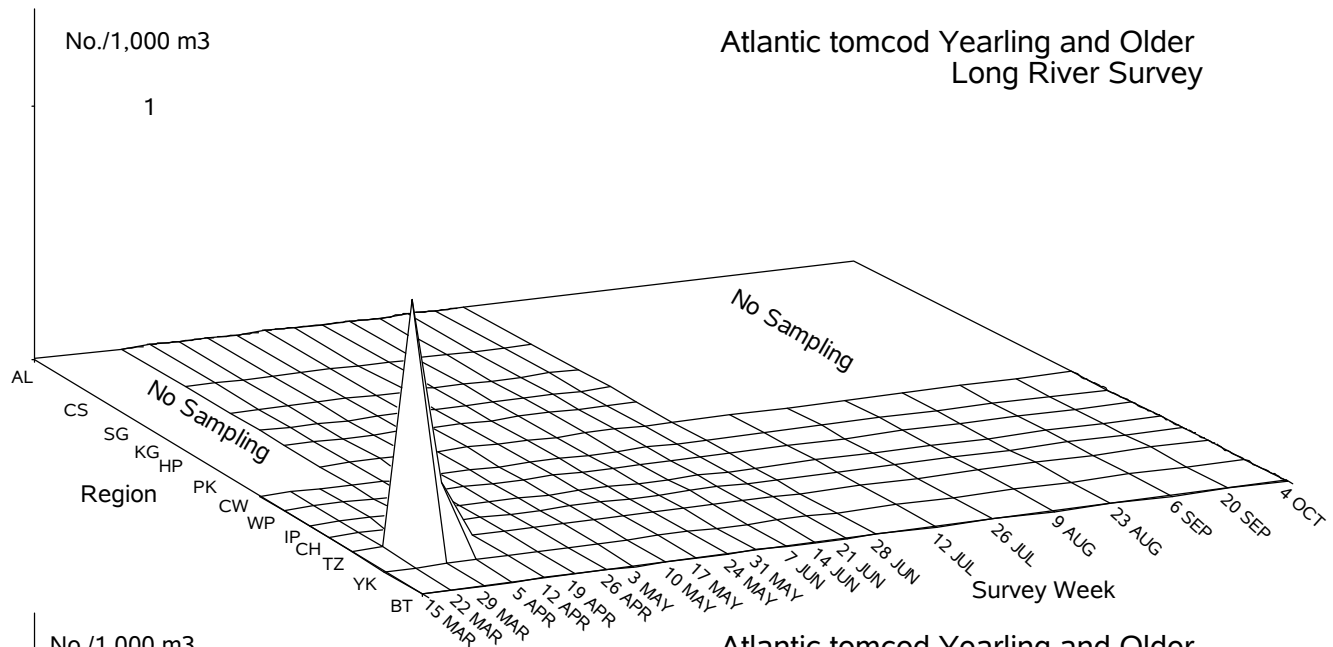


Figure 4-19. Spatiotemporal distribution of yearling and older Atlantic tomcod in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

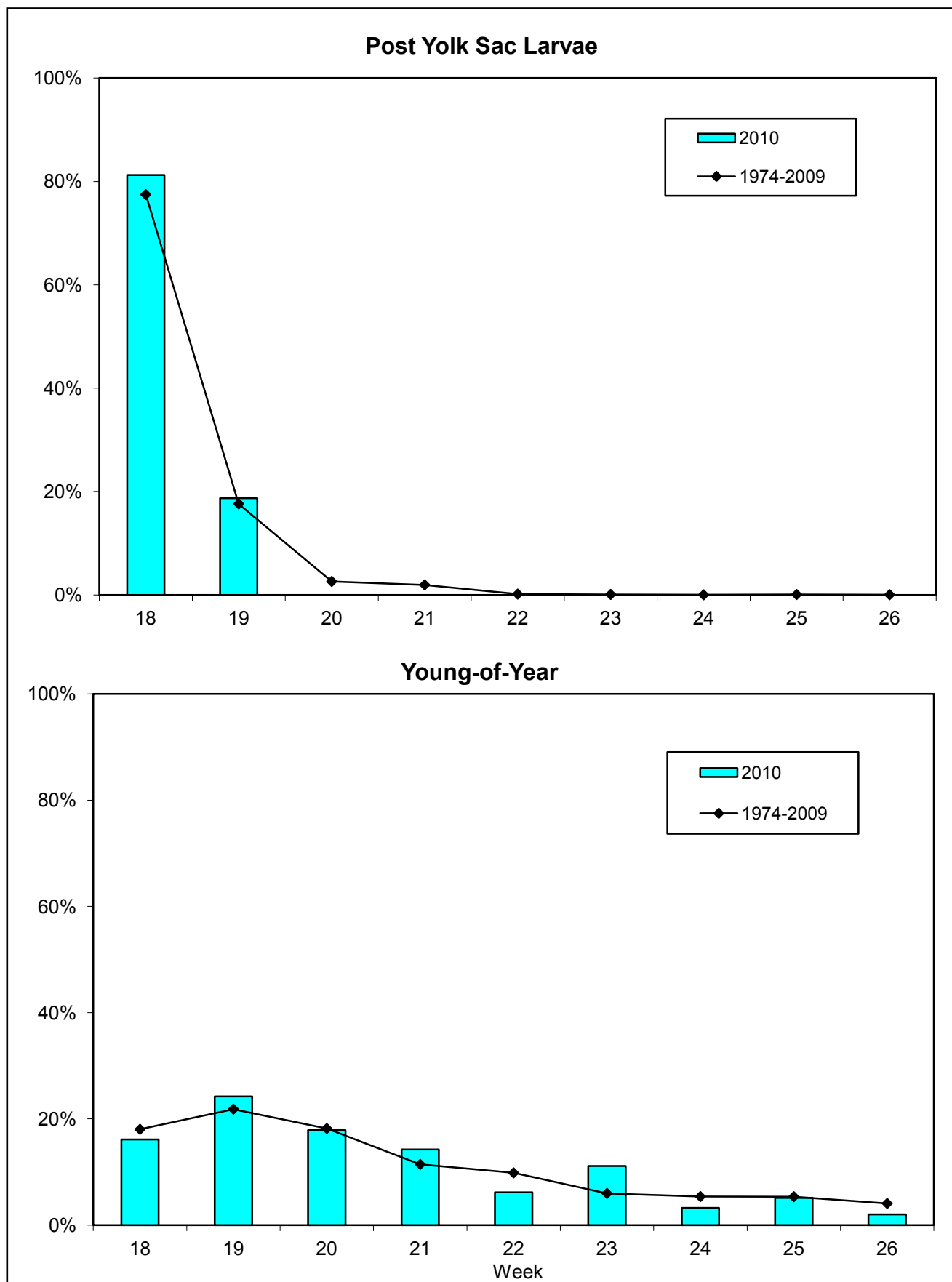


Figure 4-20. Temporal distribution indices for Atlantic tomcod collected during Long River surveys of the Hudson River estuary, 1974-2010.

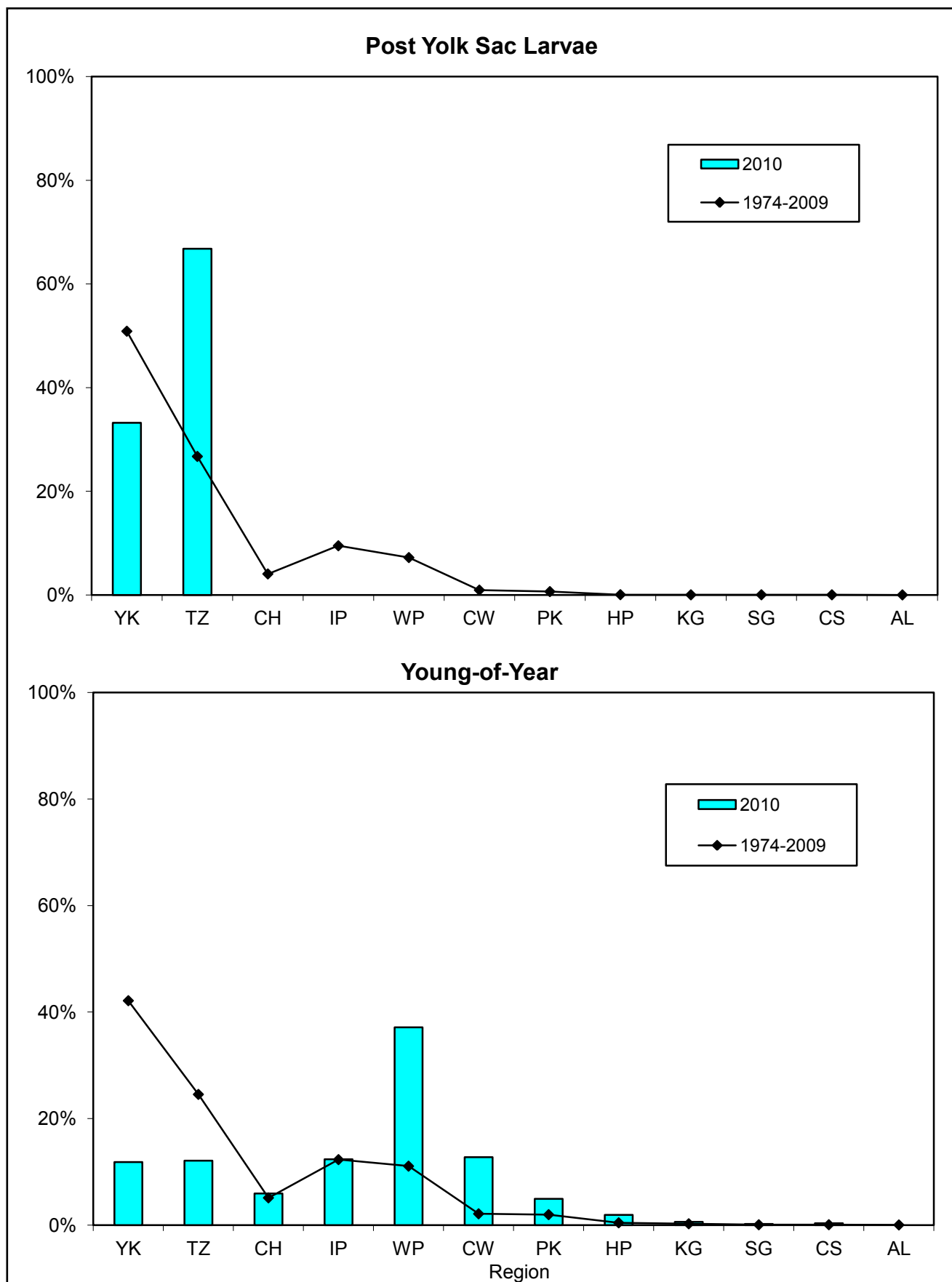


Figure 4-21. Geographic distribution indices for Atlantic tomcod collected during Long River surveys of the Hudson River estuary, 1974-2010.

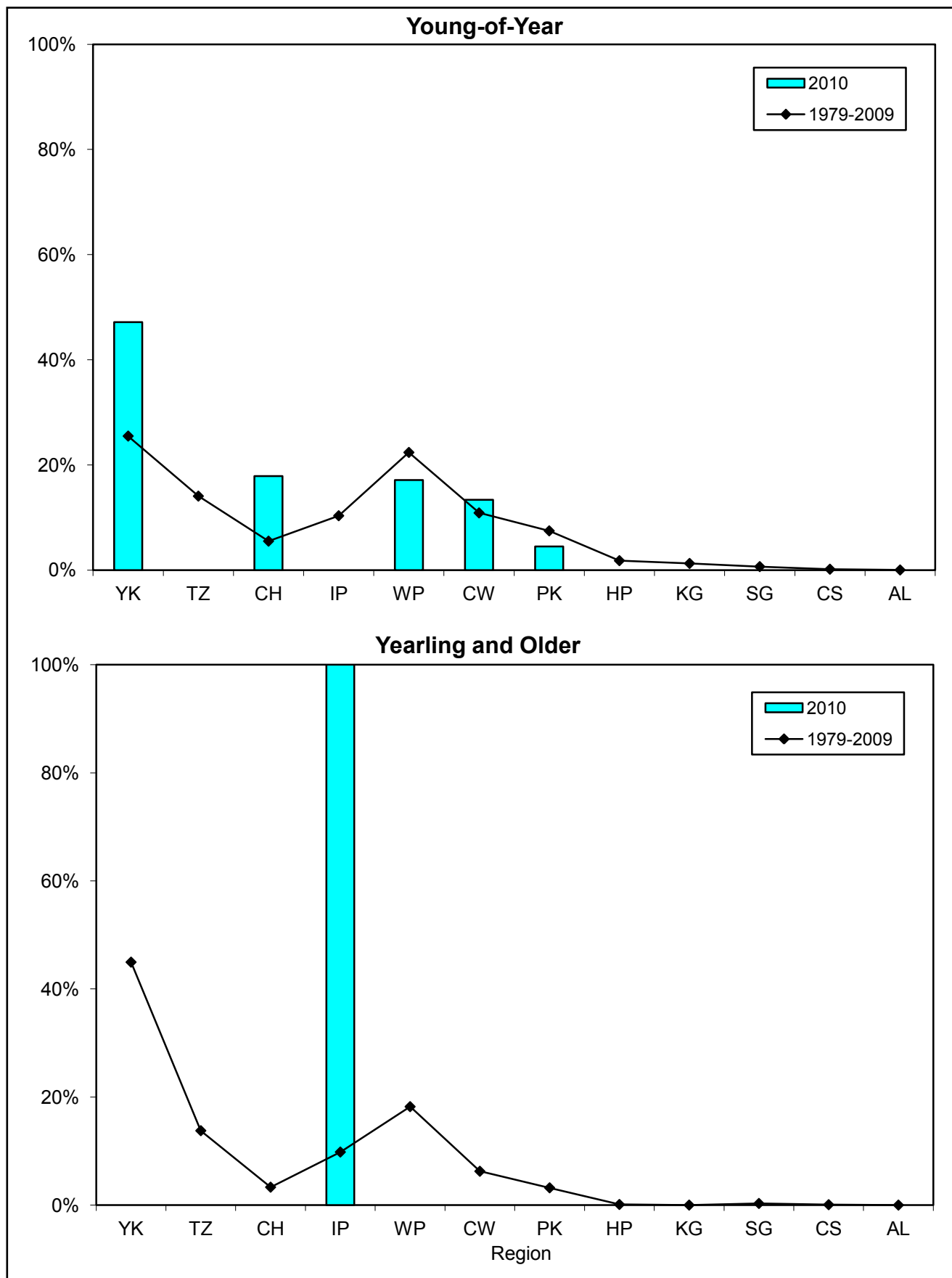


Figure 4-22. Geographic distribution indices for Atlantic tomcod collected during Fall Juvenile surveys of the Hudson River estuary, 1979-2010.

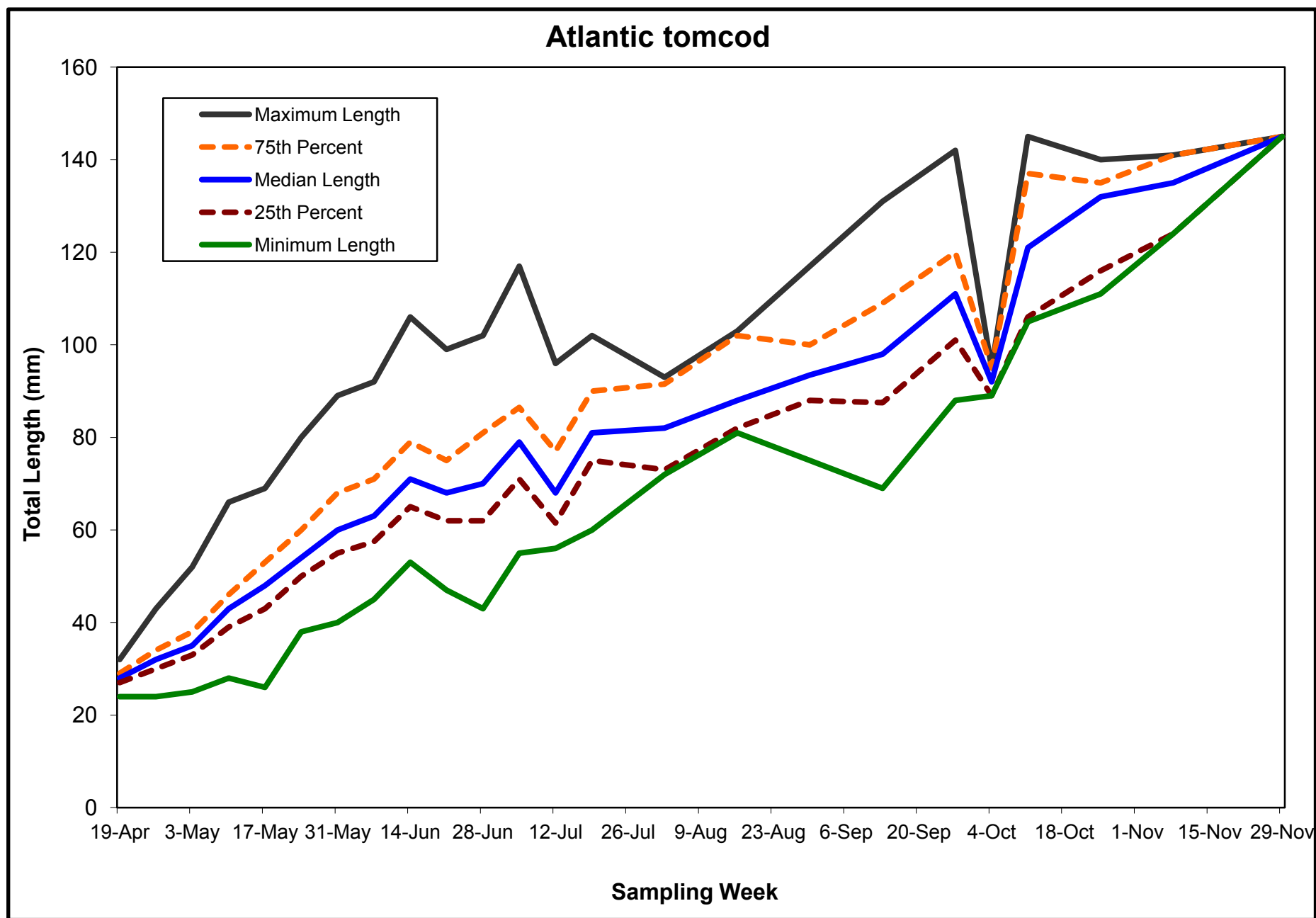


Figure 4-23. Weekly length statistics for young-of-year Atlantic tomcod in the Hudson River estuary, 2010.

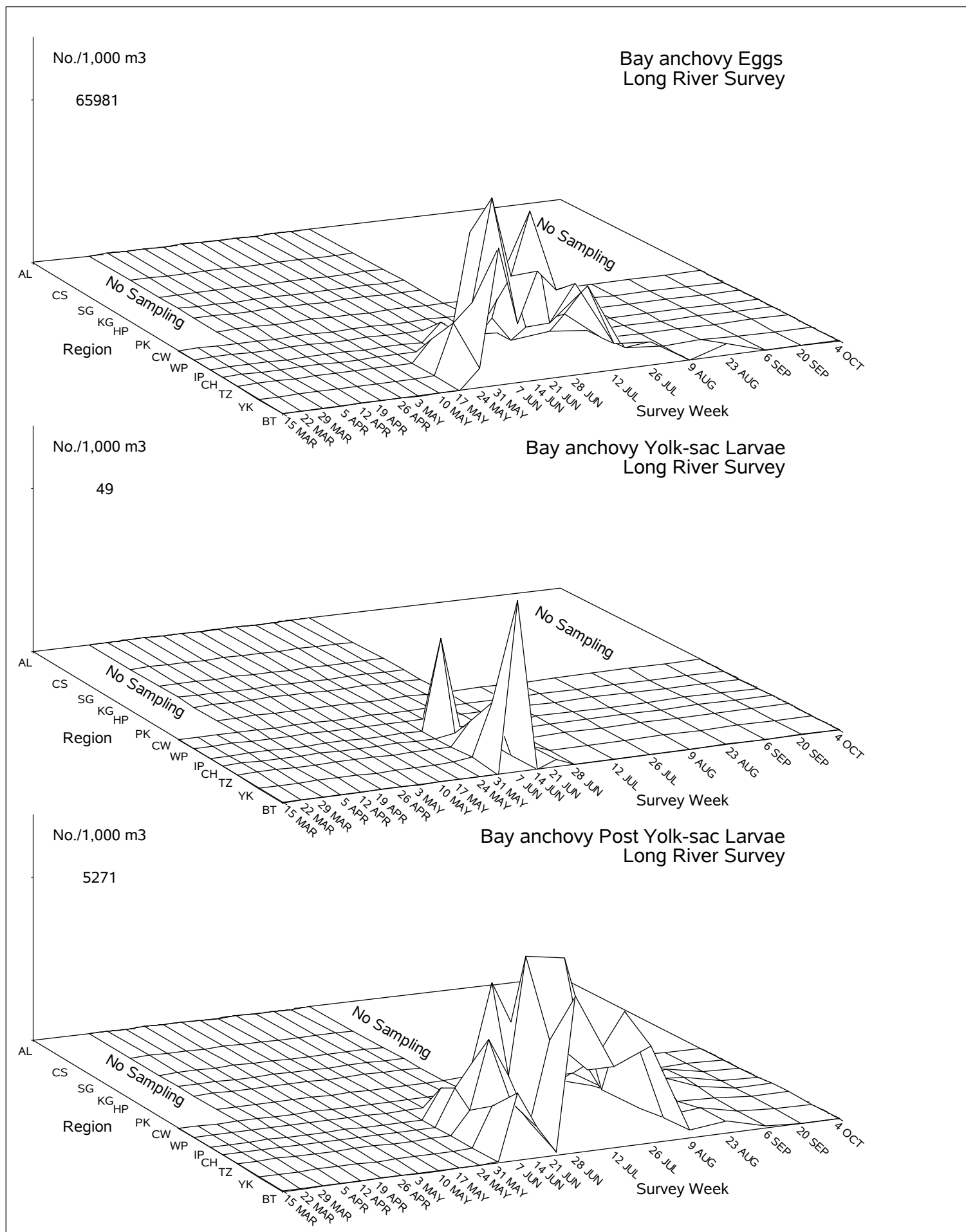


Figure 4-24. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval bay anchovy in the Hudson River estuary based on the 2010 Long River Survey.

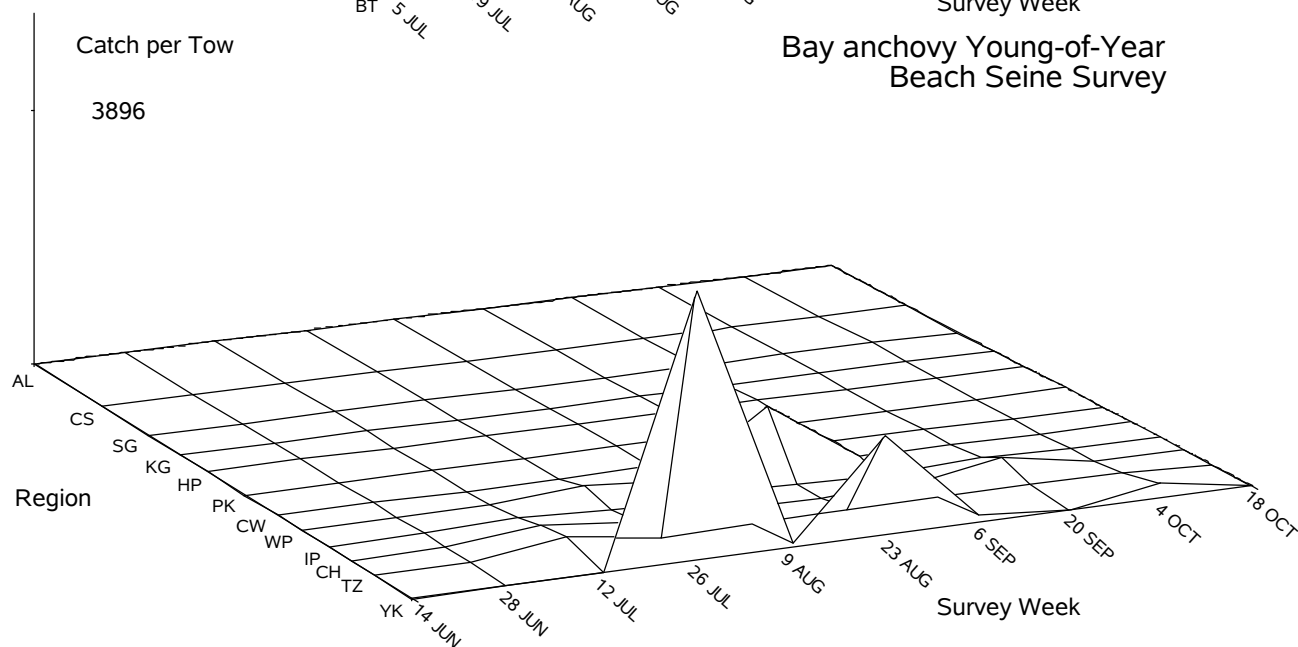
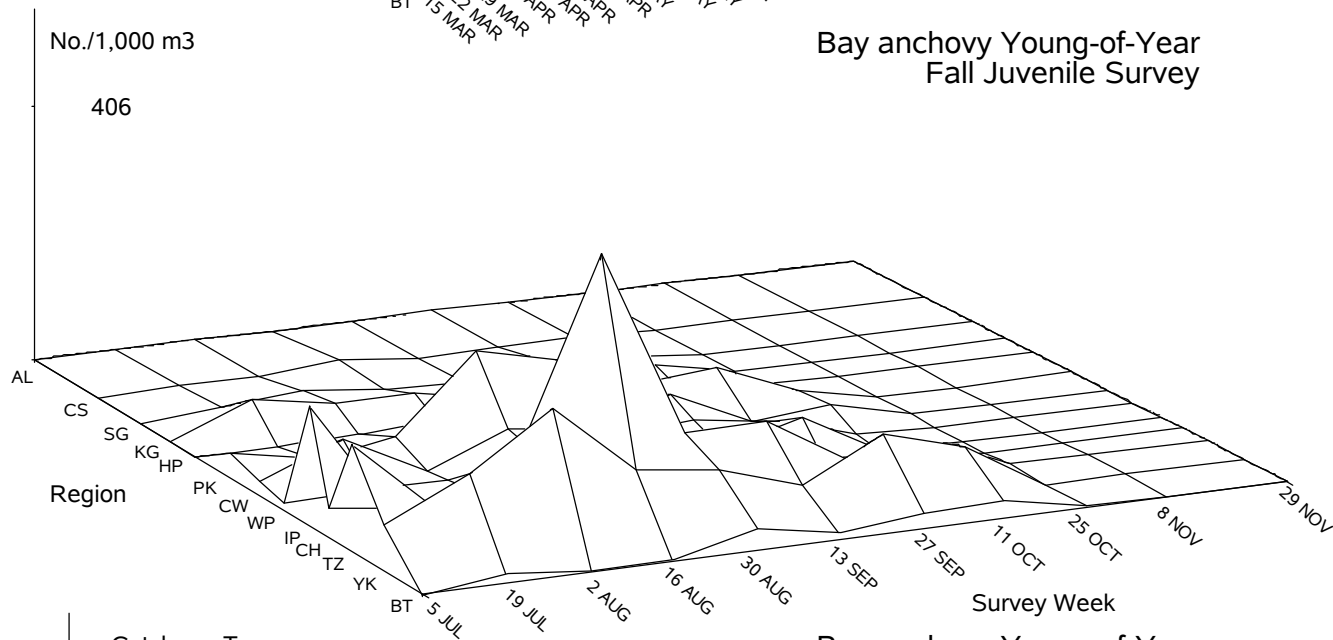
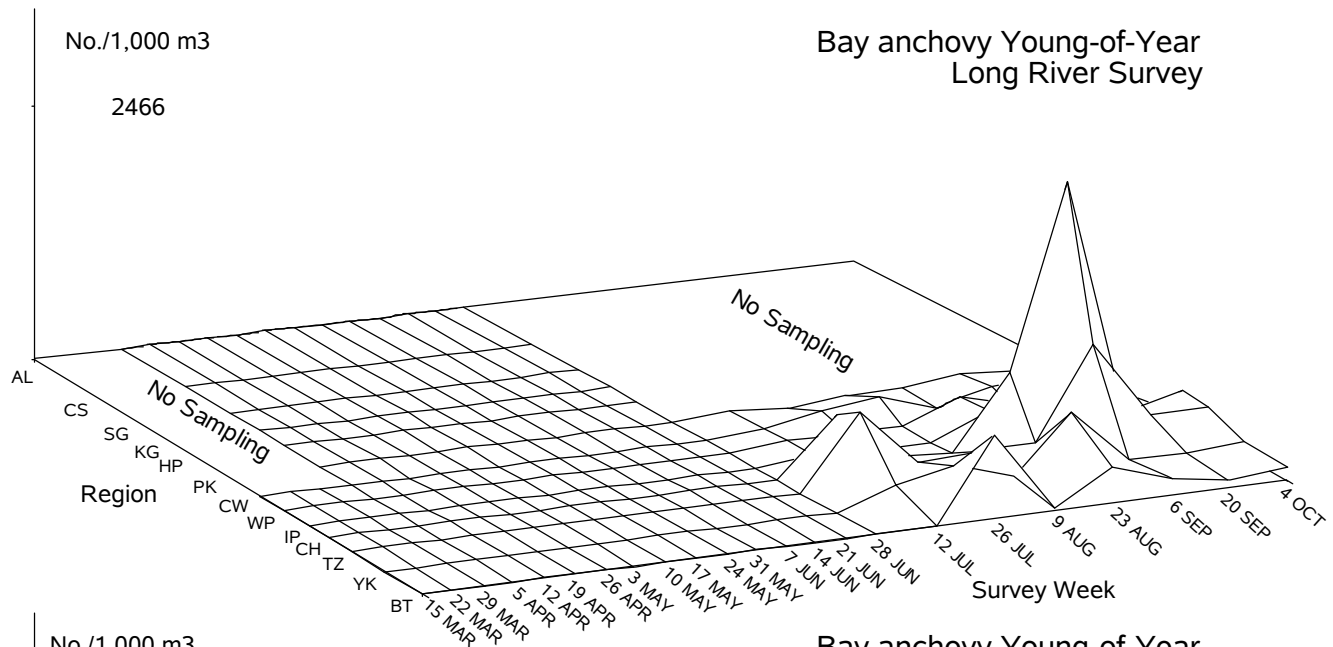


Figure 4-25. Spatiotemporal distribution of young-of-year bay anchovy in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

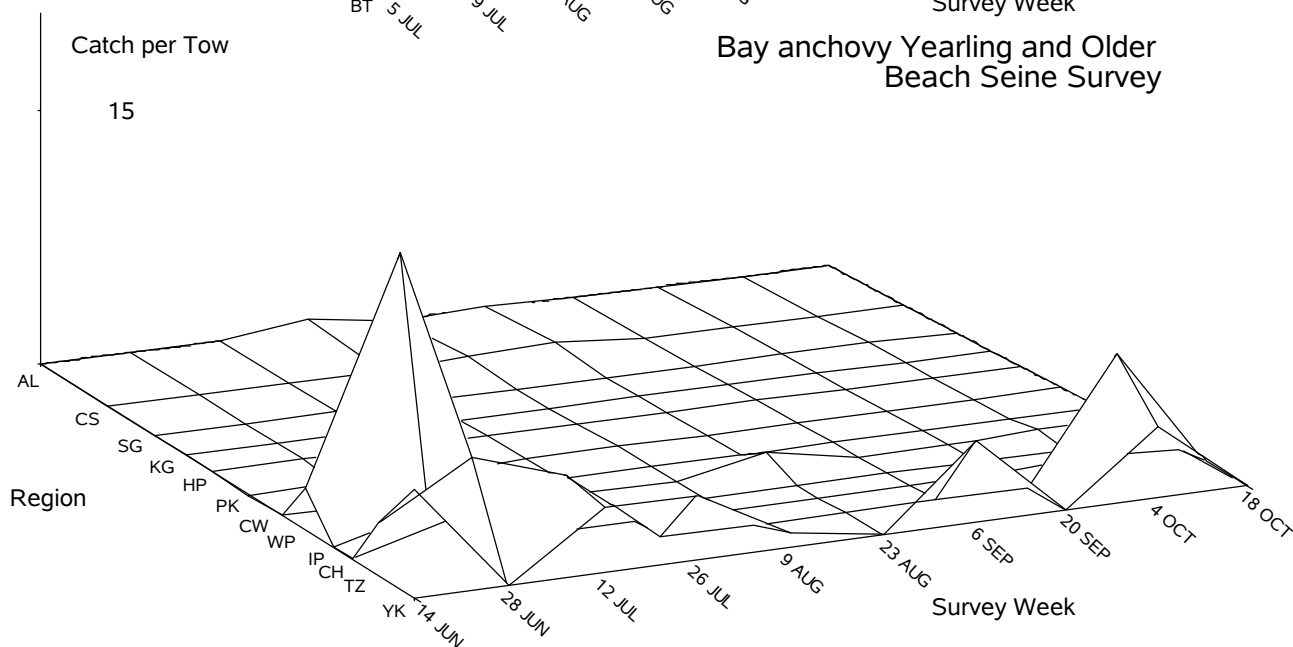
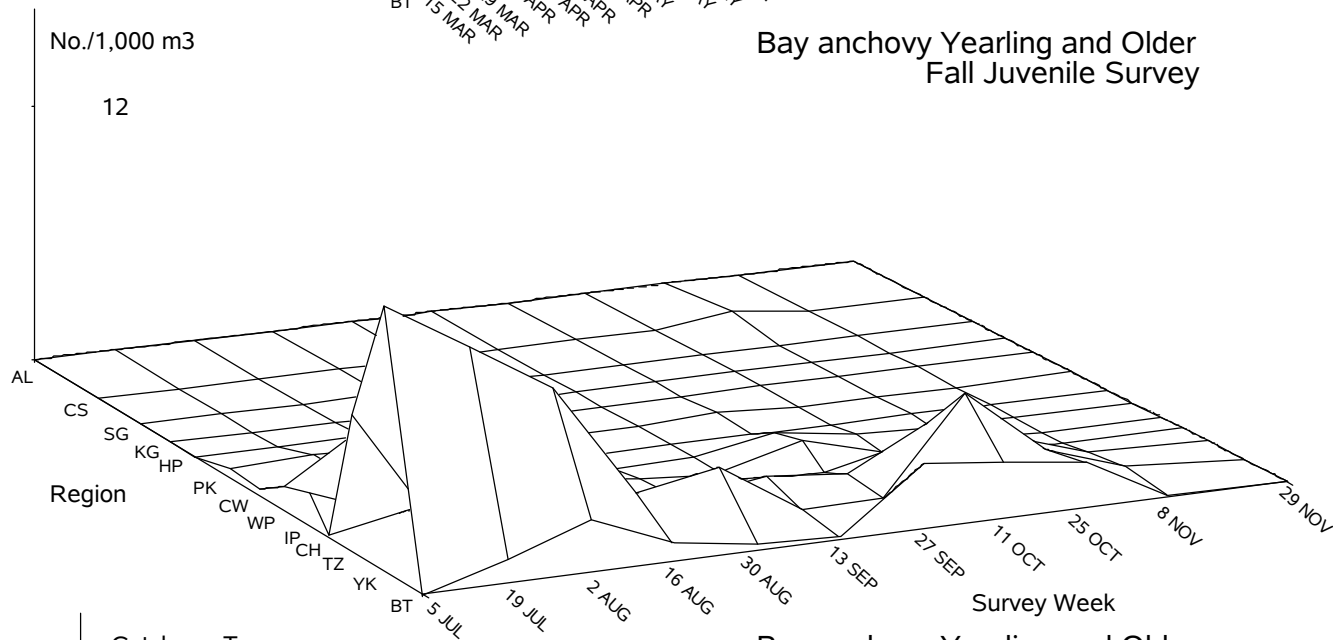
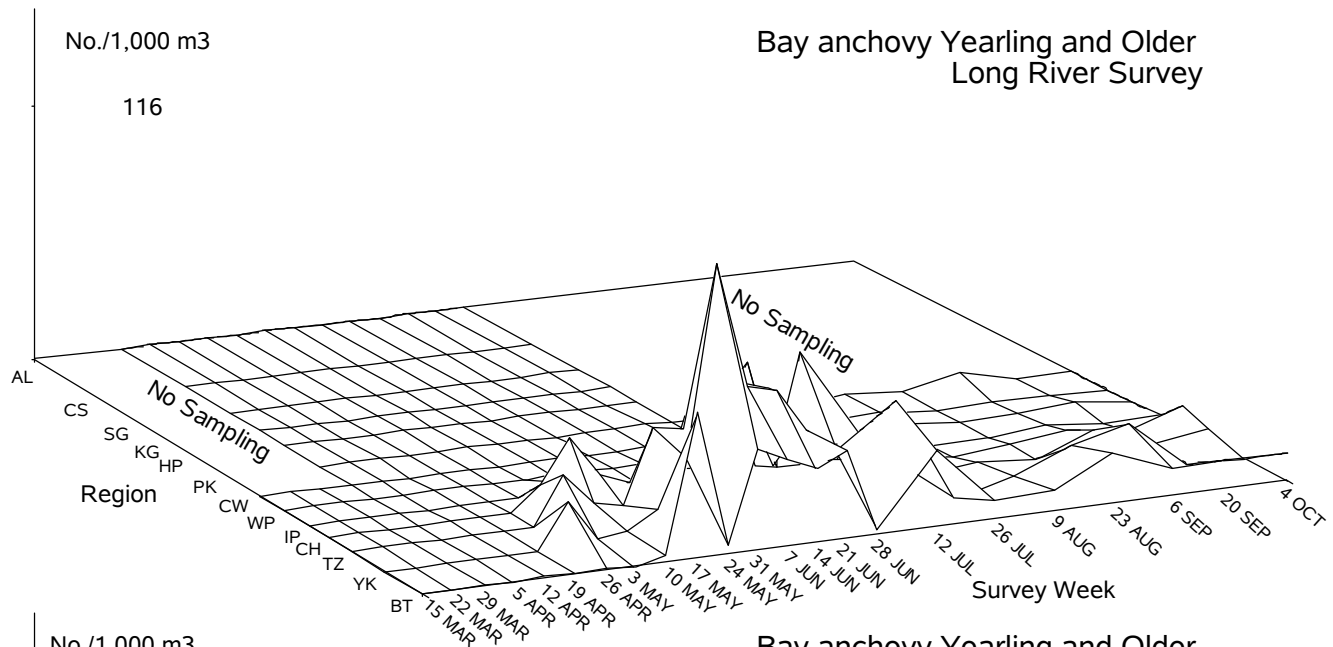


Figure 4-26. Spatiotemporal distribution of yearling and older bay anchovy in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

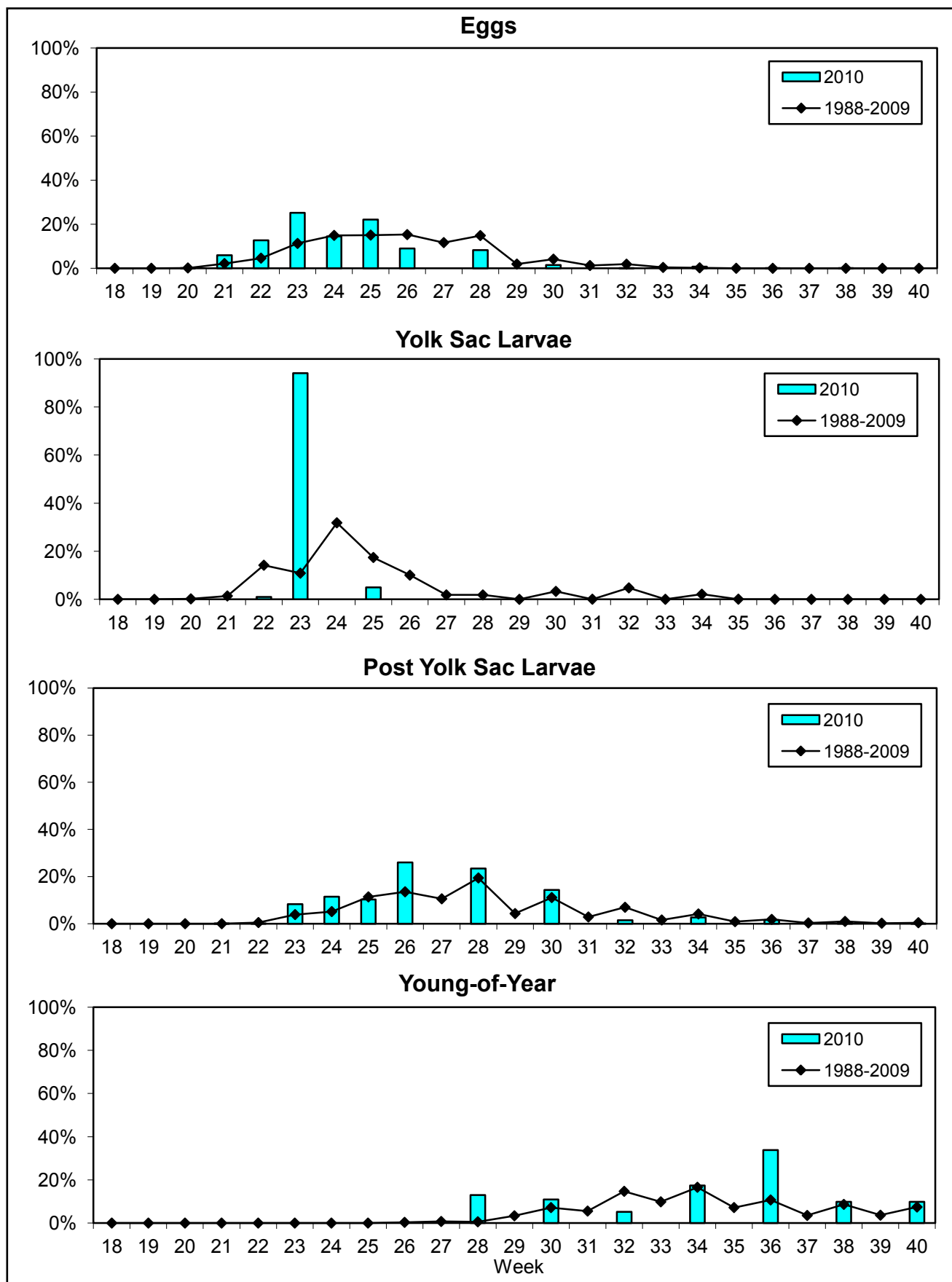


Figure 4-27. Temporal distribution indices for bay anchovy collected during Long River surveys of the Hudson River estuary, 1988-2010.

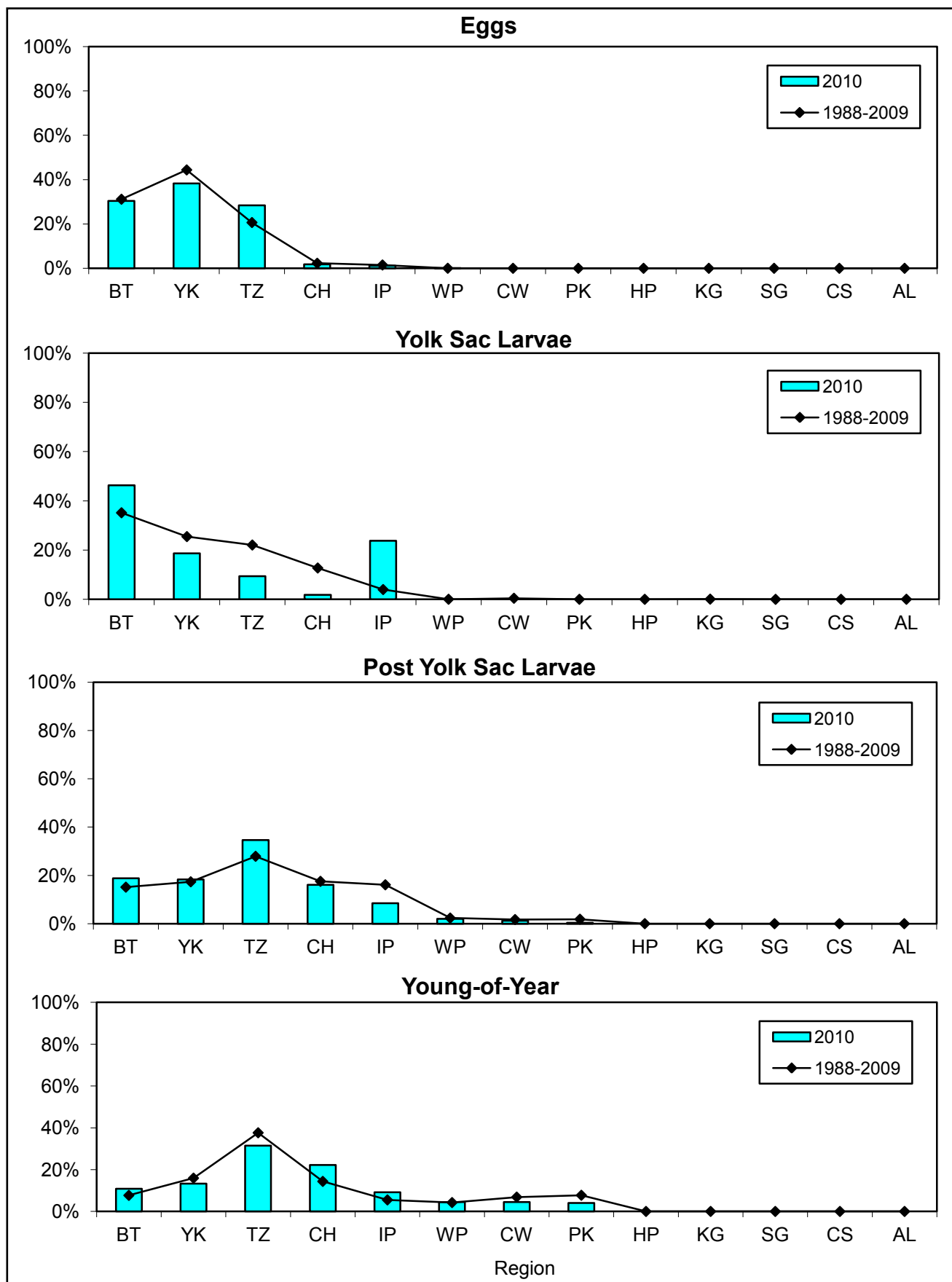


Figure 4-28. Geographic distribution indices for bay anchovy collected during Long River surveys of the Hudson River estuary, 1988-2010.

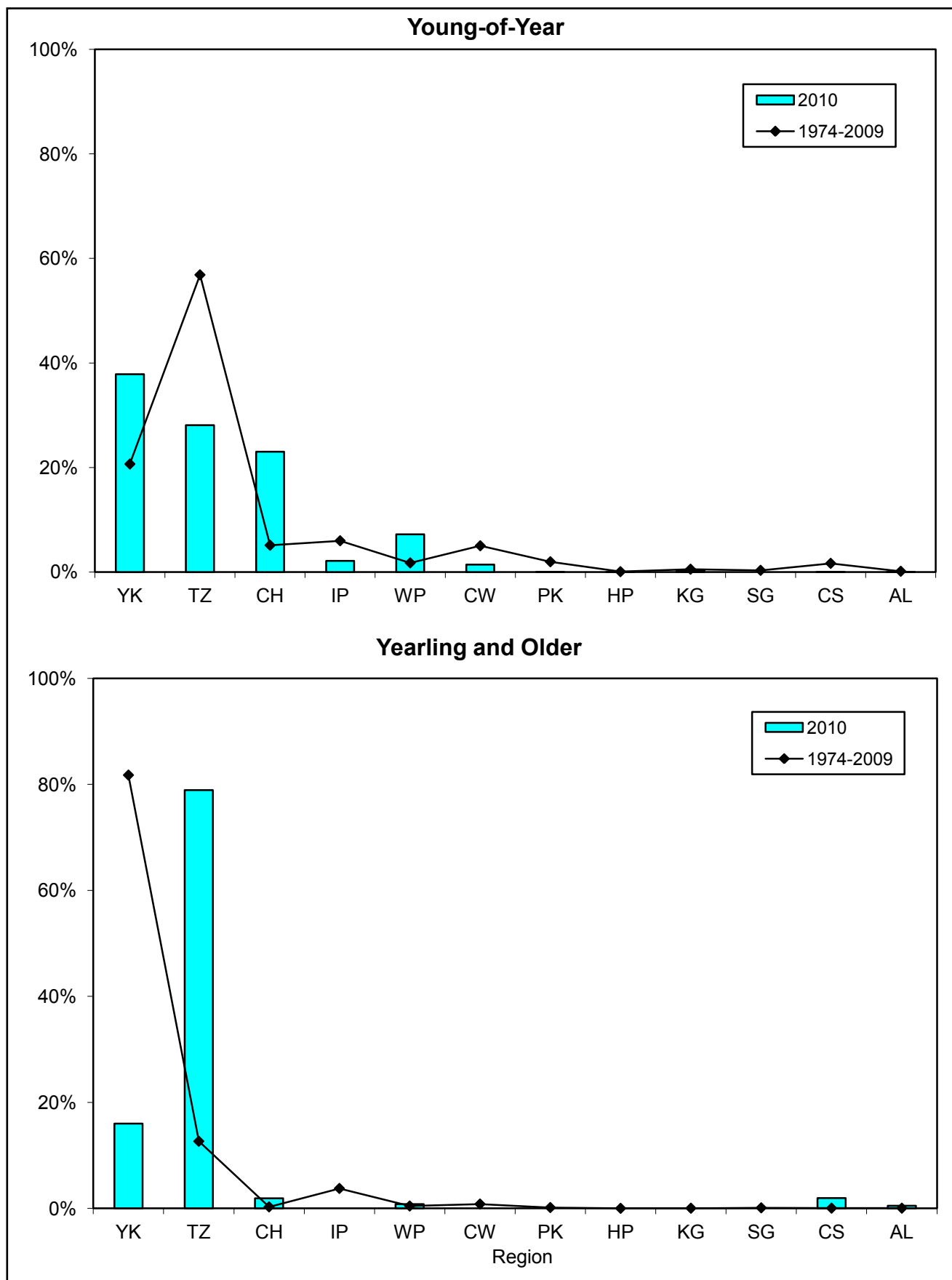


Figure 4-29. Geographic distribution indices for bay anchovy collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

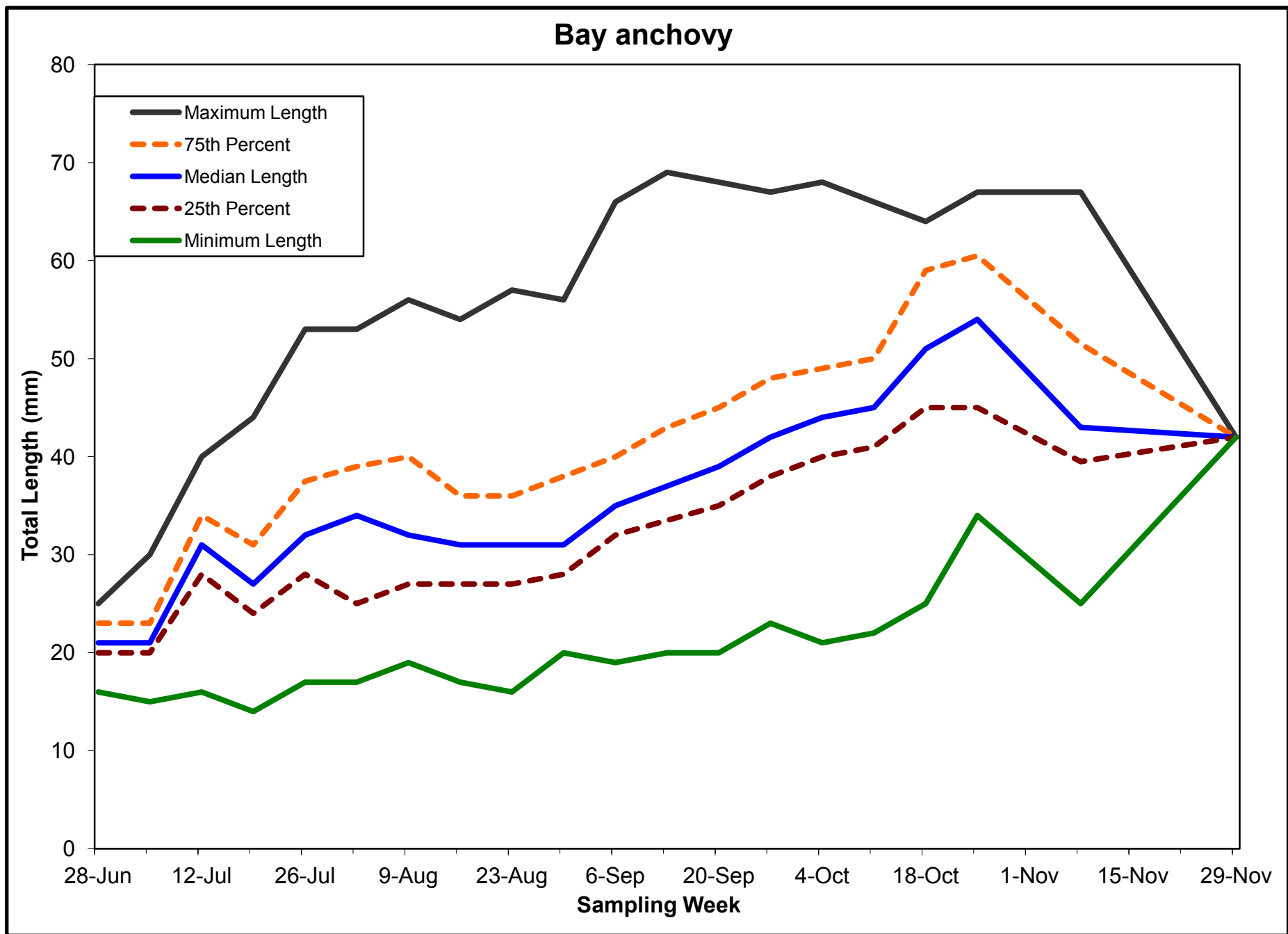


Figure 4-30. Weekly length statistics for young-of-year bay anchovy in the Hudson River estuary, 2010.

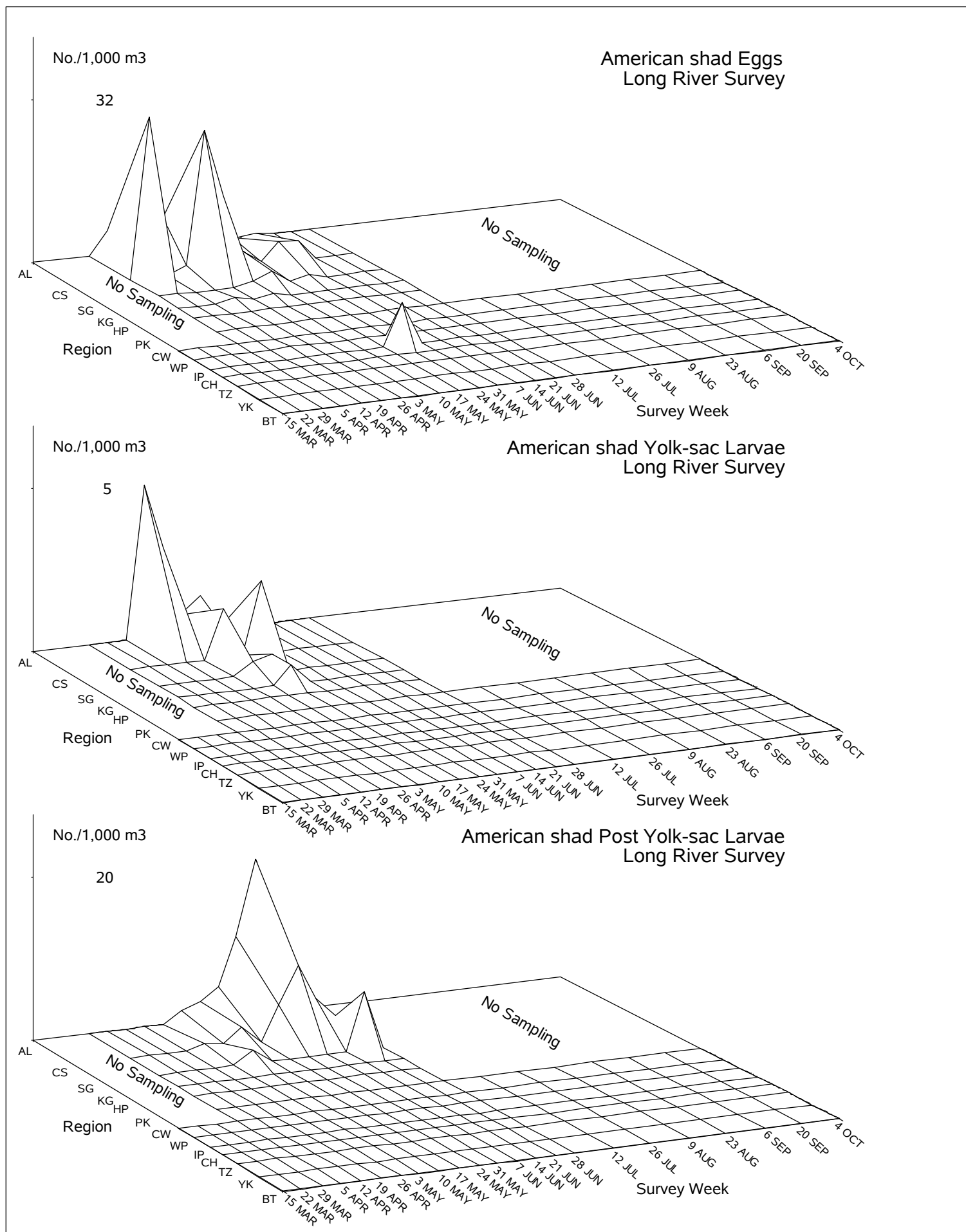


Figure 4-31. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval American shad in the Hudson River estuary based on the 2010 Long River Survey.

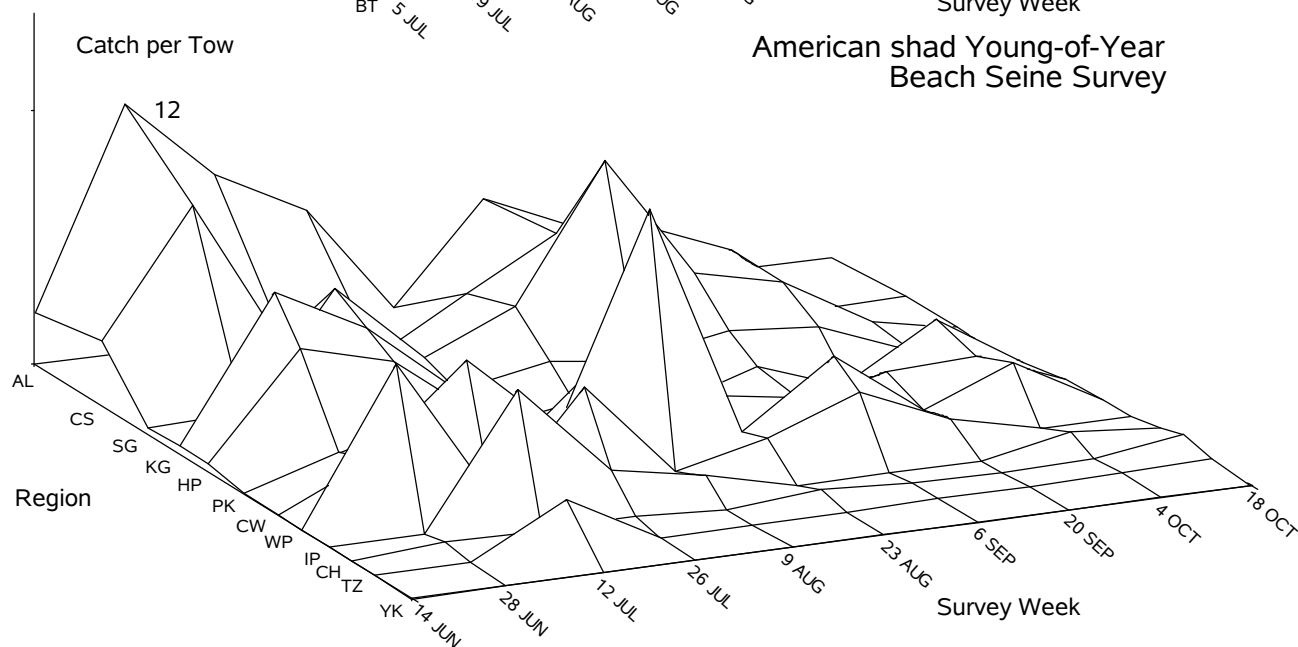
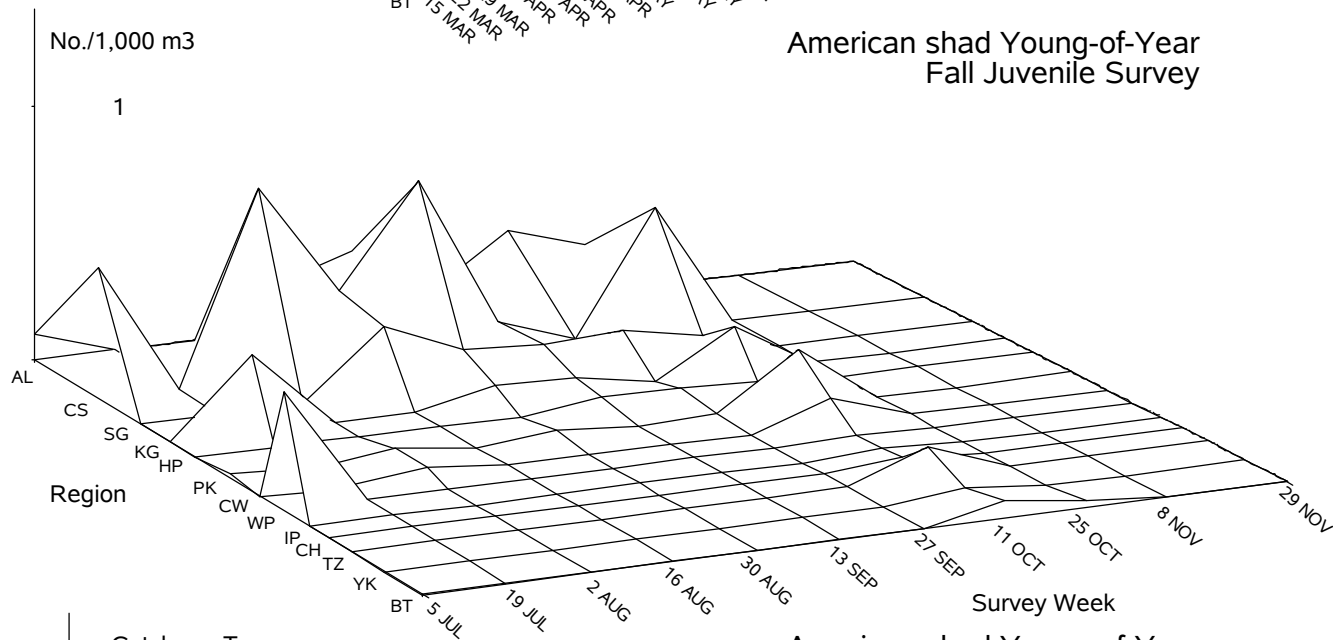
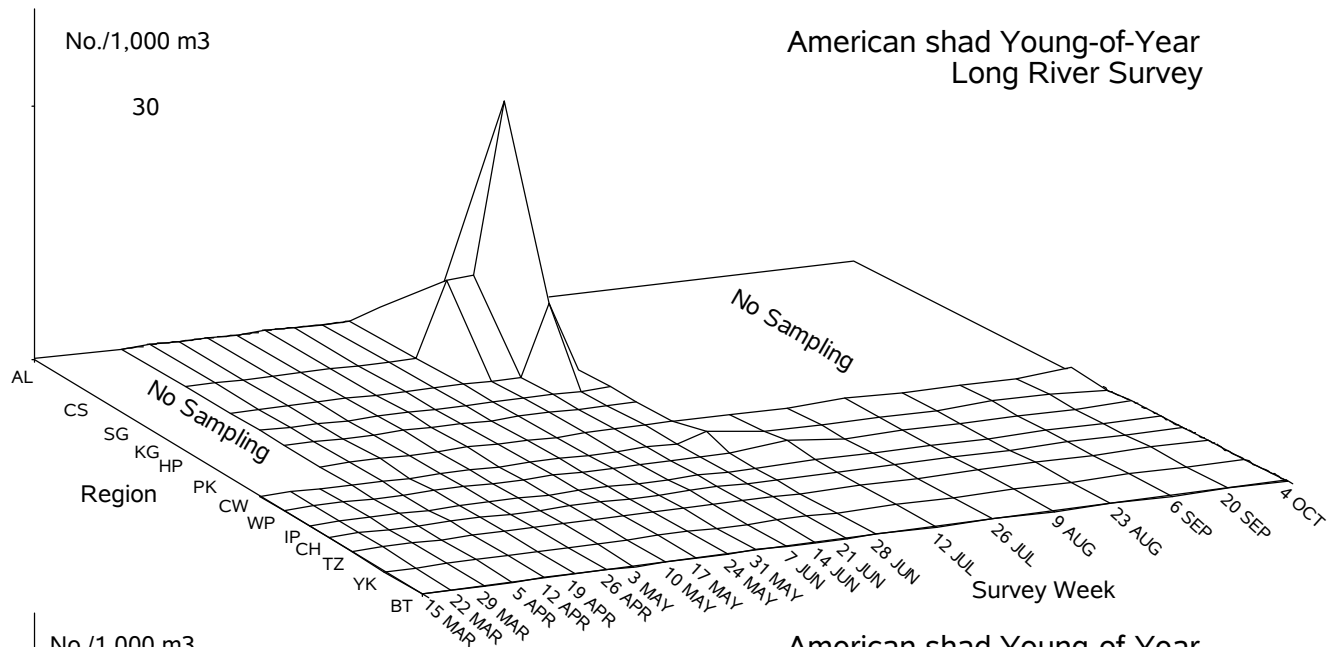


Figure 4-32. Spatiotemporal distribution of young-of-year American shad in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

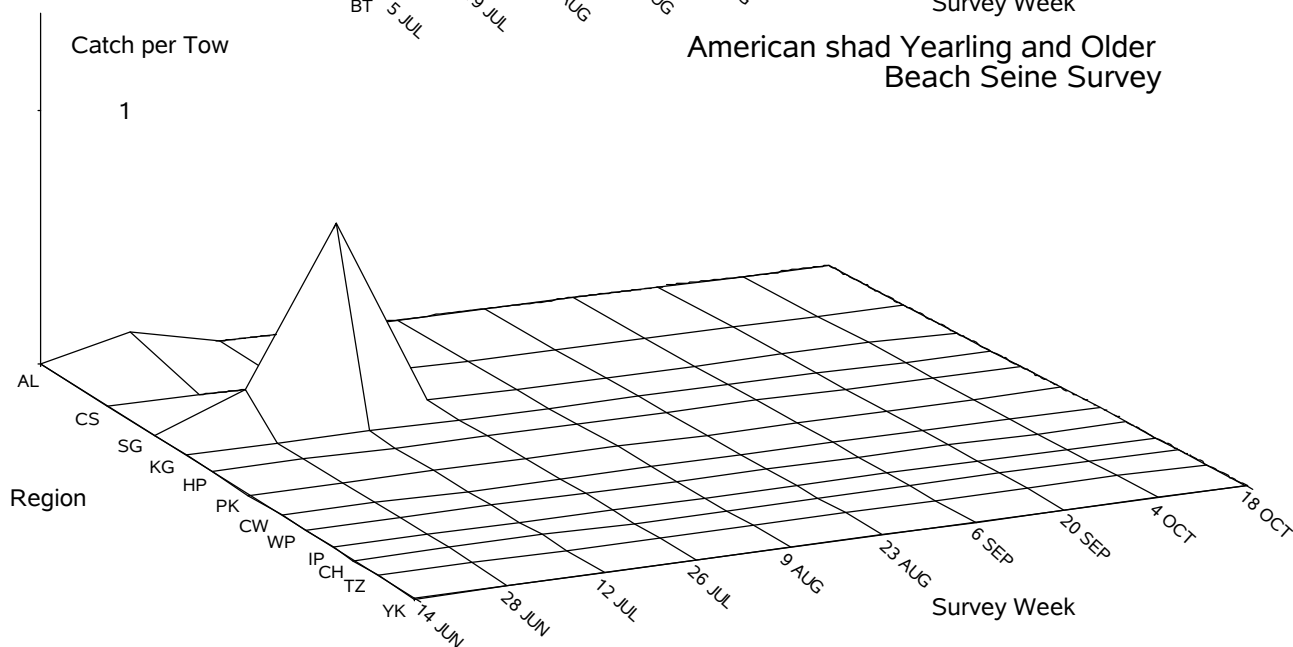
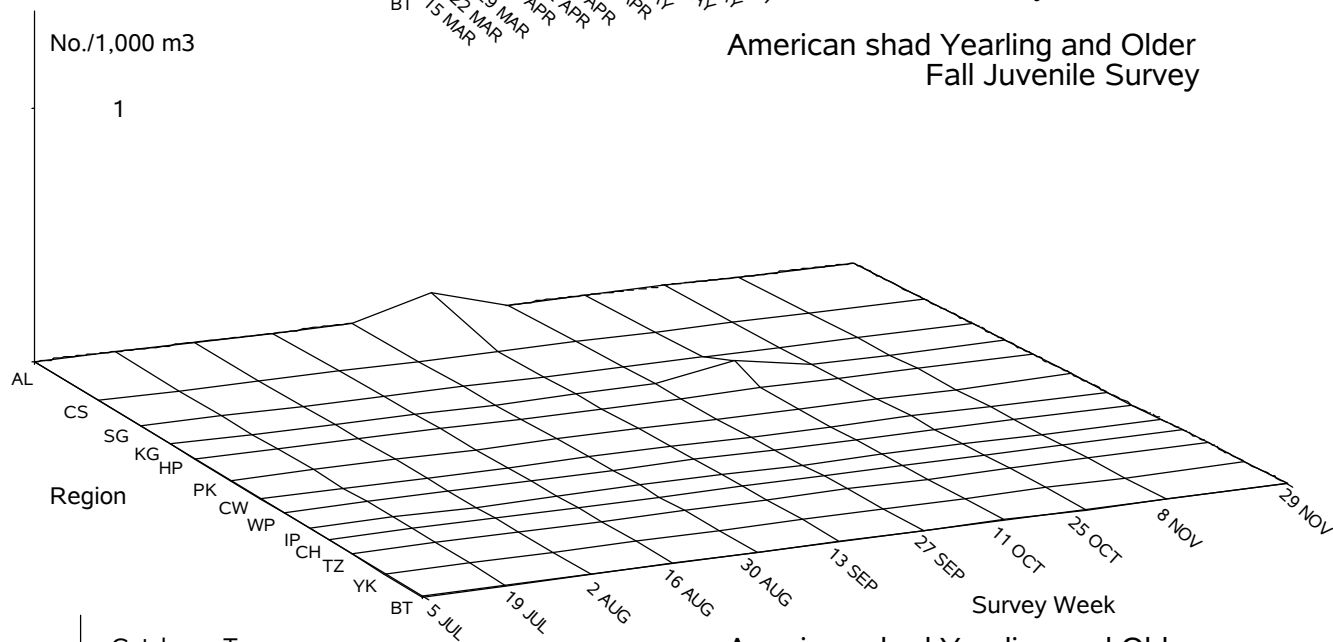
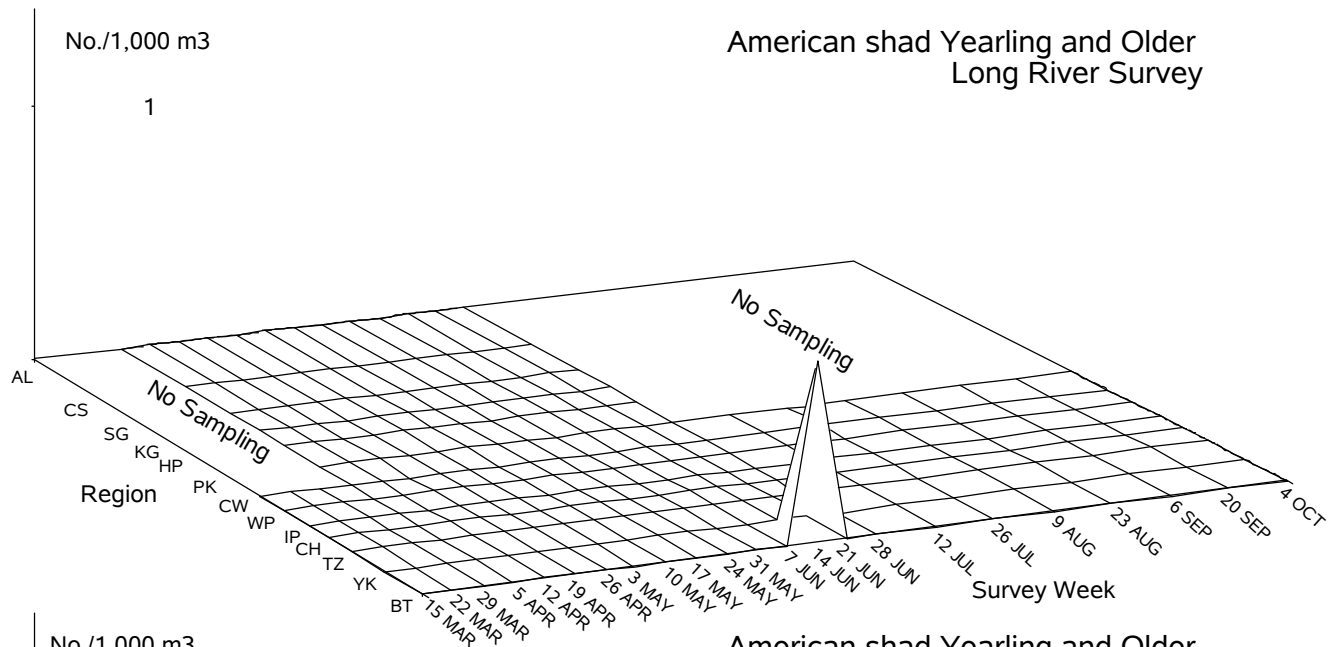


Figure 4-33. Spatiotemporal distribution of yearling and older American shad in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

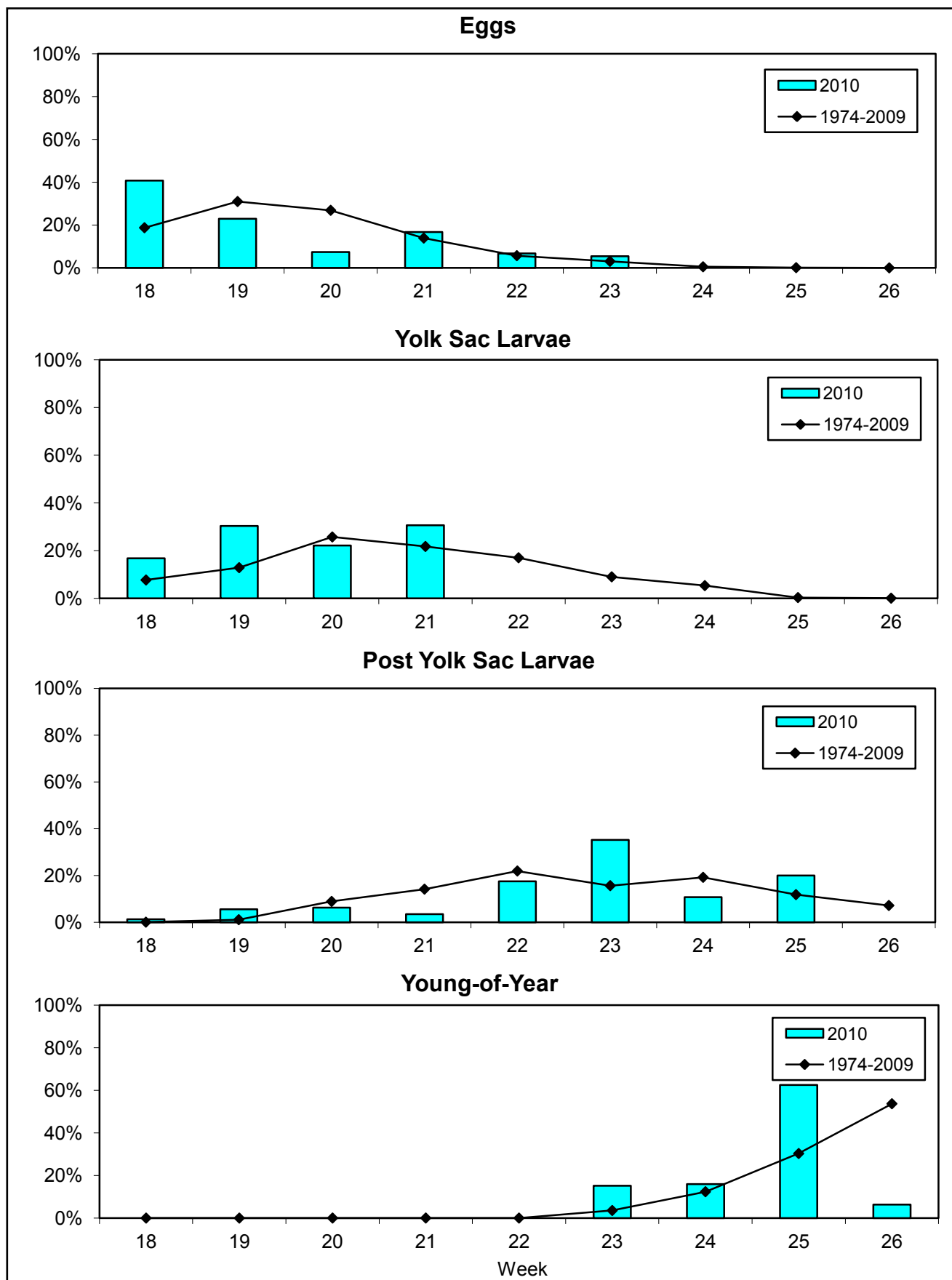


Figure 4-34. Temporal distribution indices for American shad collected during Long River surveys of the Hudson River estuary, 1974-2010.

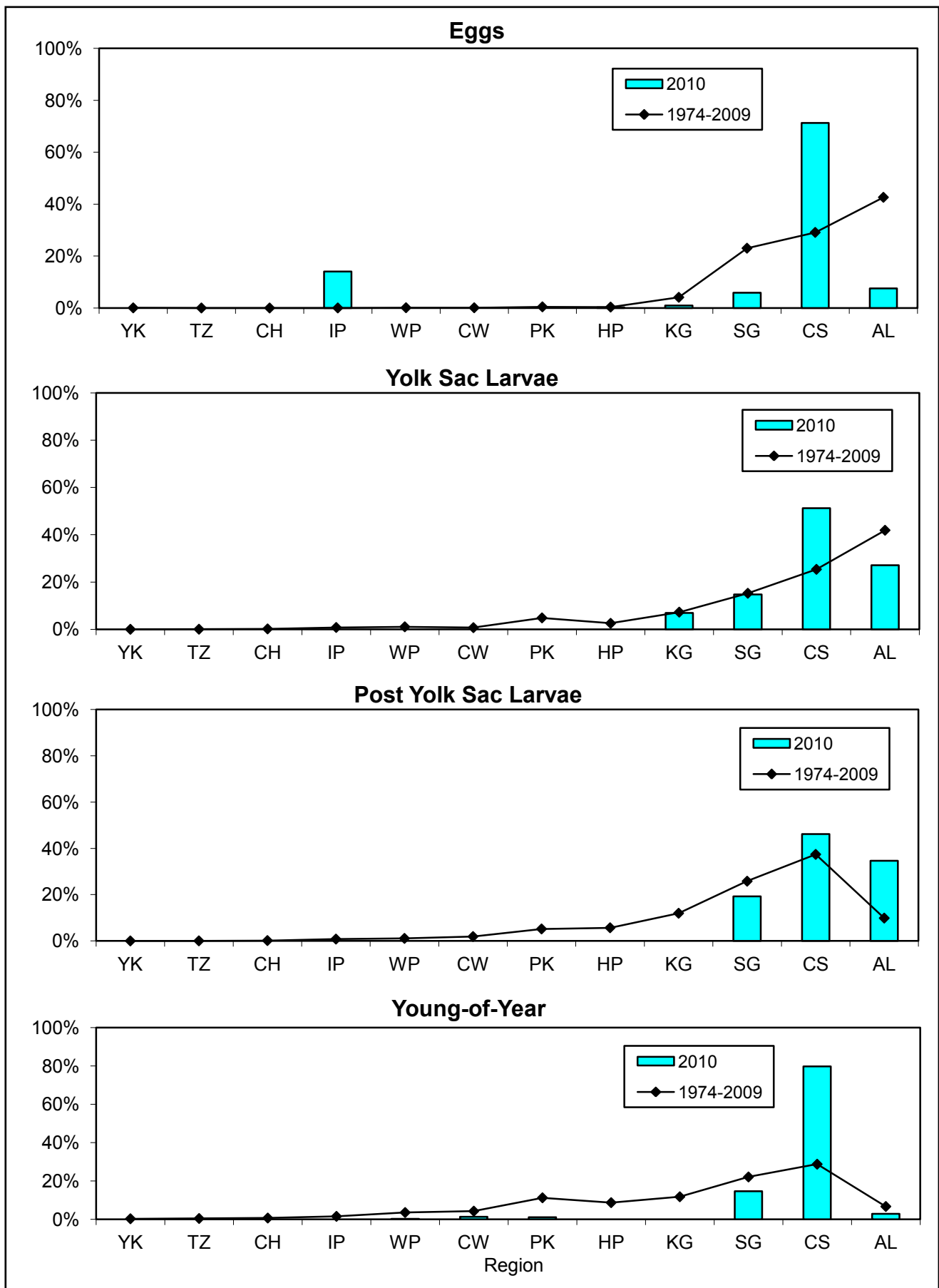


Figure 4-35. Geographic distribution indices for American shad collected during Long River surveys of the Hudson River estuary, 1974-2010.

Young-of-Year

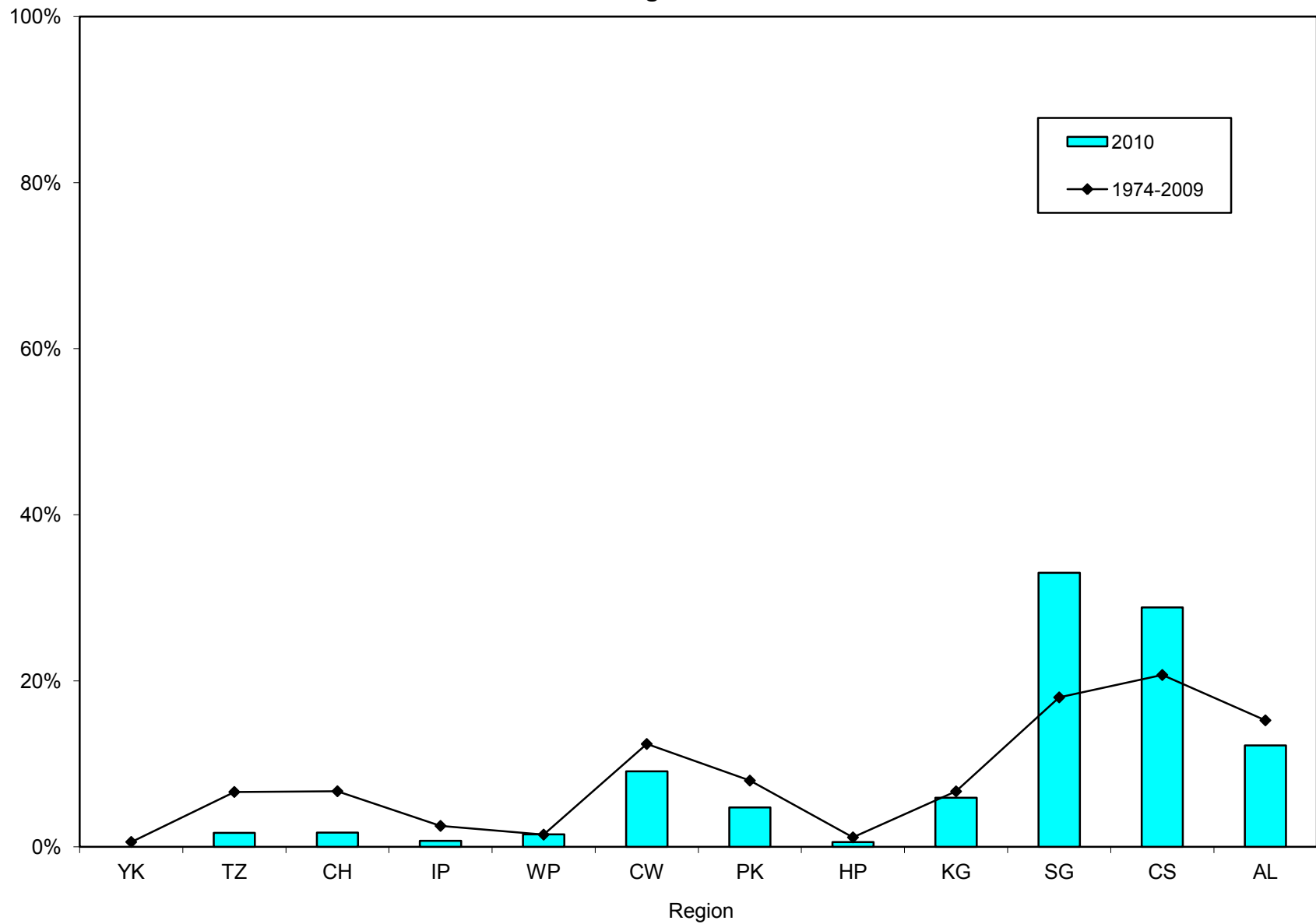


Figure 4-36. Geographic distribution indices for American shad collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

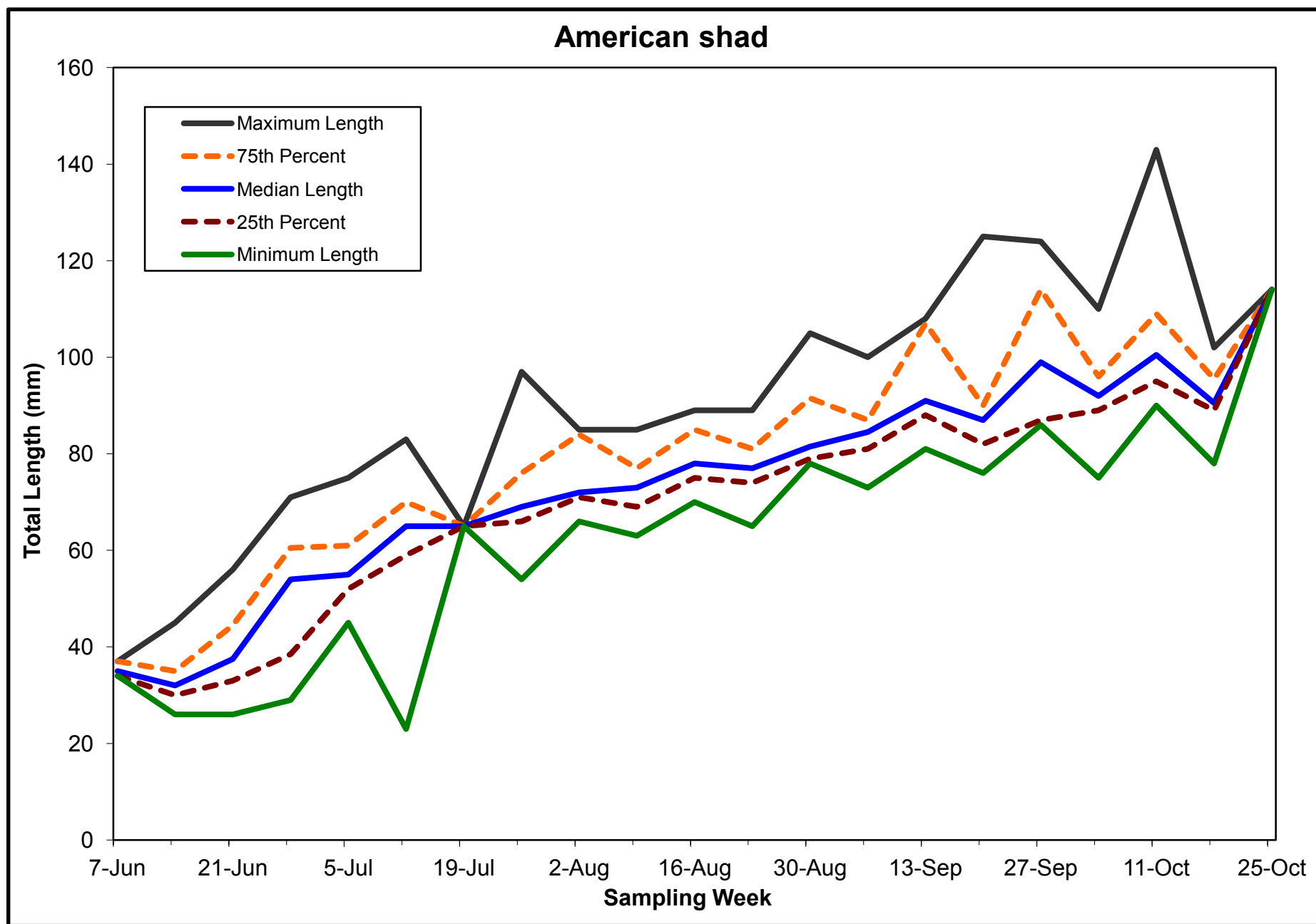


Figure 4-37. Weekly length statistics for young-of-year American shad in the Hudson River estuary, 2010.

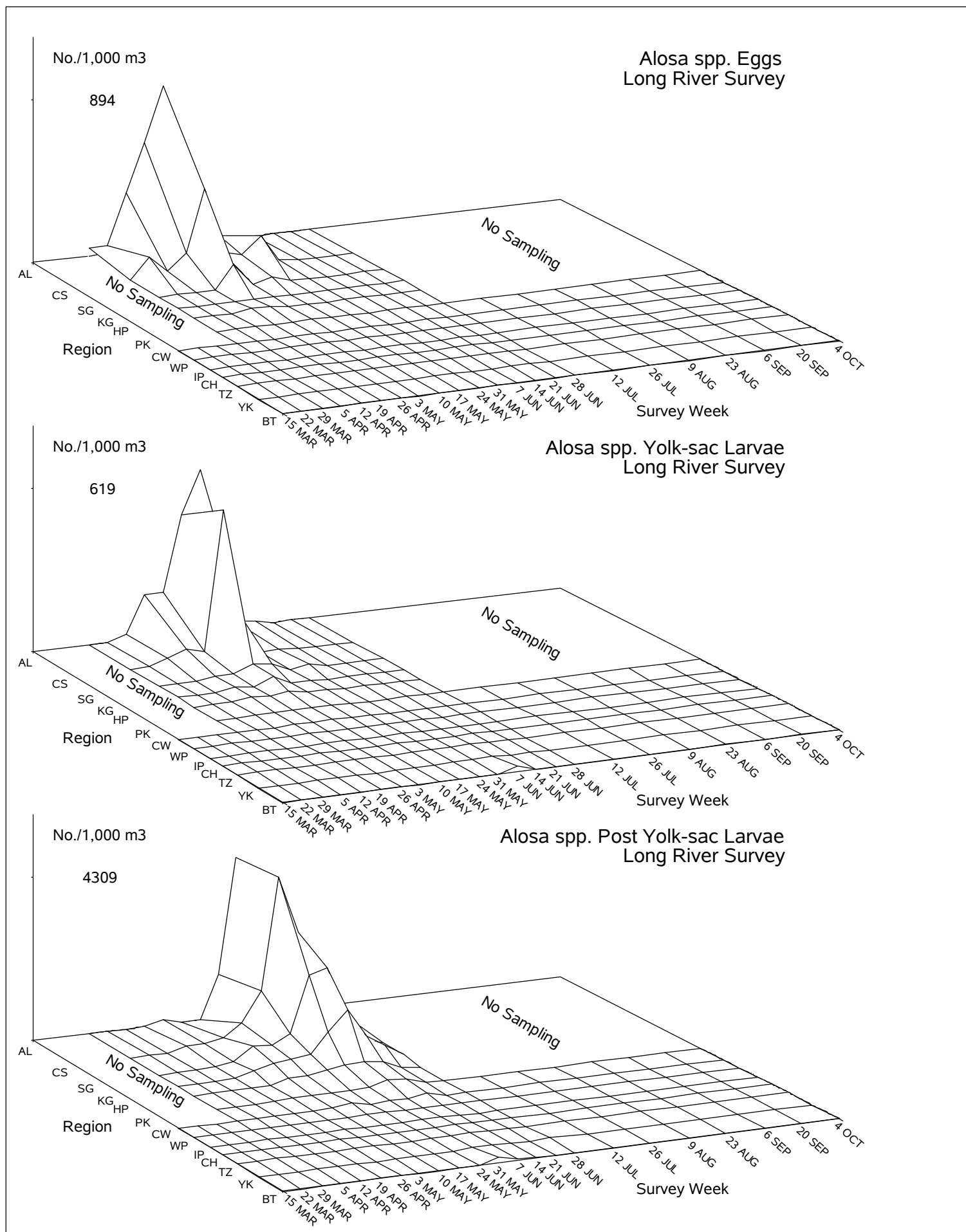


Figure 4-38. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval *Alosa* spp. in the Hudson River estuary based on the 2010 Long River Survey.

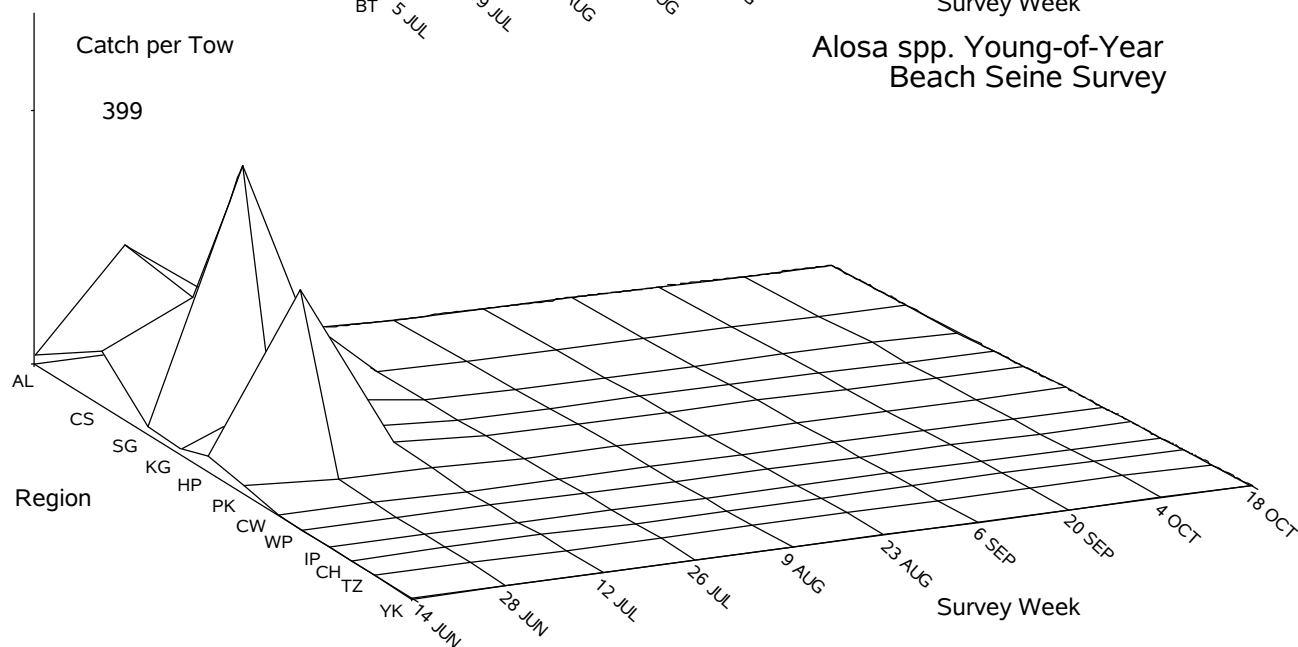
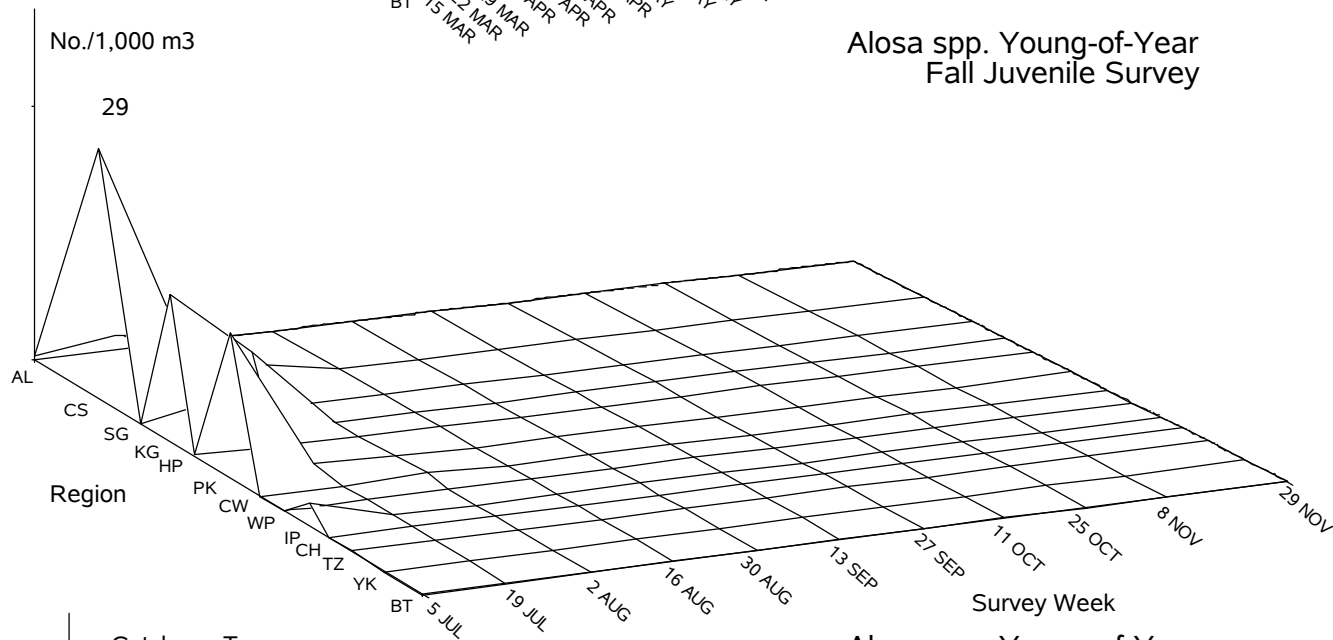
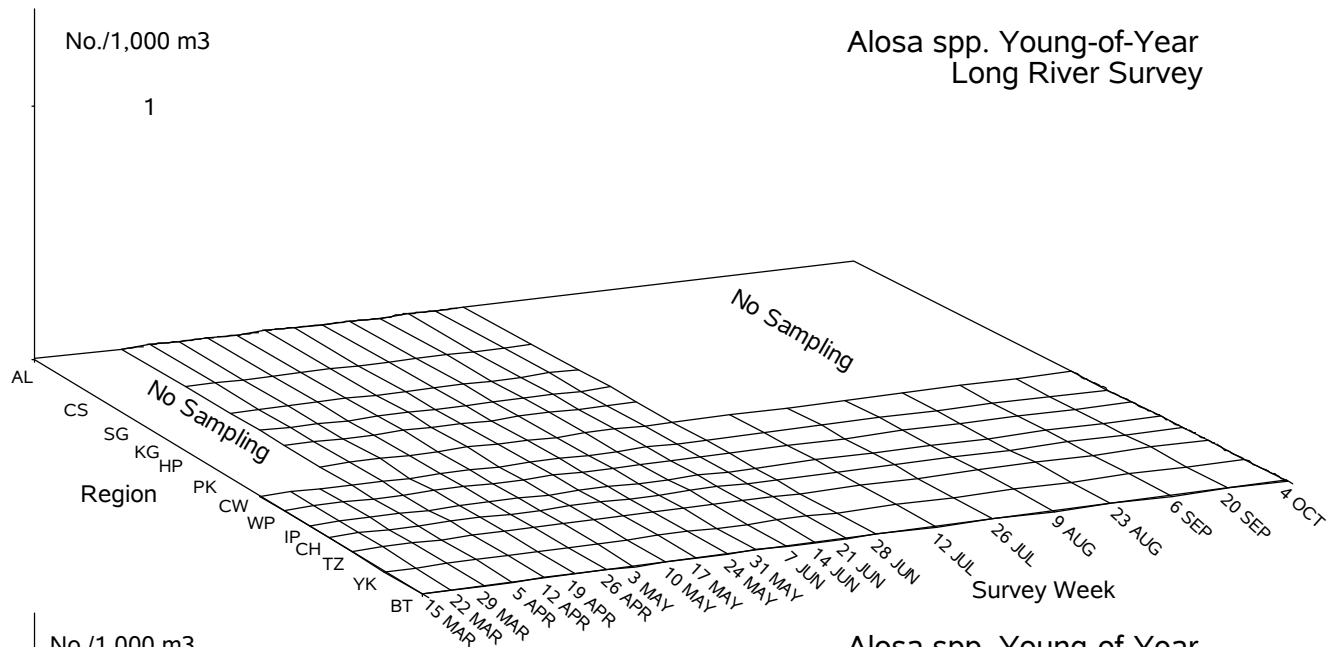


Figure 4-39. Spatiotemporal distribution of young-of-year Alosa spp. in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

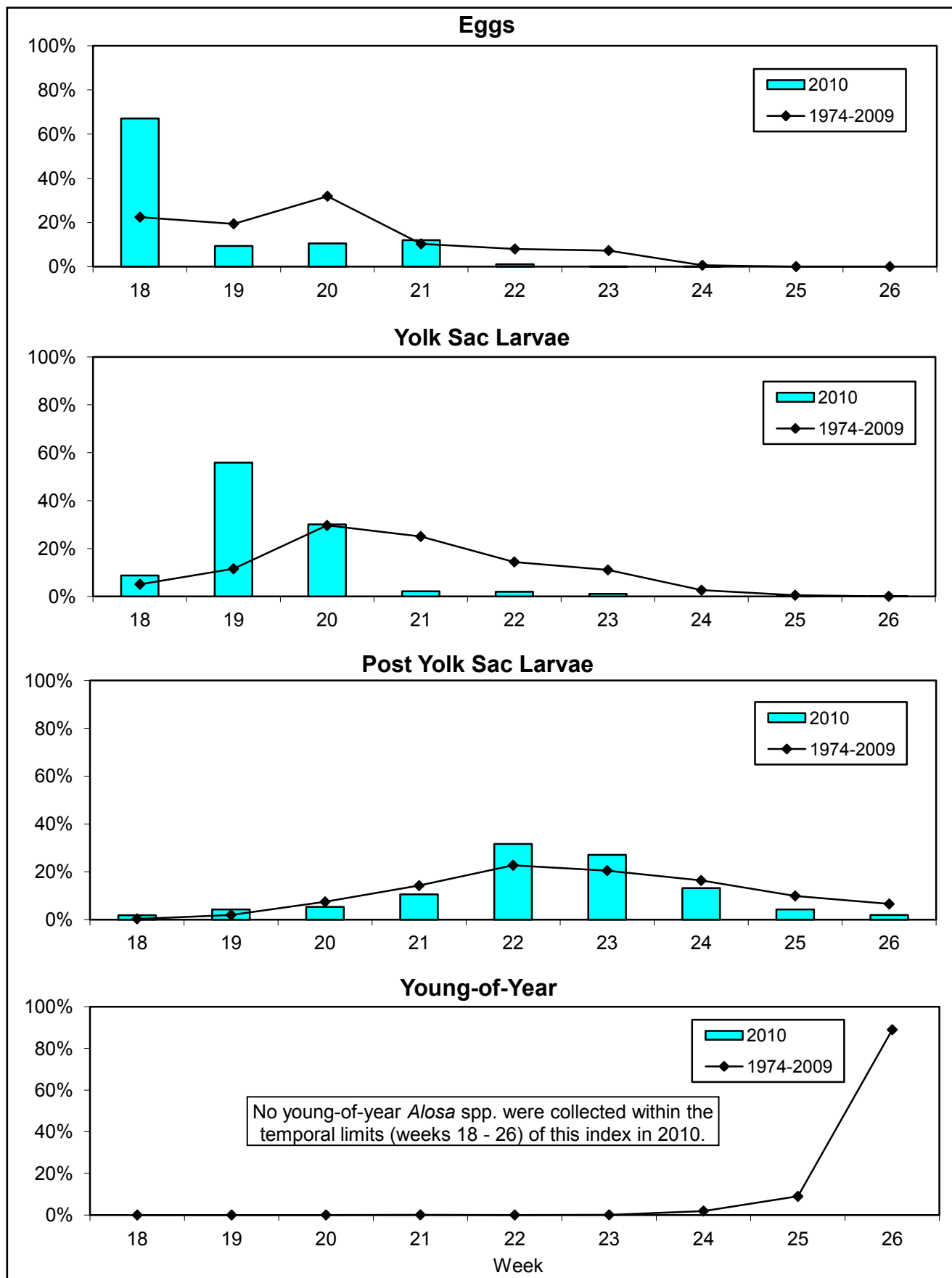


Figure 4-40. Temporal distribution indices for *Alosa* spp. collected during Long River surveys of the Hudson River estuary, 1974-2010.

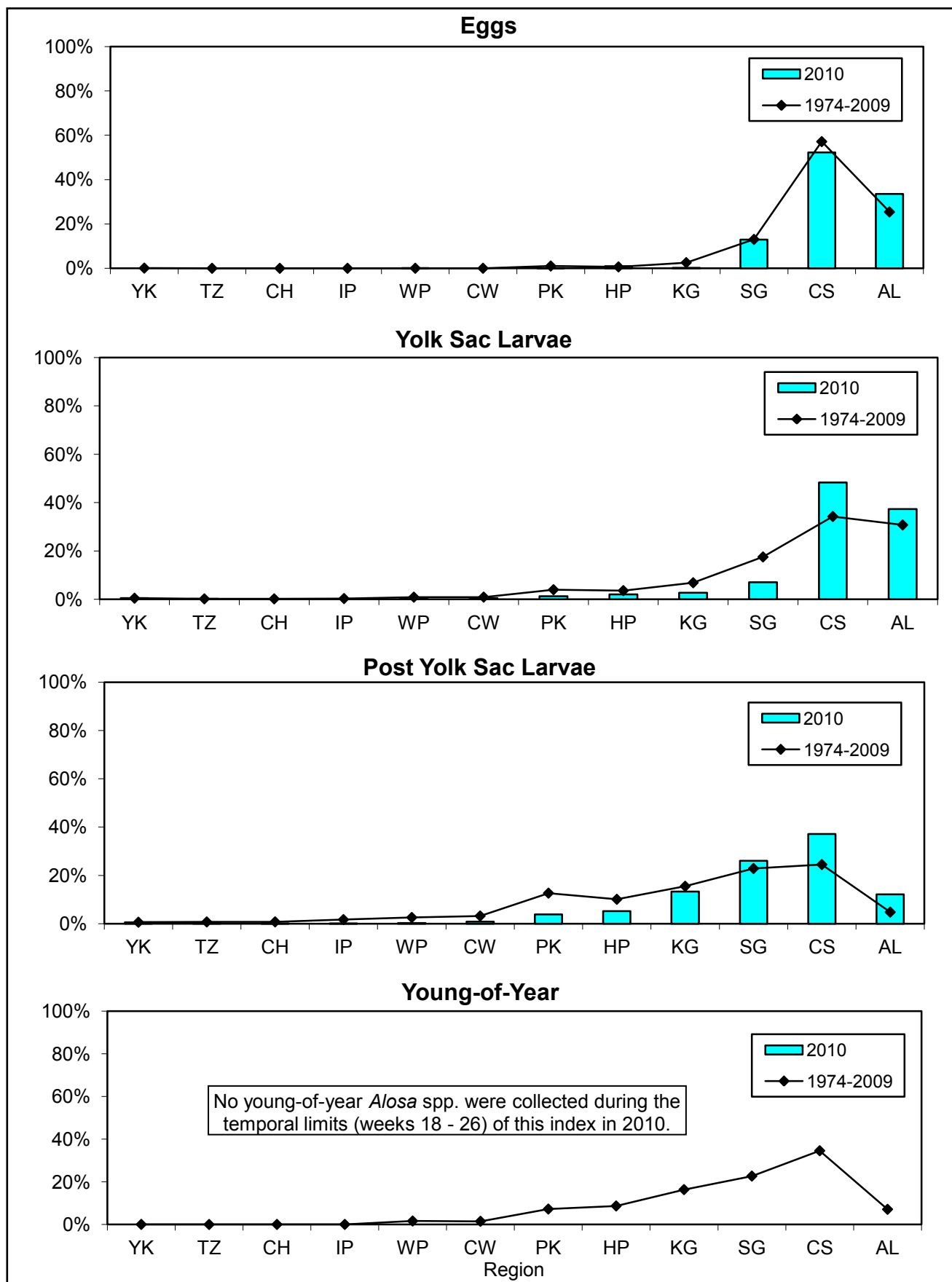


Figure 4-41. Geographic distribution indices for *Alosa* spp. collected during Long River surveys of the Hudson River estuary, 1974-2010.

Young-of-Year

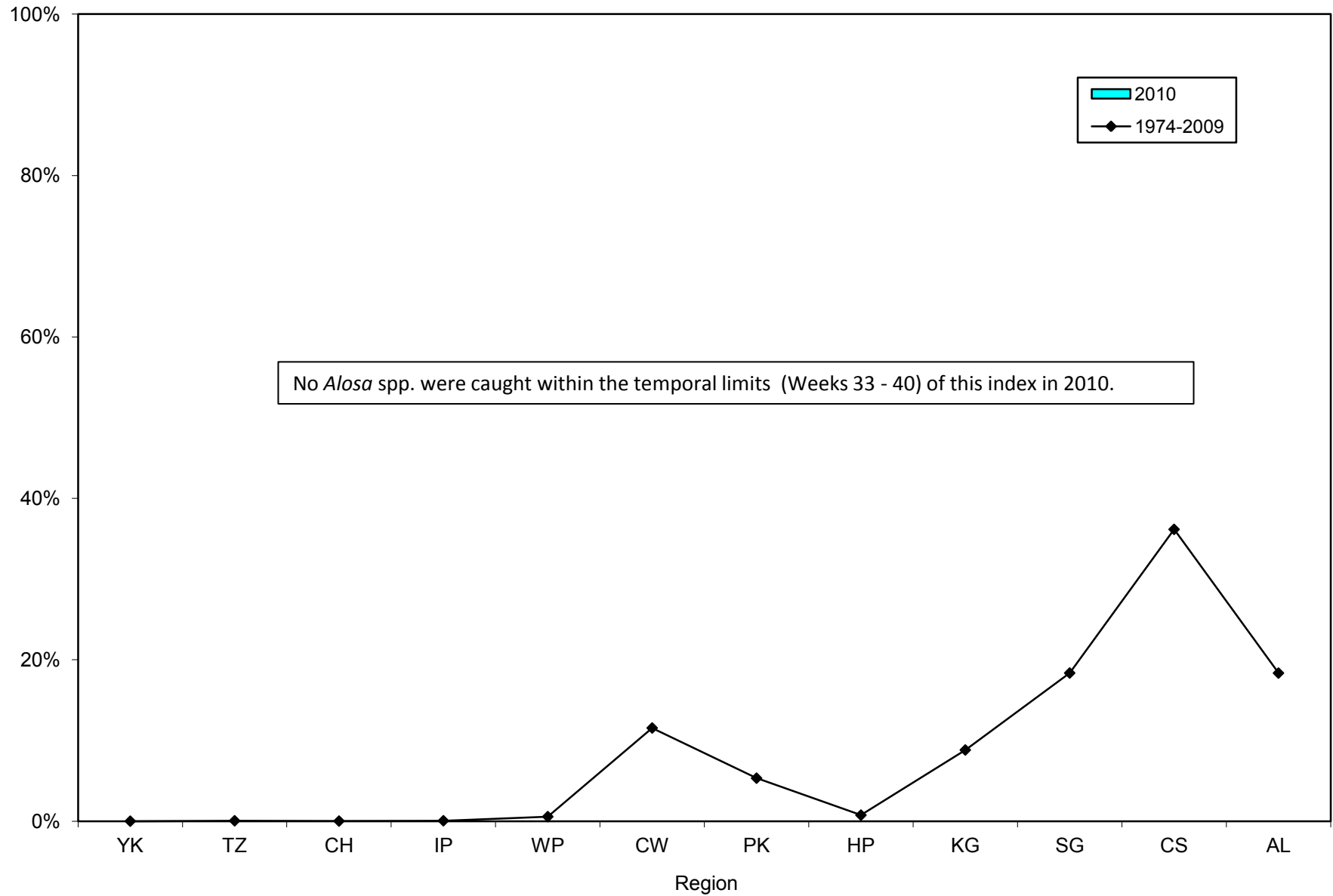


Figure 4-42. Geographic distribution indices for *Alosa* spp. collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

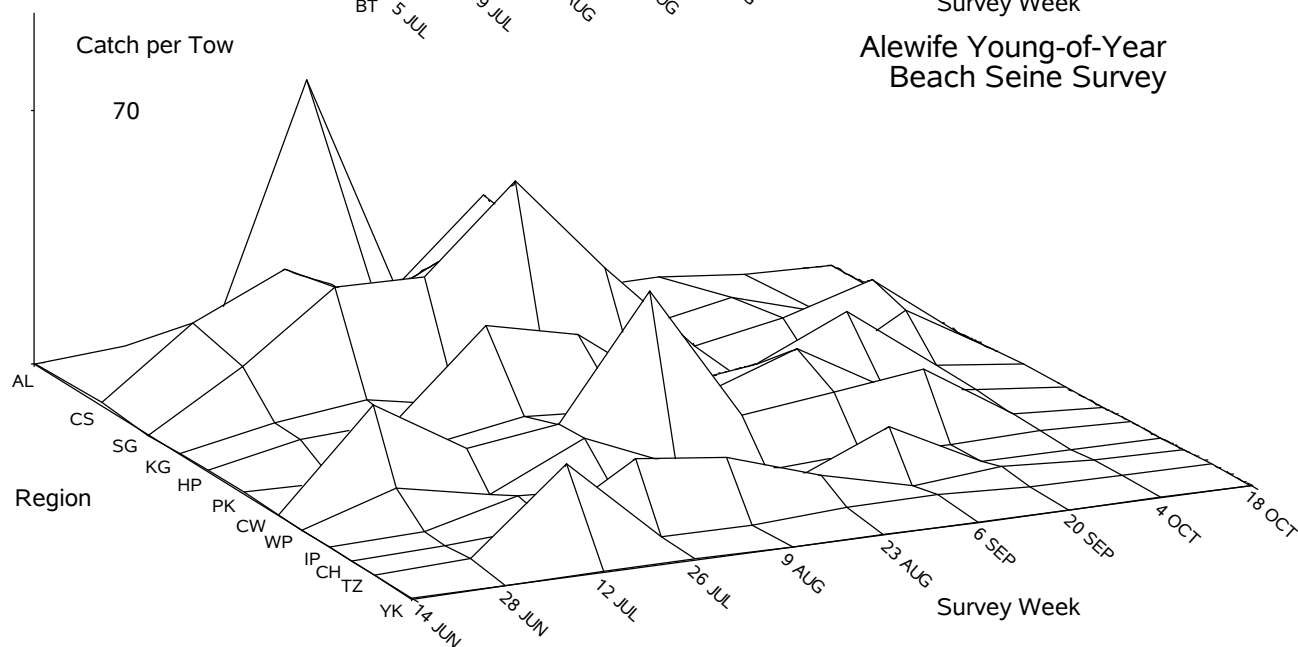
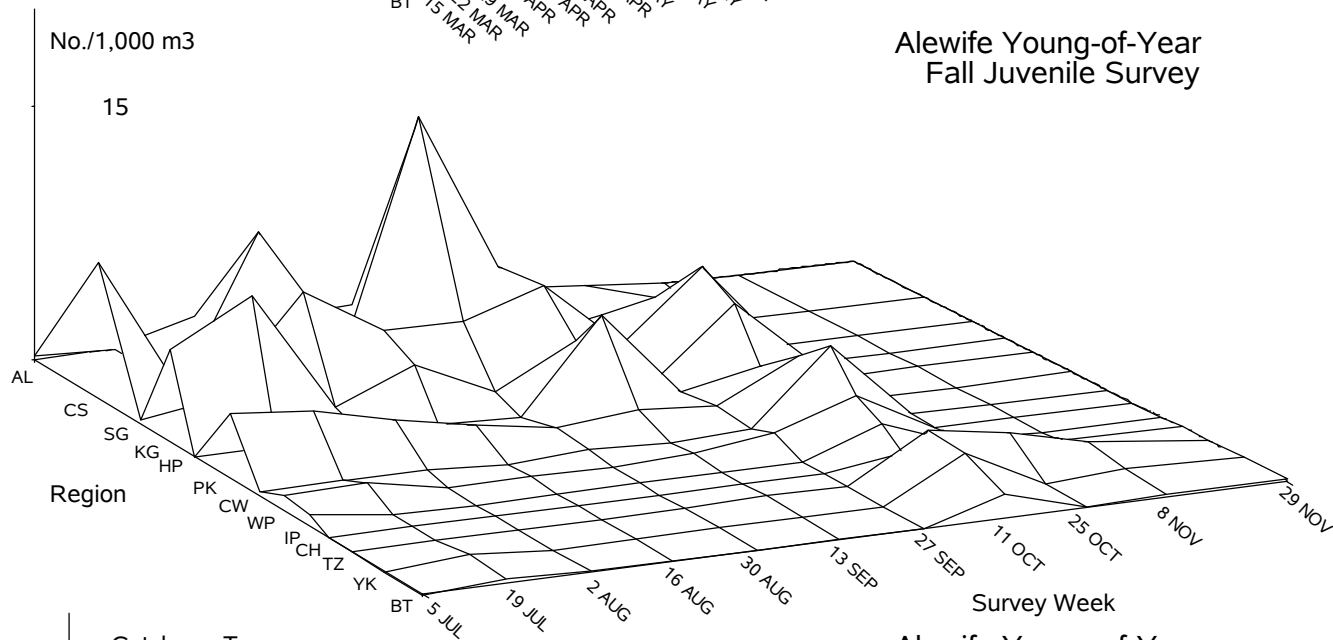
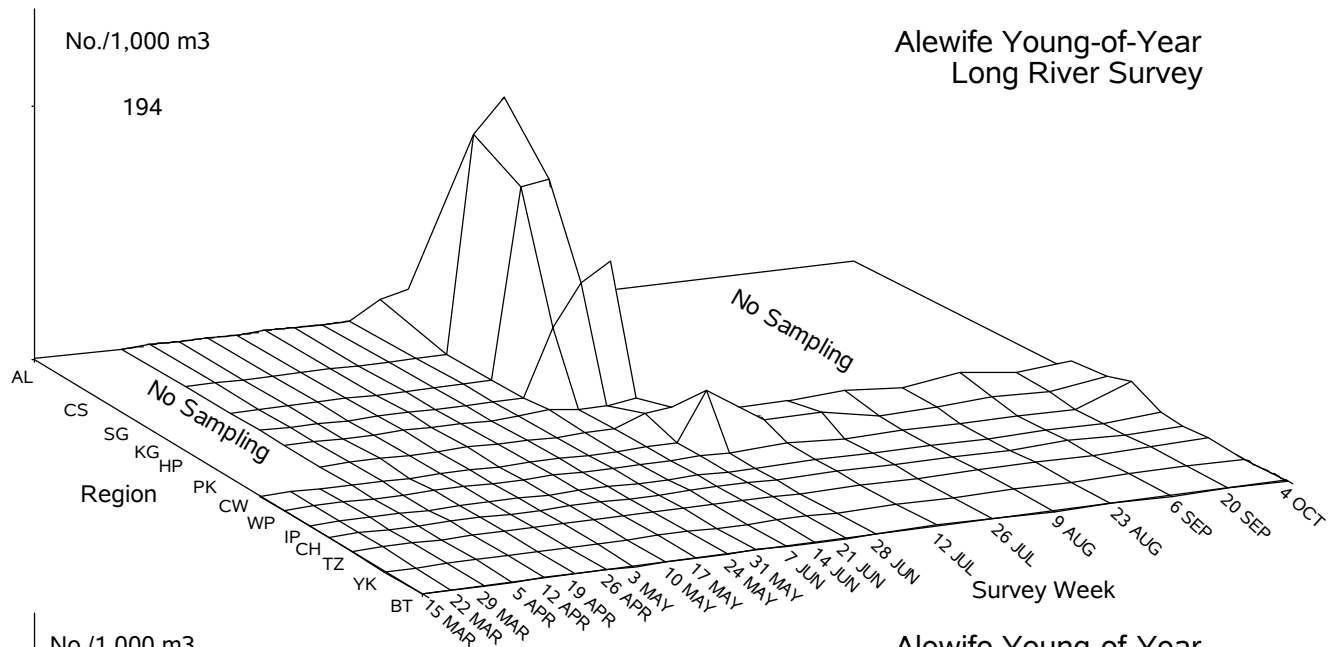


Figure 4-43. Spatiotemporal distribution of young-of-year alewife in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

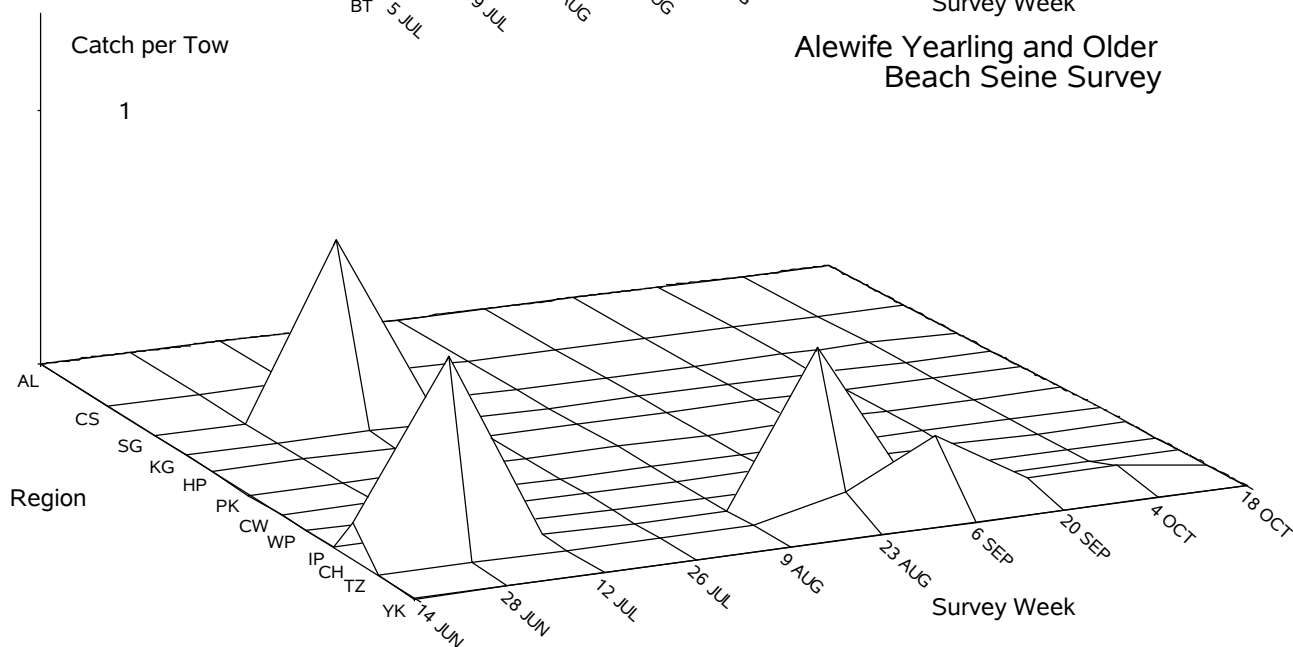
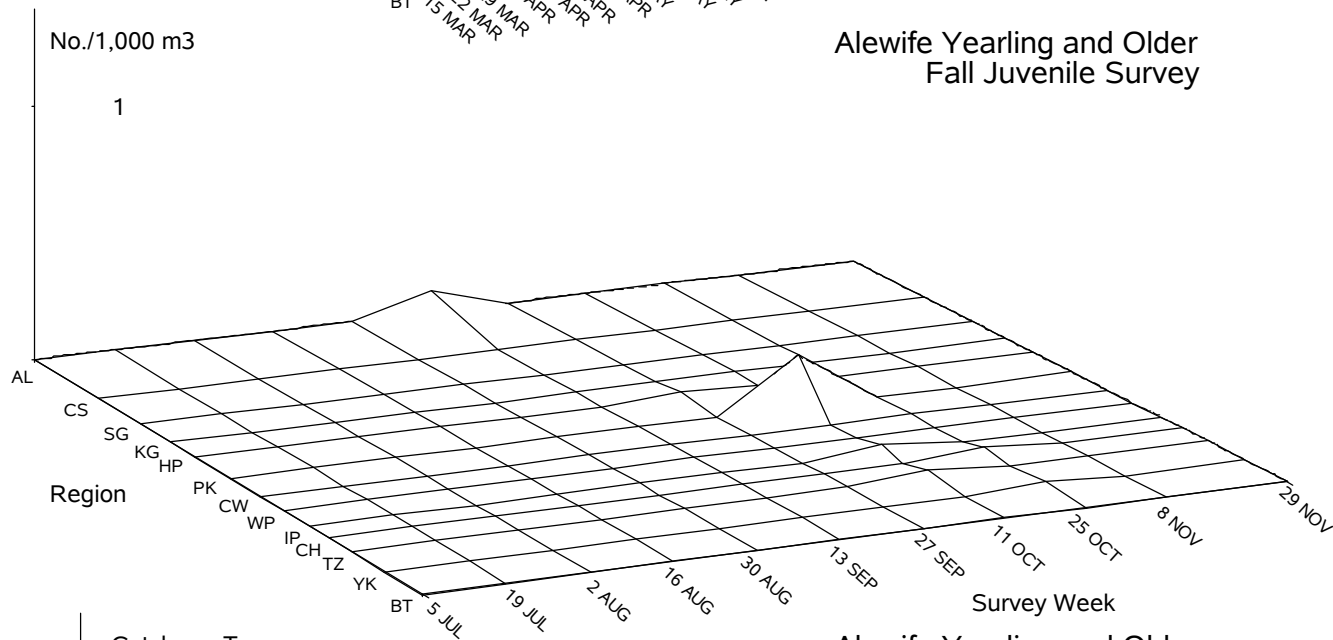
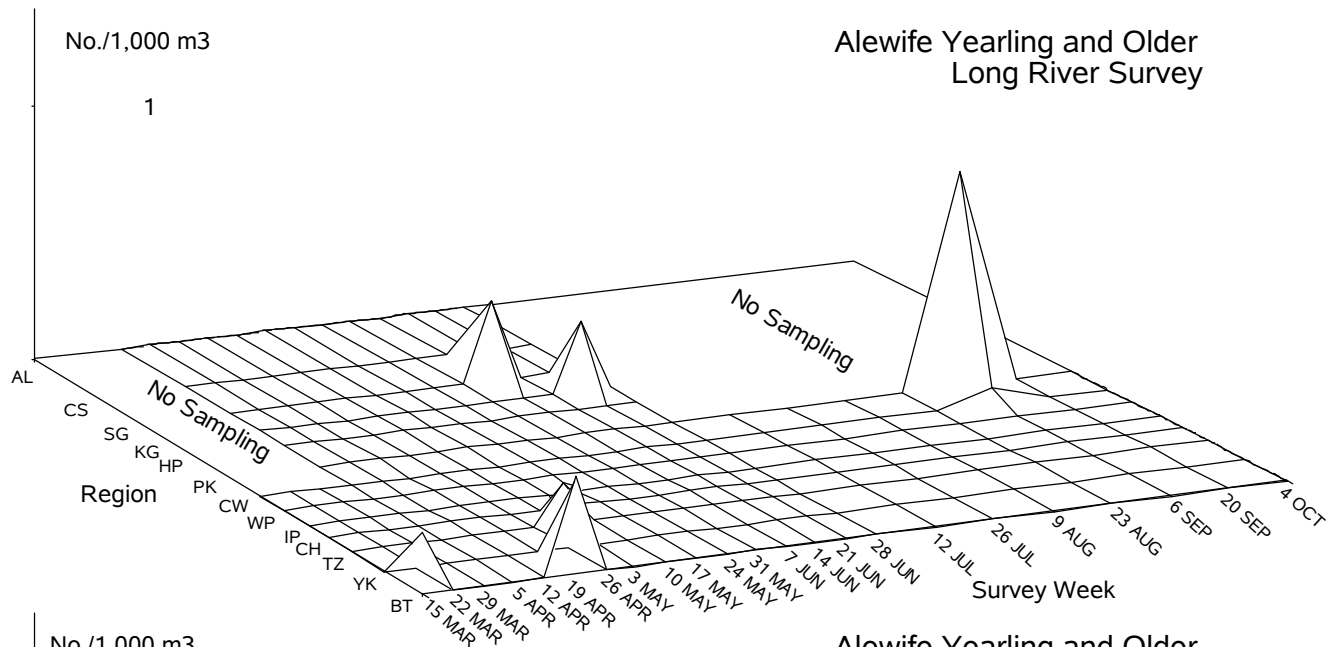


Figure 4-44. Spatiotemporal distribution of yearling and older alewife in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

Young-of-Year

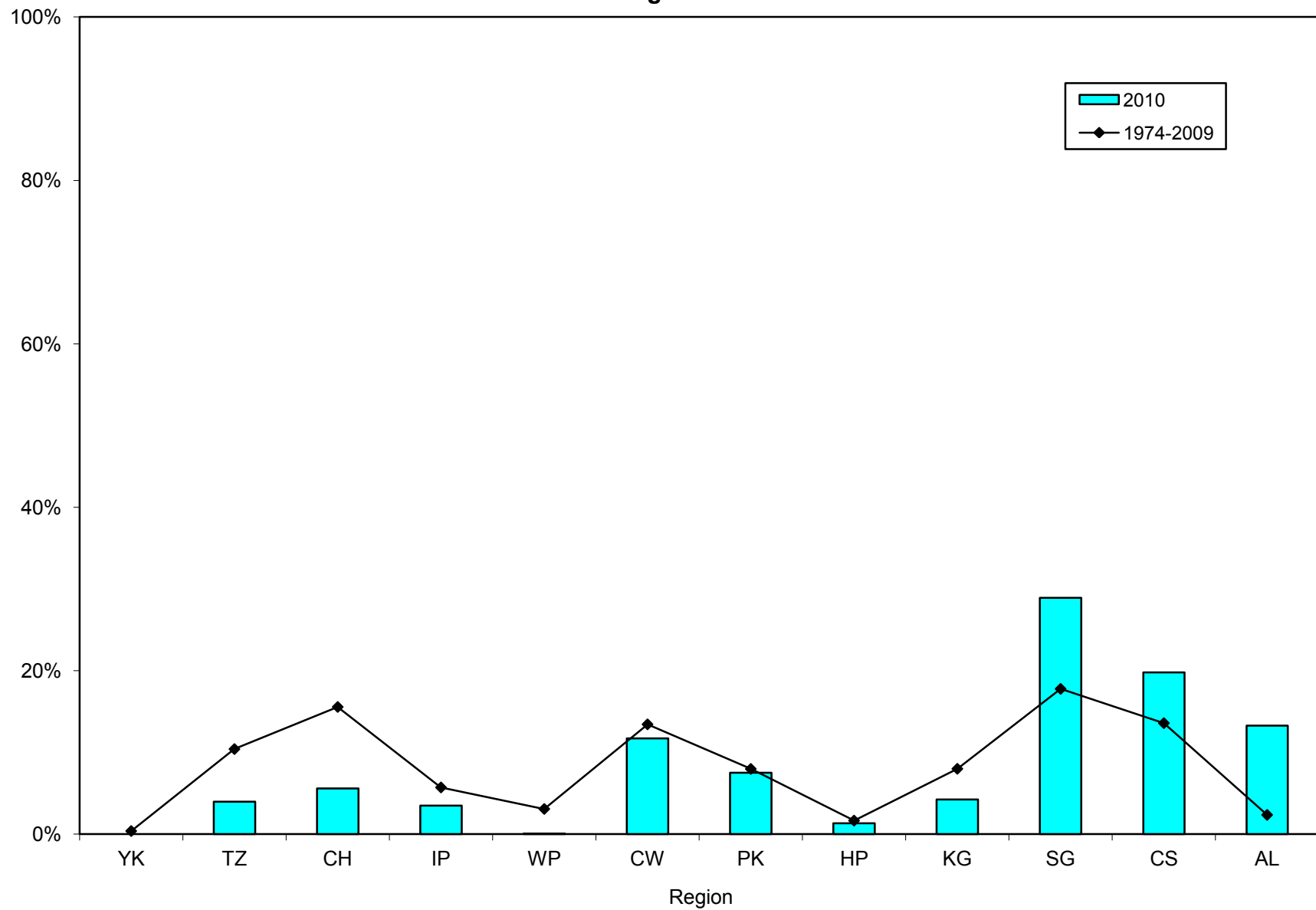


Figure 4-45. Geographic distribution indices for alewife collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

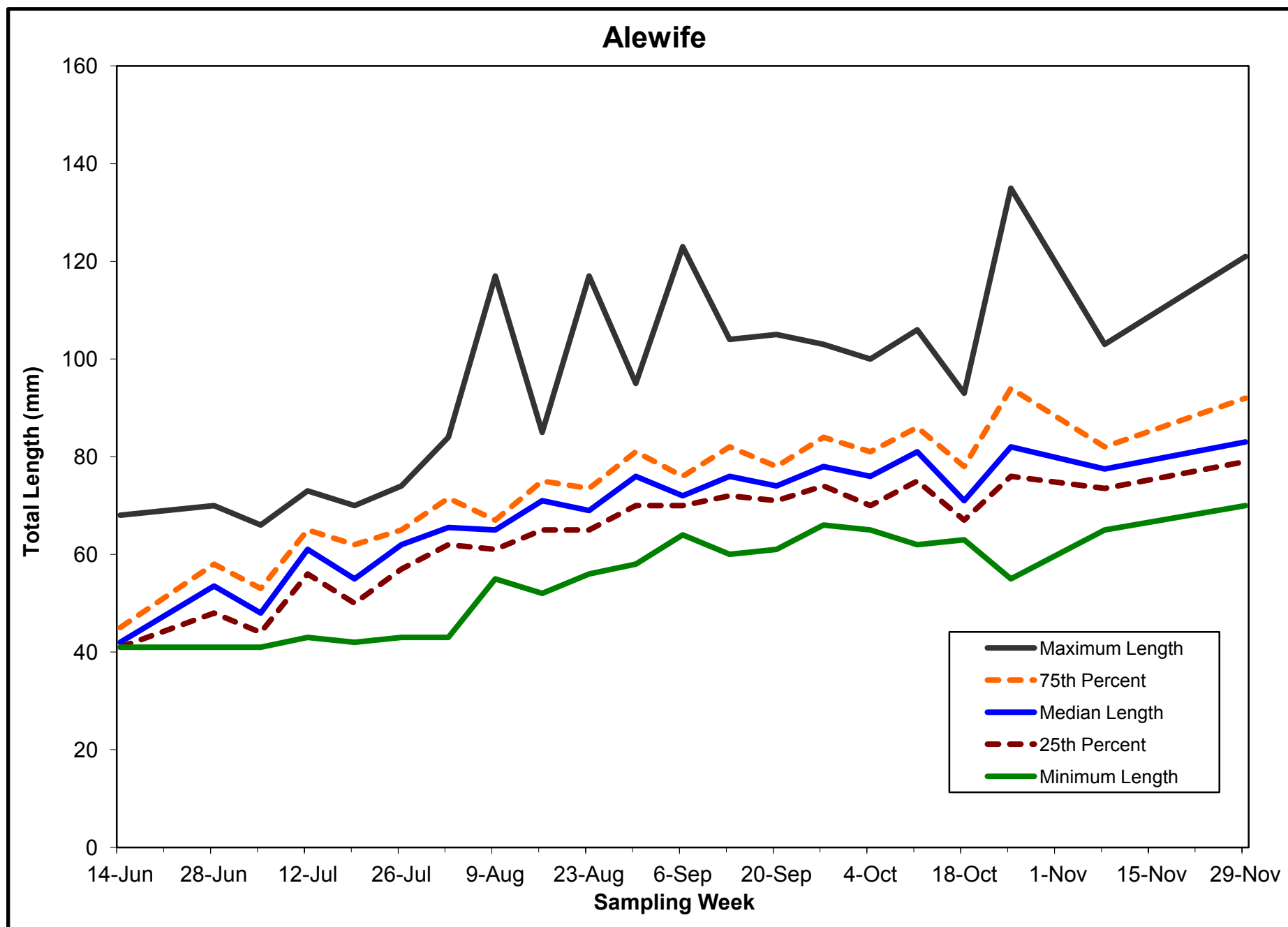


Figure 4-46. Weekly length statistics for young-of-year alewife in the Hudson River estuary, 2010.

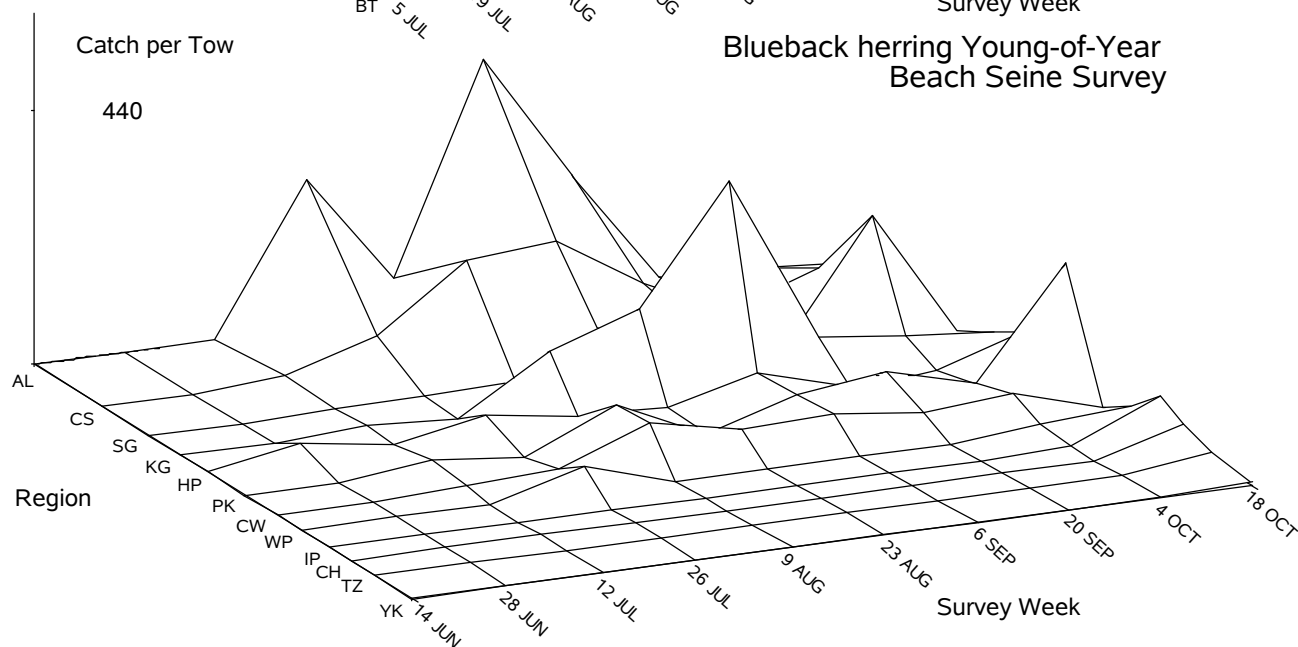
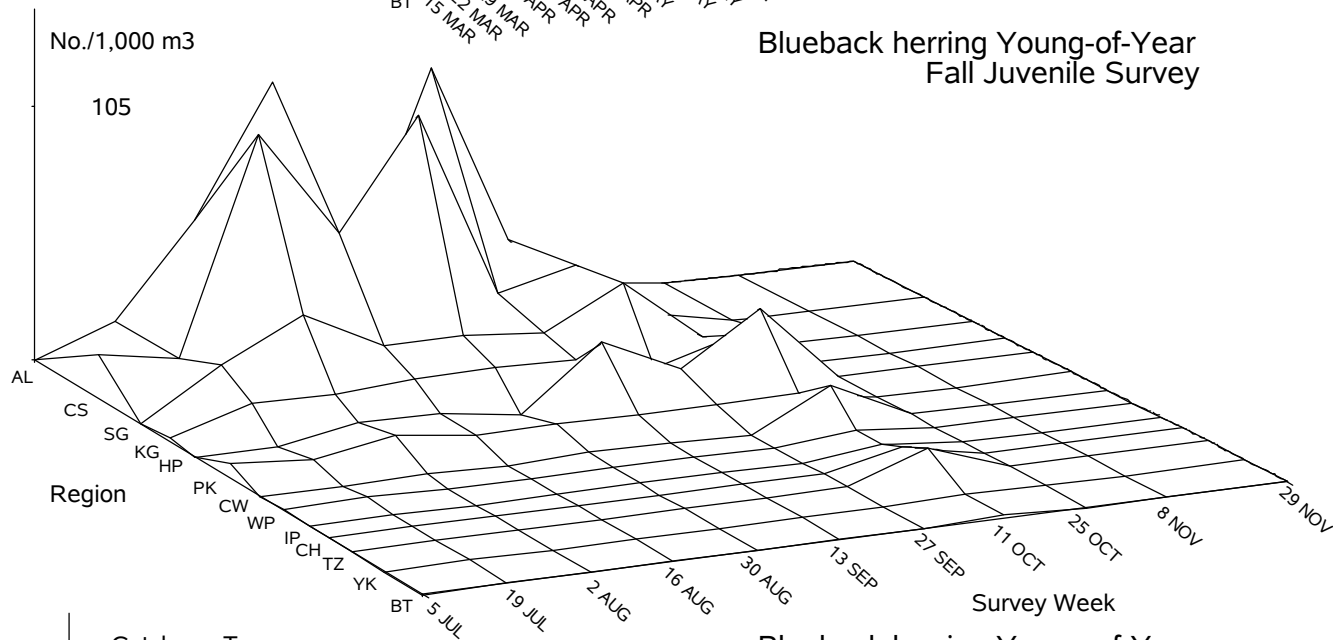
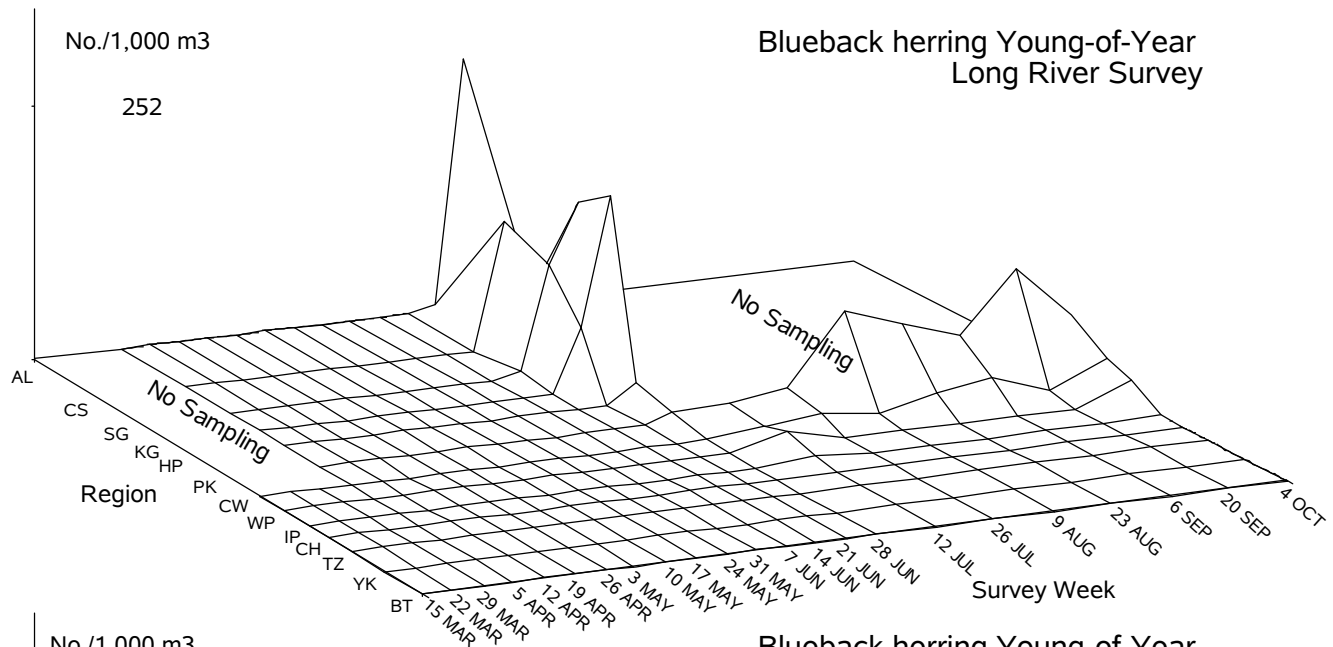


Figure 4-47. Spatiotemporal distribution of young-of-year blueback herring in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

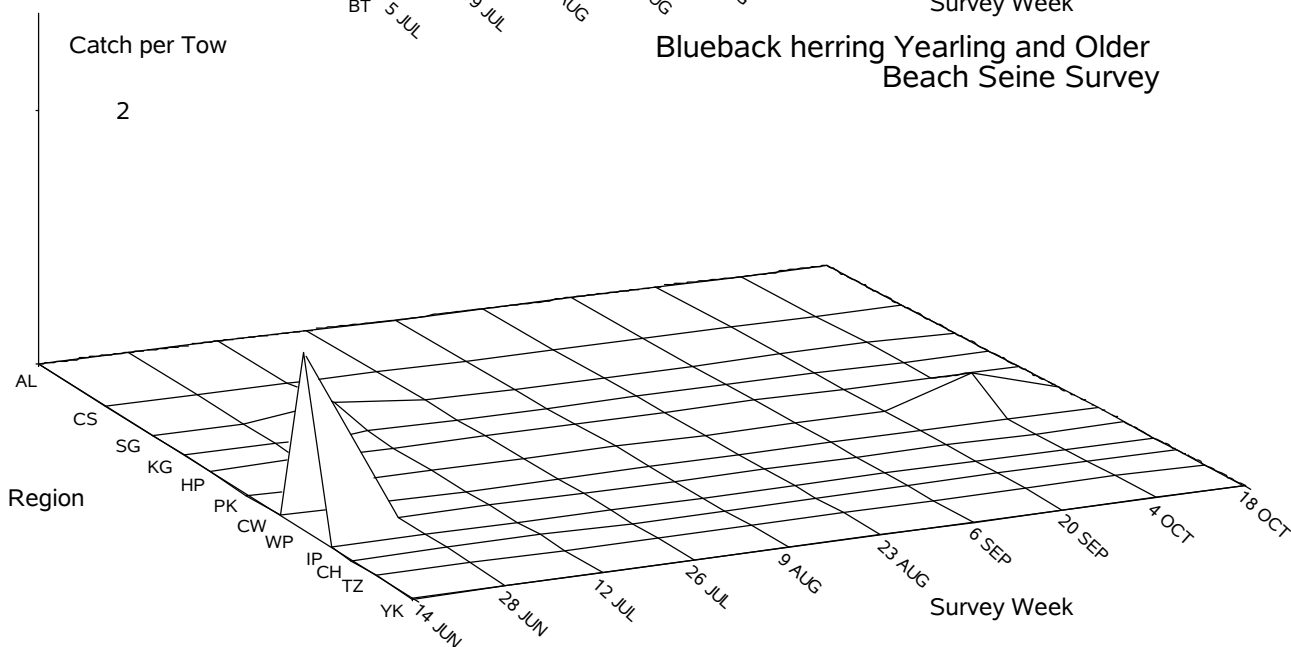
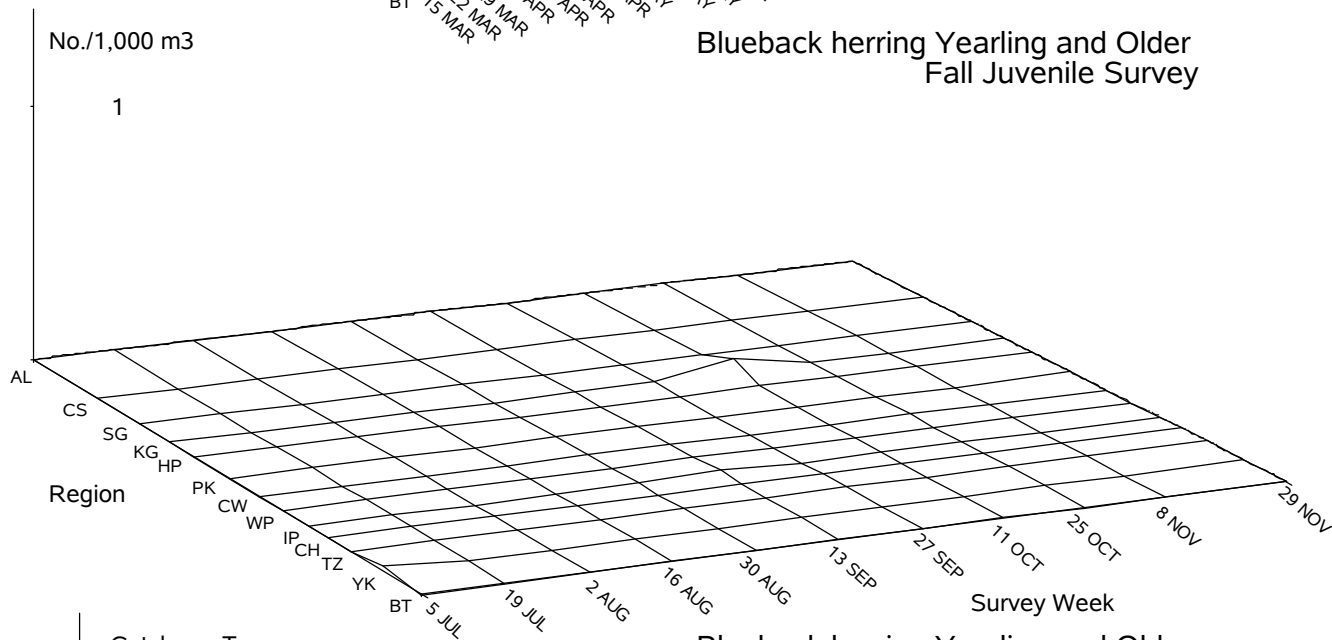
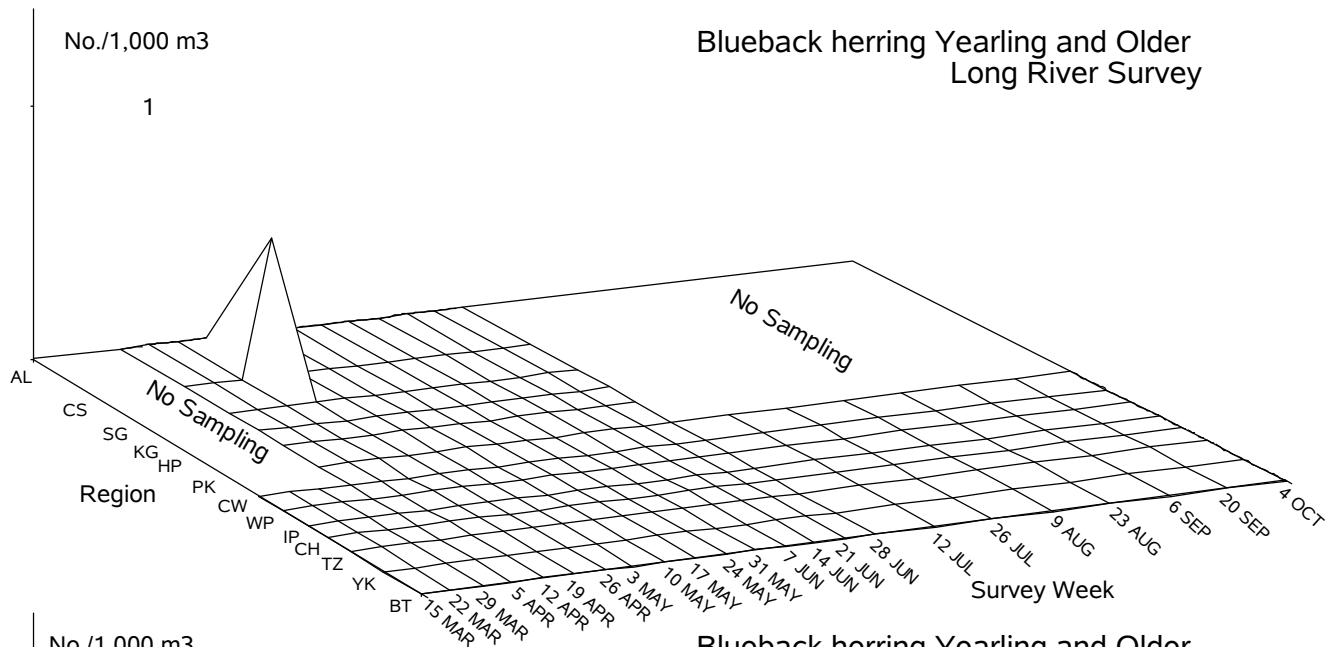


Figure 4-48. Spatiotemporal distribution of yearling and older blueback herring in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

Young-of-Year

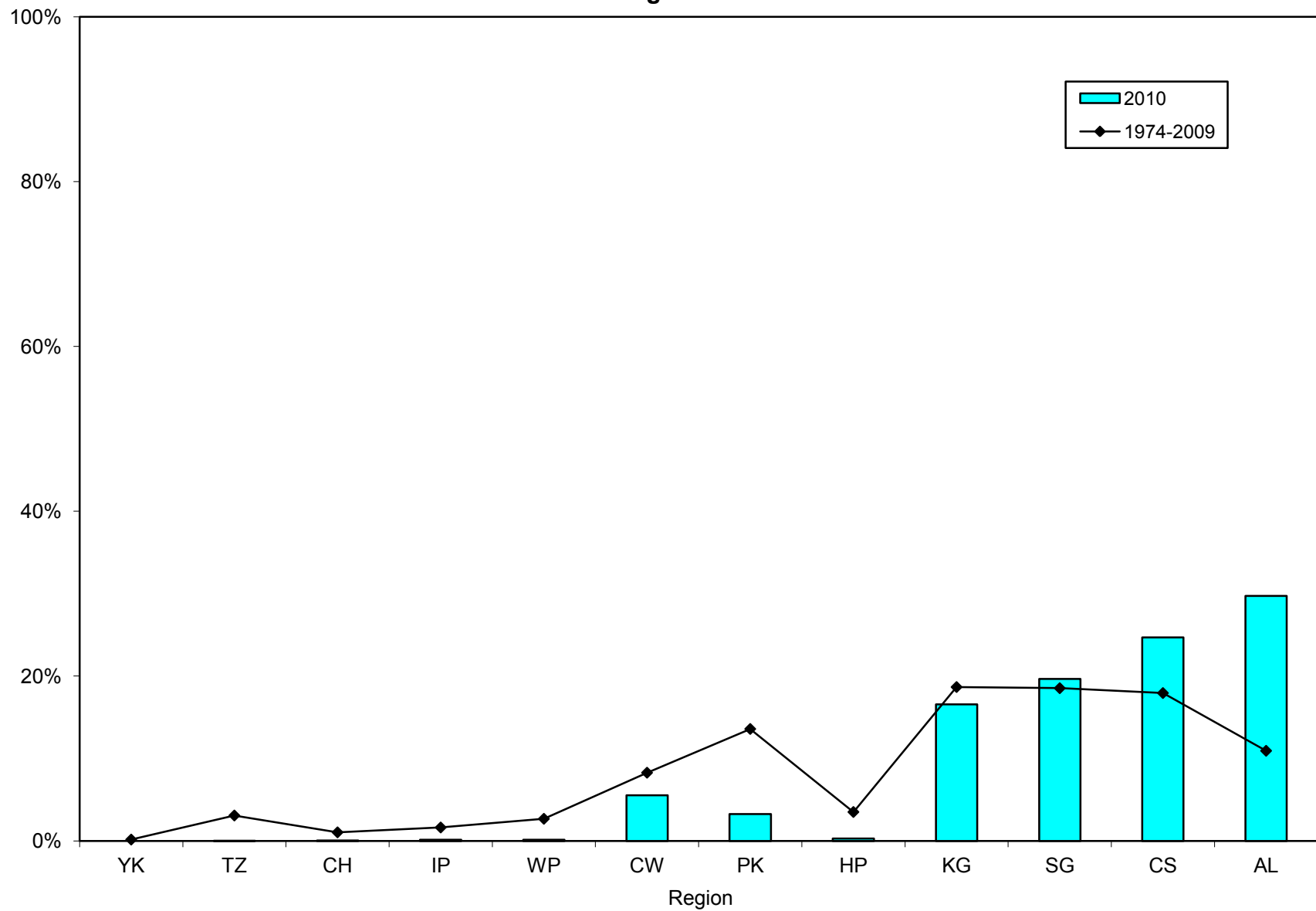


Figure 4-49. Geographic distribution indices for blueback herring collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

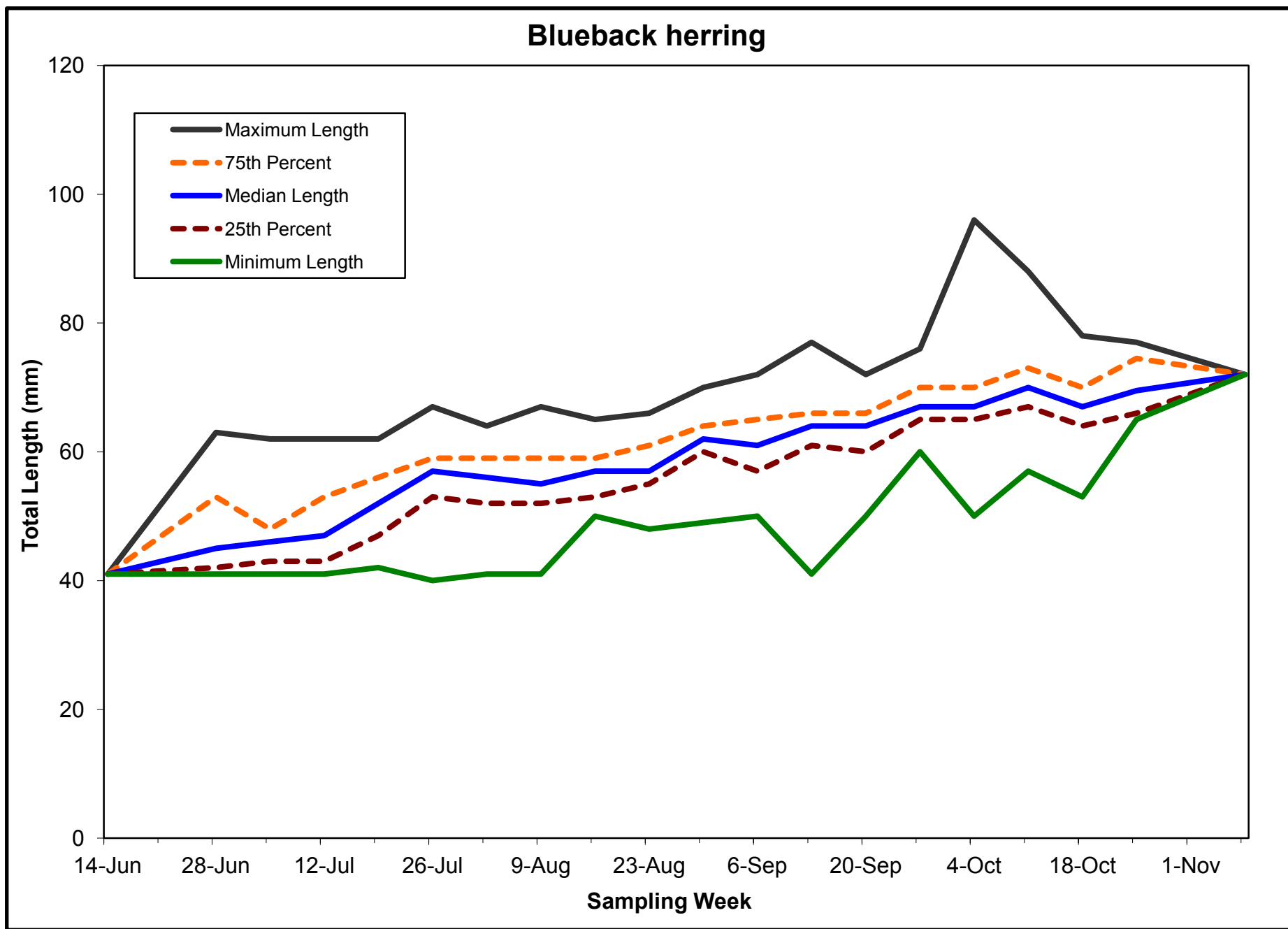


Figure 4-50. Weekly length statistics for young-of-year blueback herring in the Hudson River estuary, 2010.

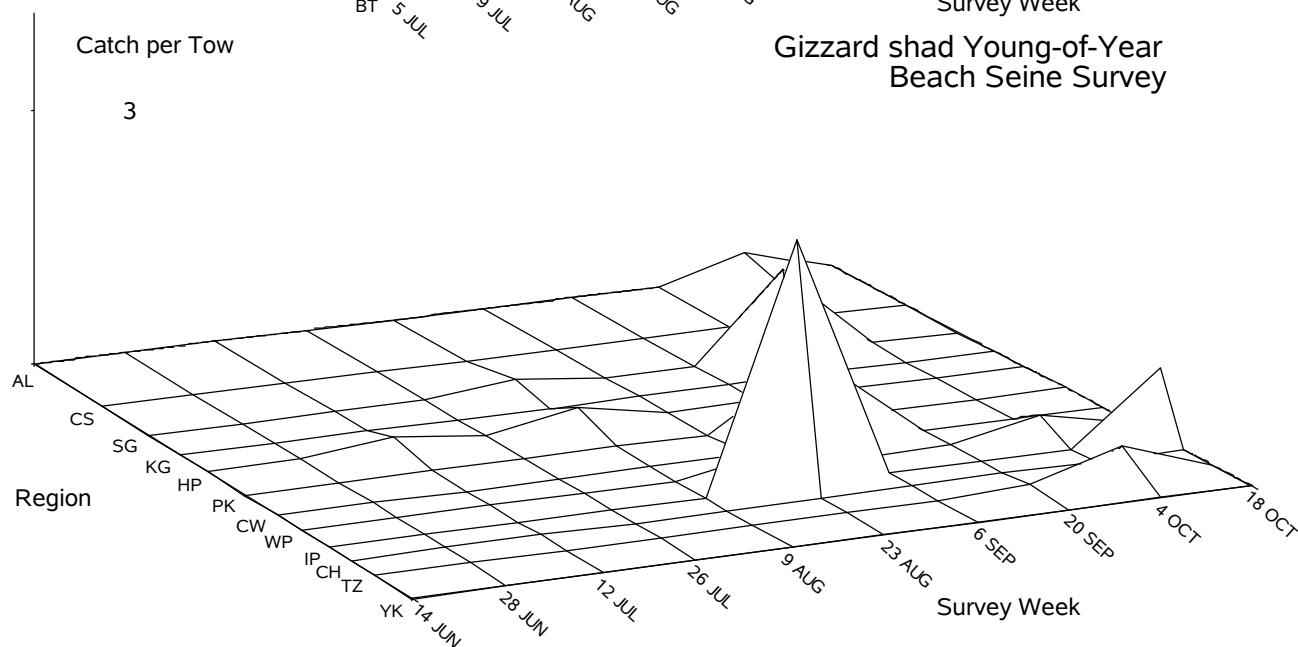
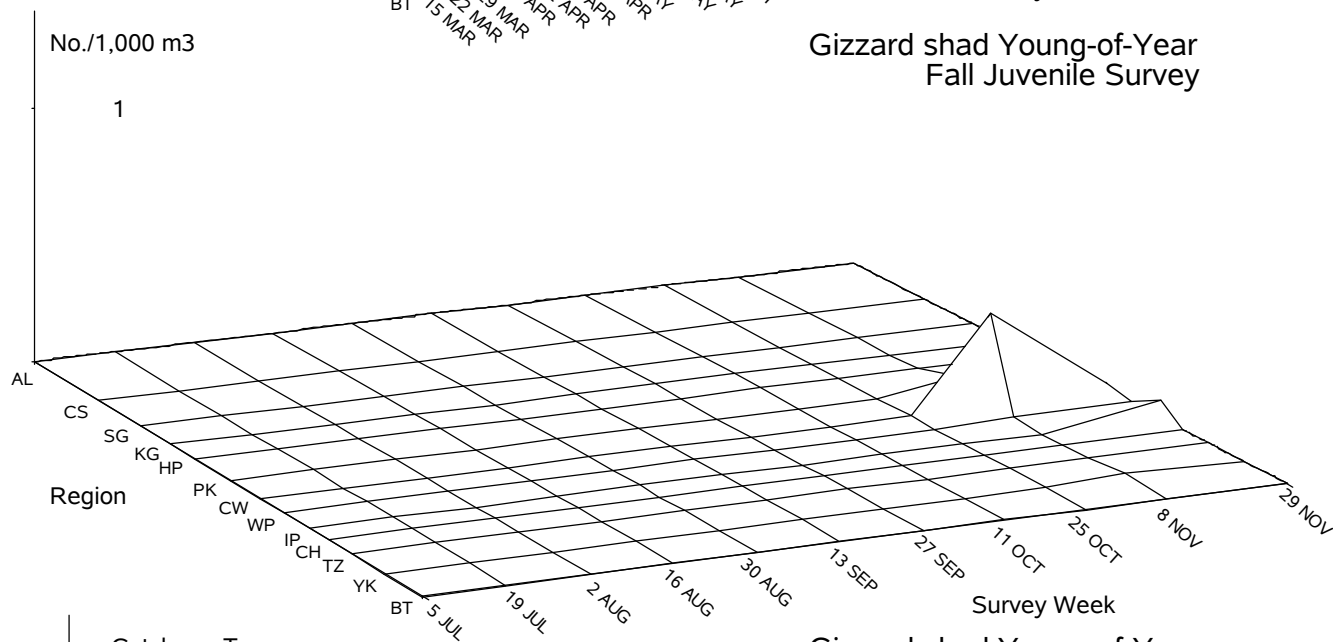
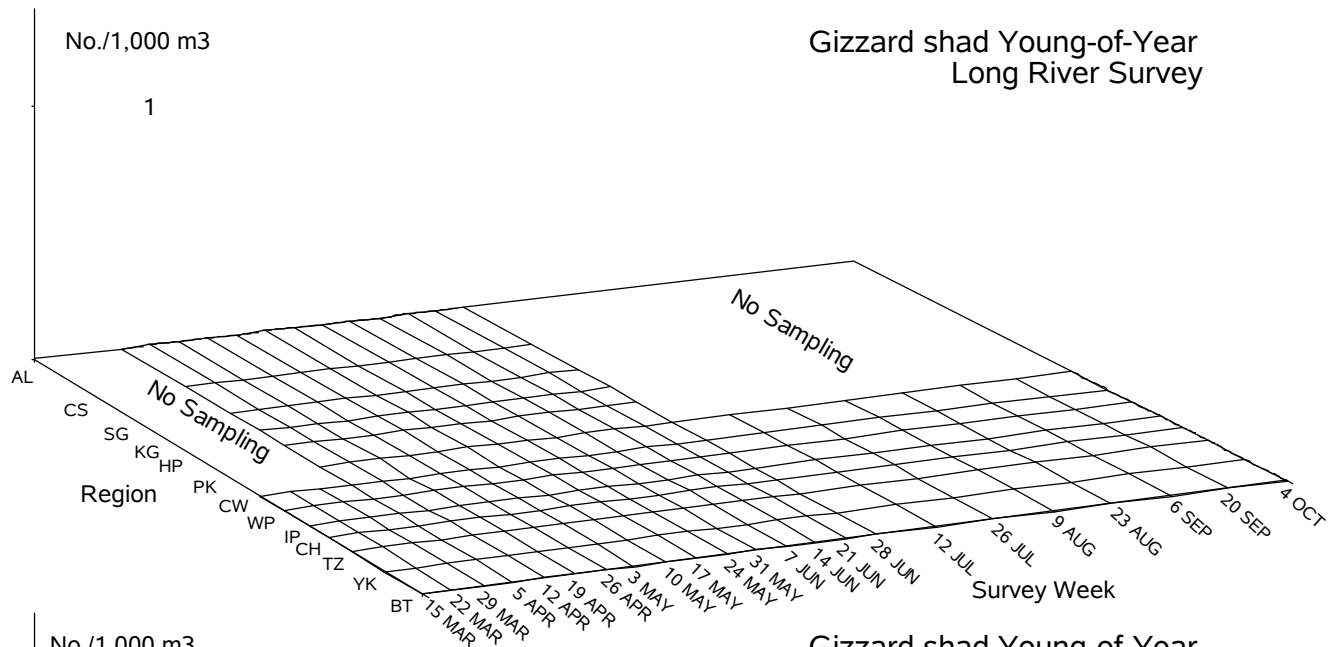


Figure 4-51. Spatiotemporal distribution of young-of-year gizzard shad in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

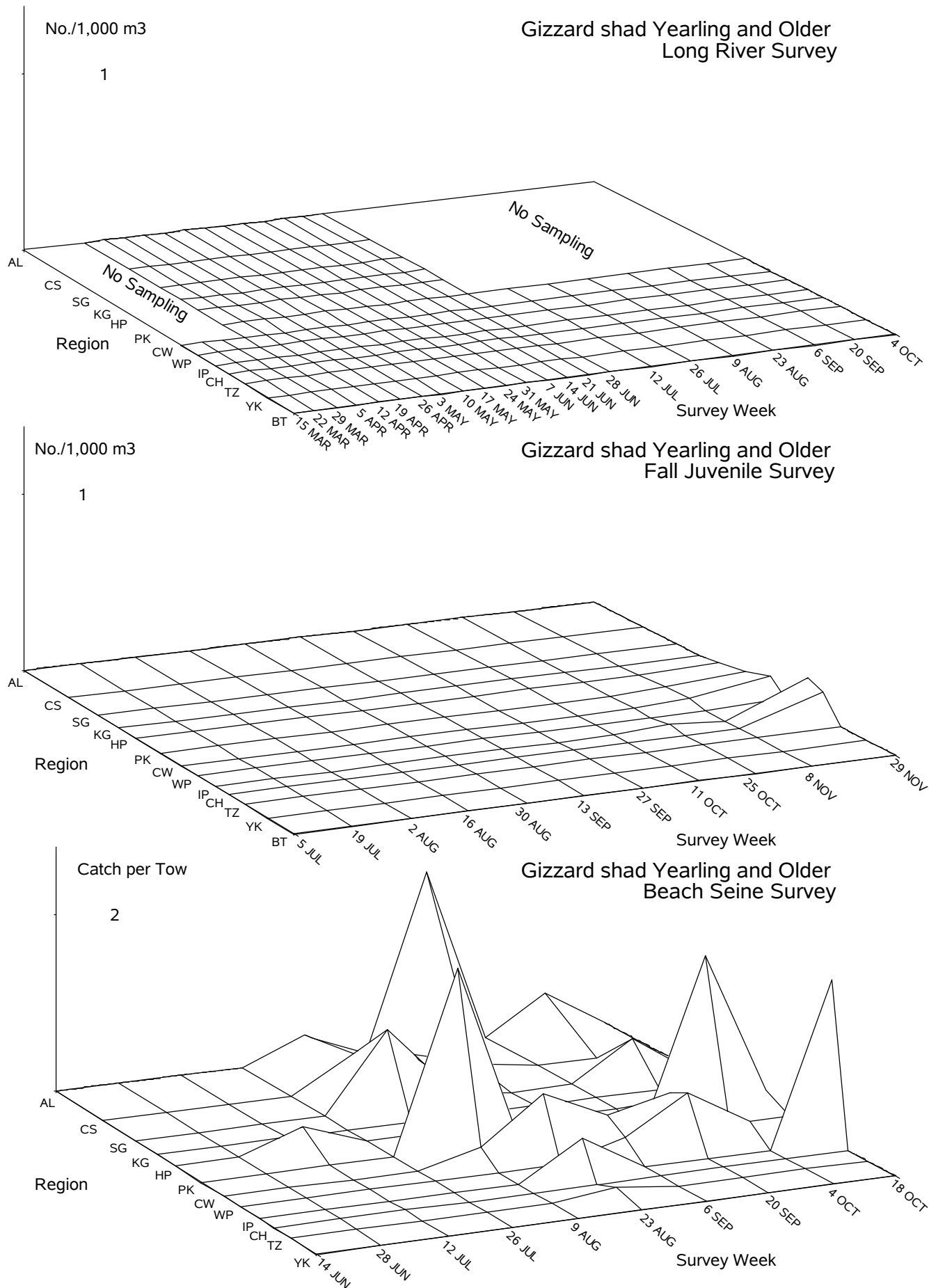


Figure 4-52. Spatiotemporal distribution of yearling and older gizzard shad in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

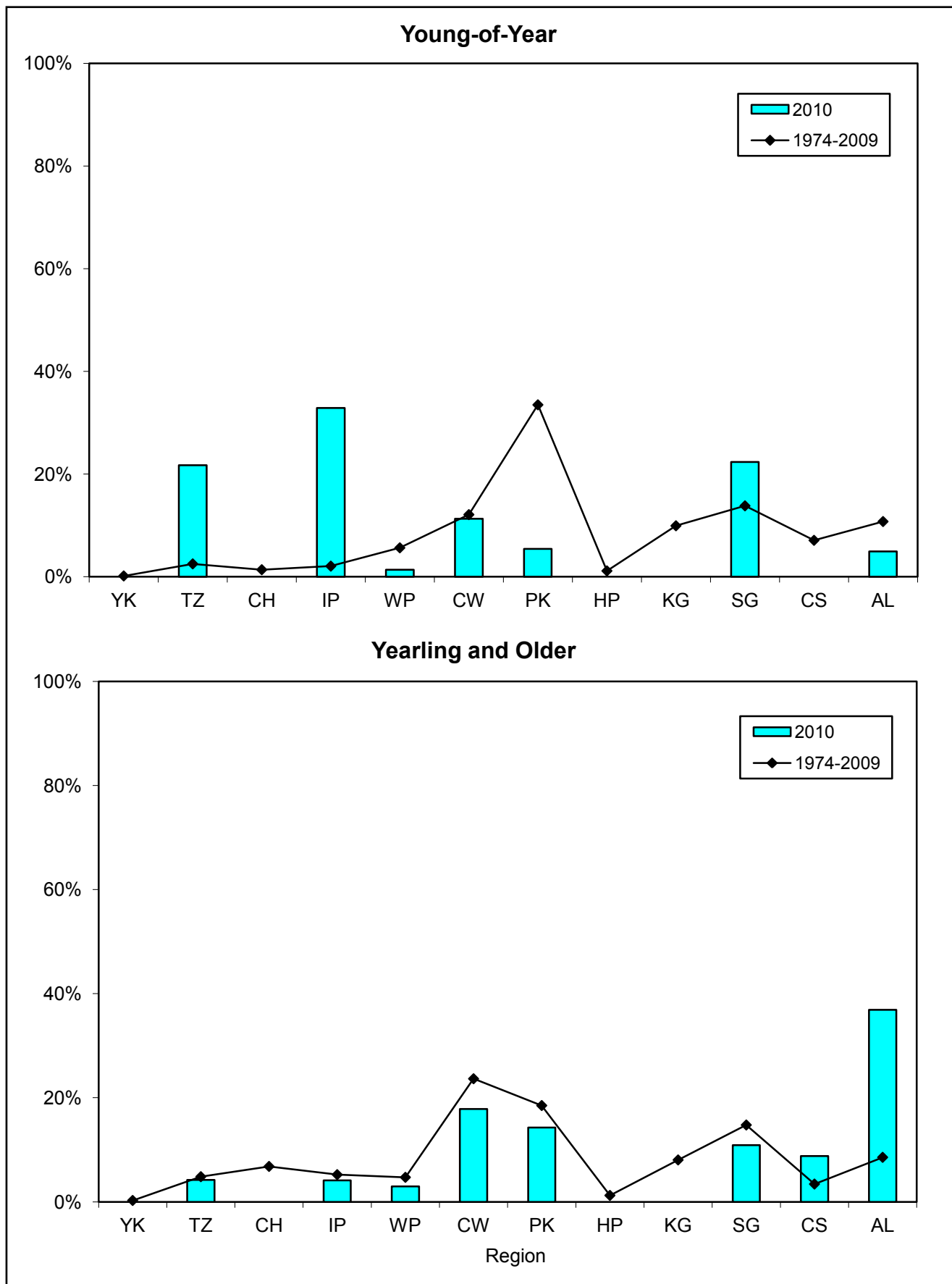


Figure 4-53. Geographic distribution indices for gizzard shad collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

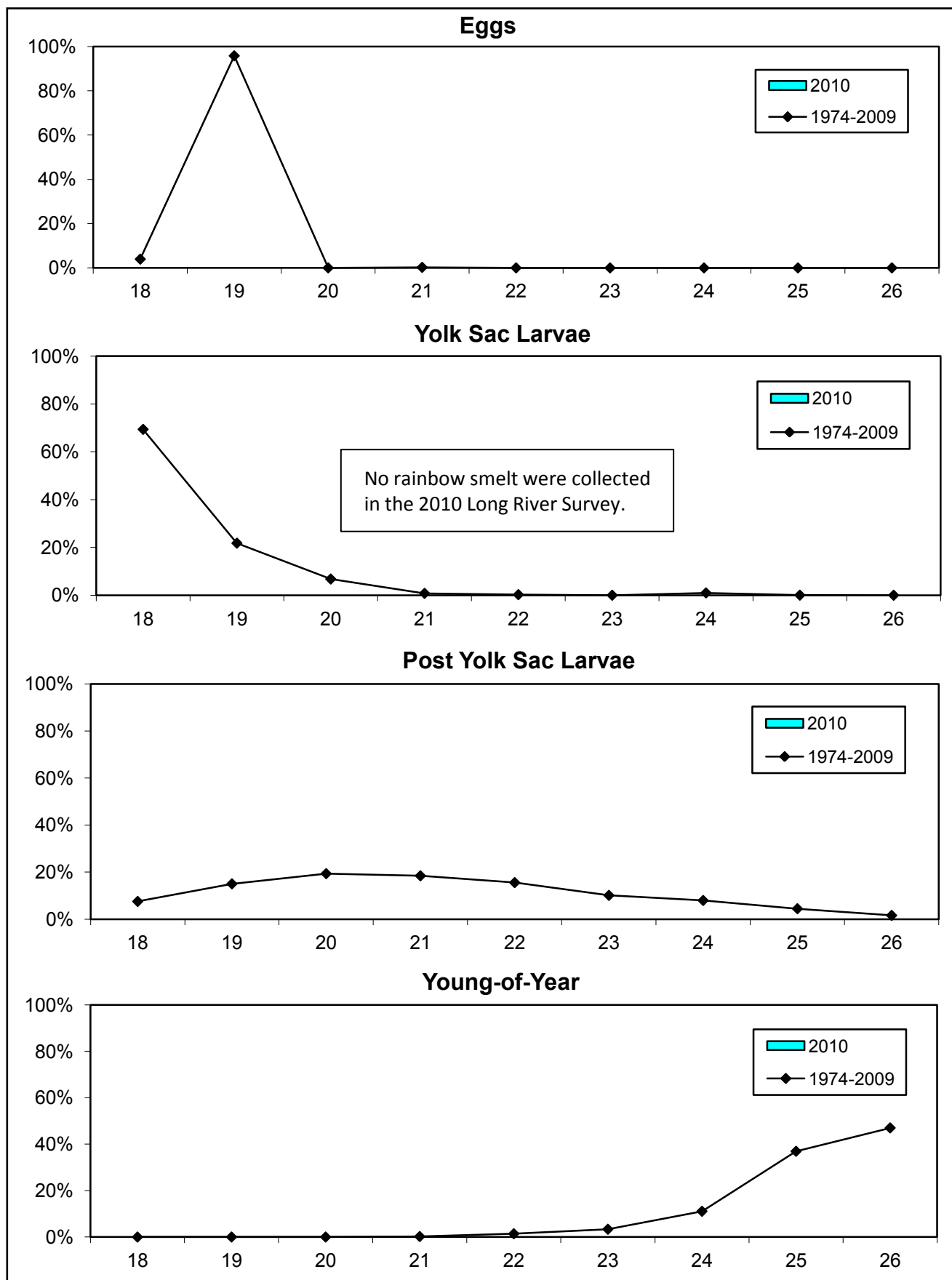


Figure 4-54. Temporal distribution indices for rainbow smelt collected during Long River surveys of the Hudson River estuary, 1974-2010.

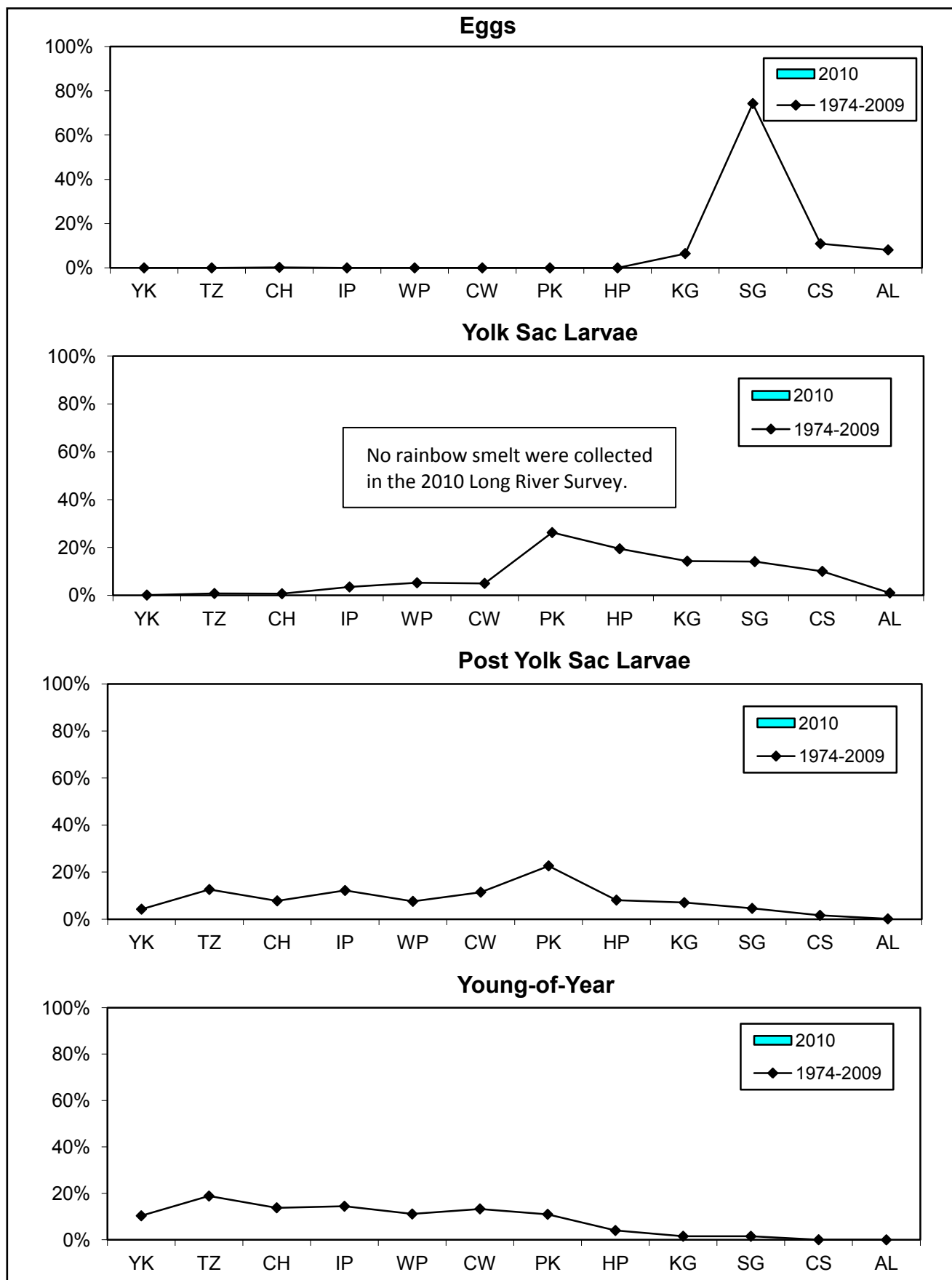


Figure 4-55. Geographic distribution indices for rainbow smelt collected during Long River surveys of the Hudson River estuary, 1974-2010.

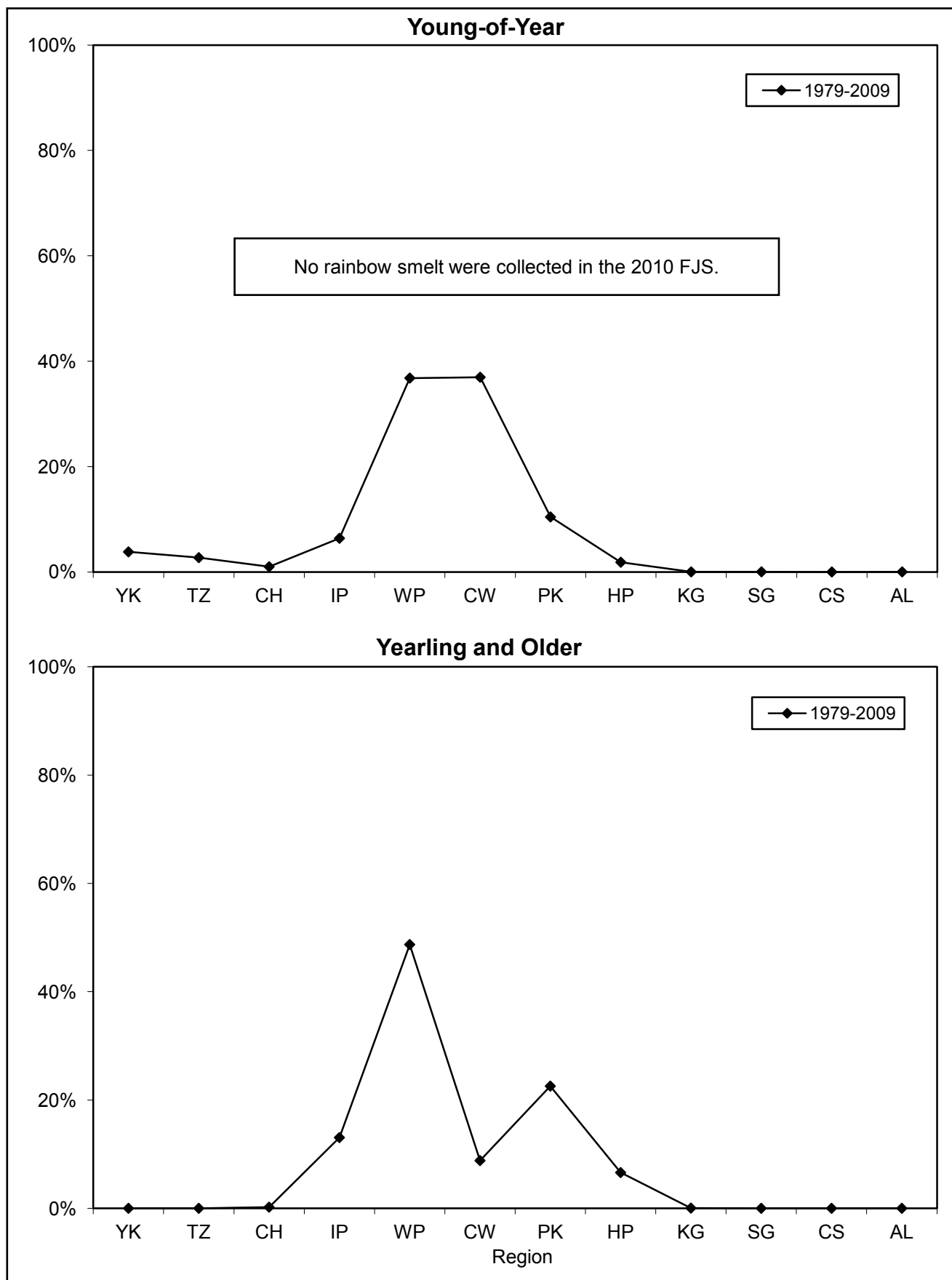


Figure 4-56. Geographic distribution indices for rainbow smelt collected during Fall Juvenile surveys of the Hudson River estuary, 1979-2010.

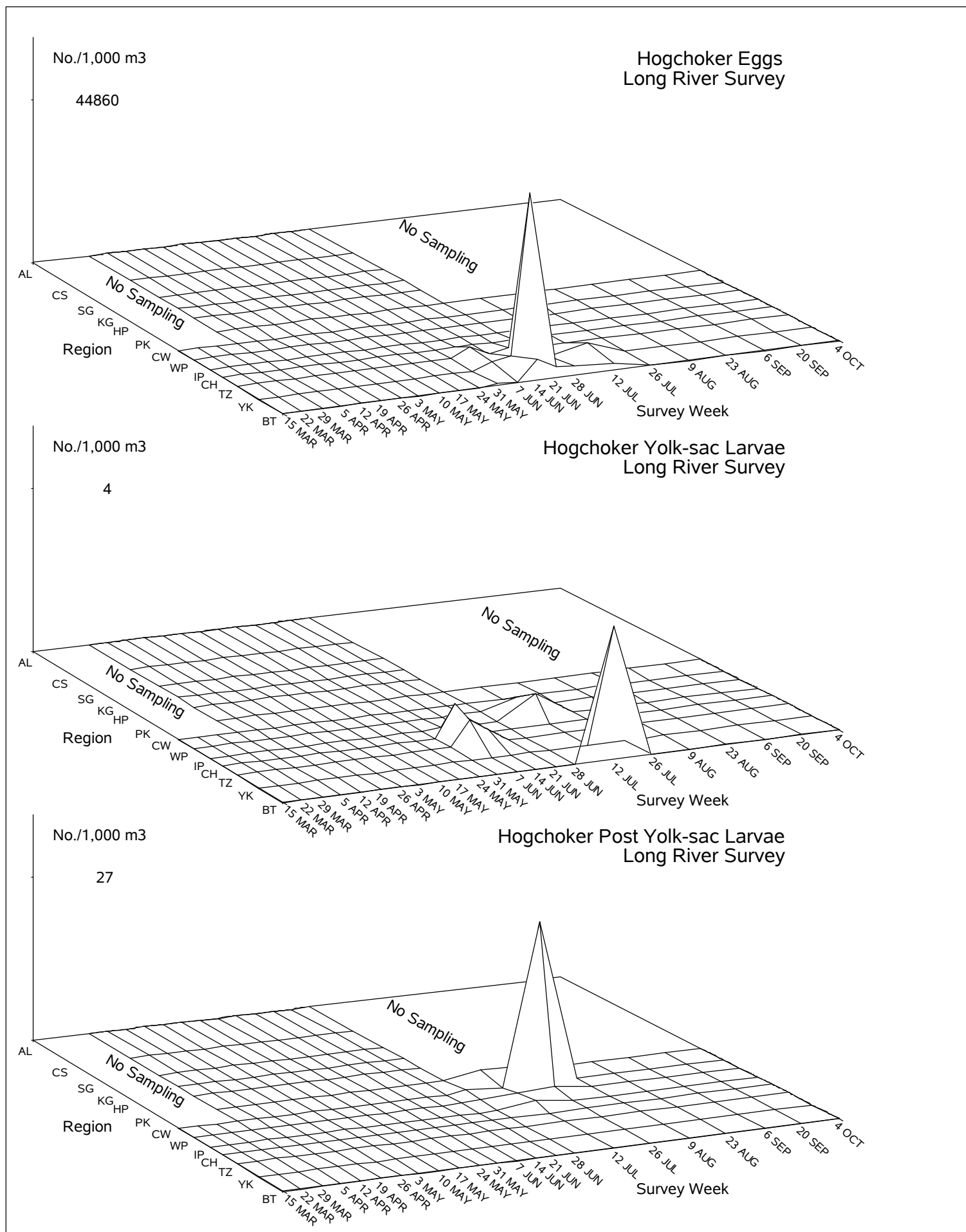


Figure 4-57. Spatiotemporal distribution of eggs, yolk-sac, and post yolk-sac larval hogchoker in the Hudson River estuary based on the 2010 Long River Survey.

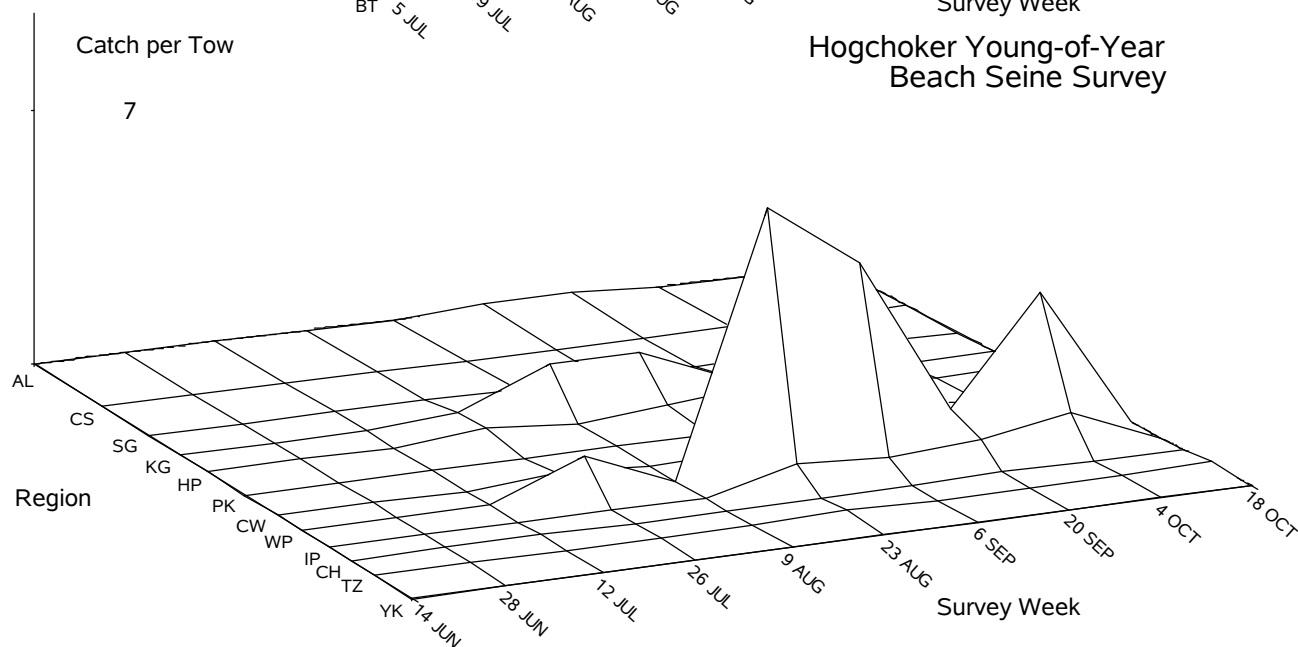
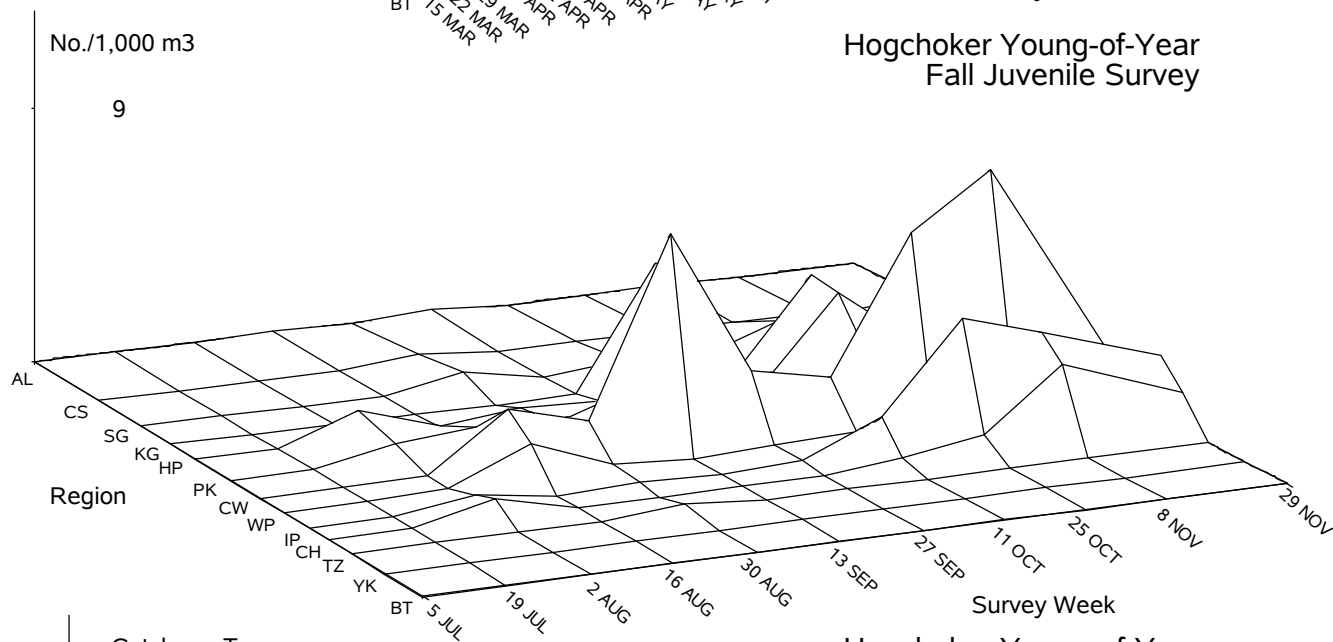
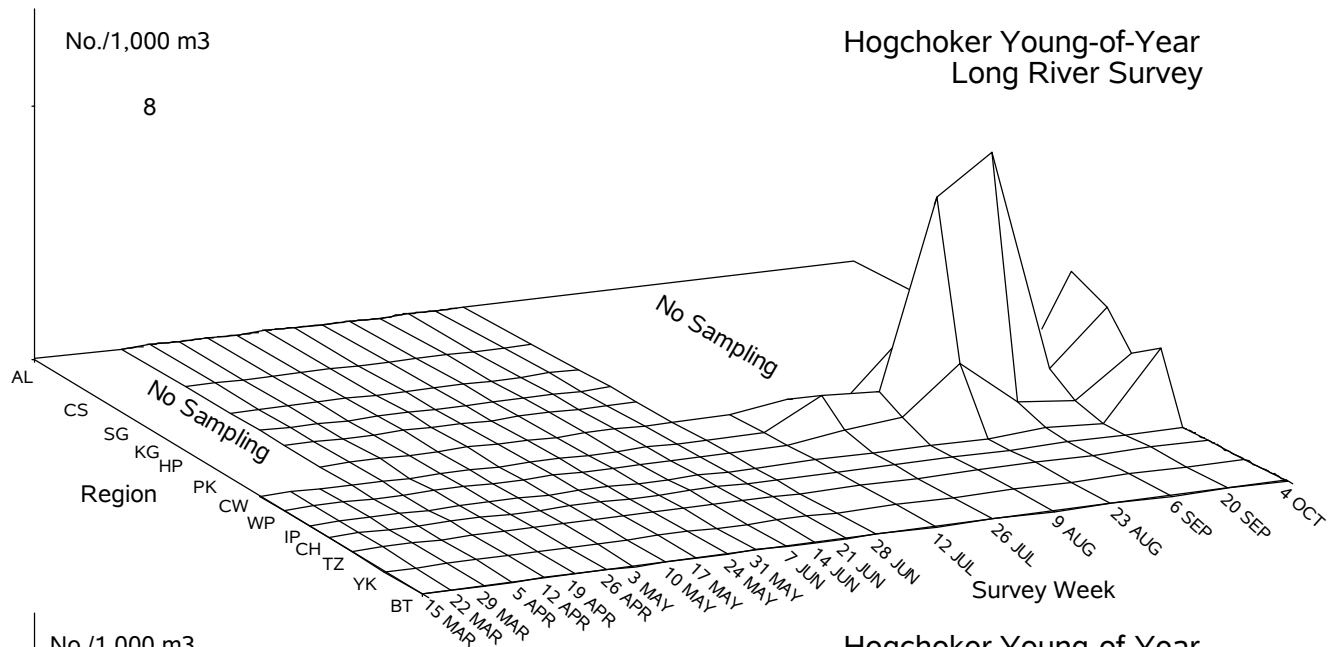


Figure 4-58. Spatiotemporal distribution of young-of-year hogchoker in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

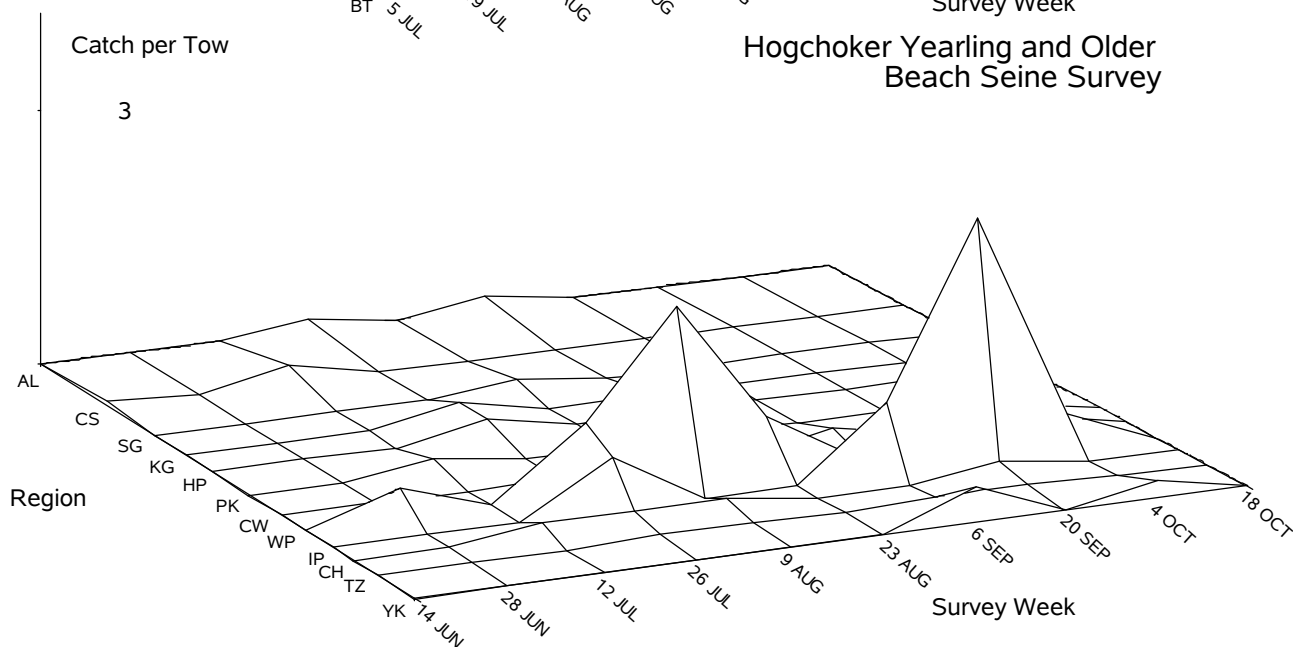
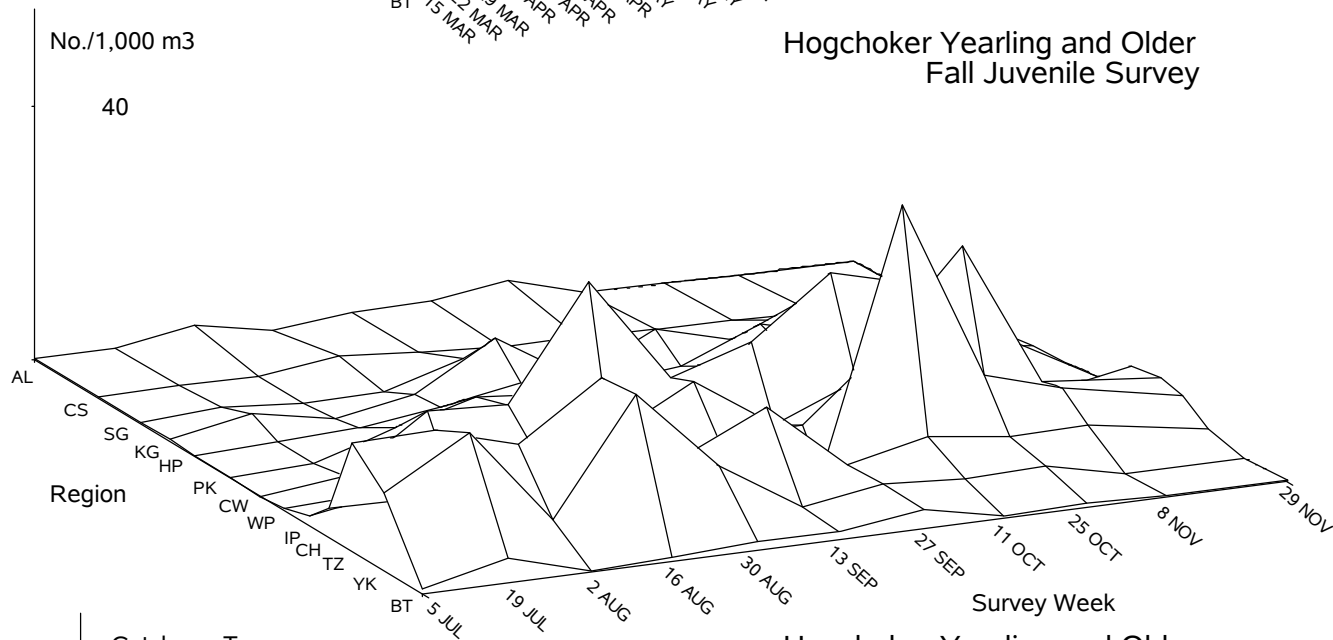
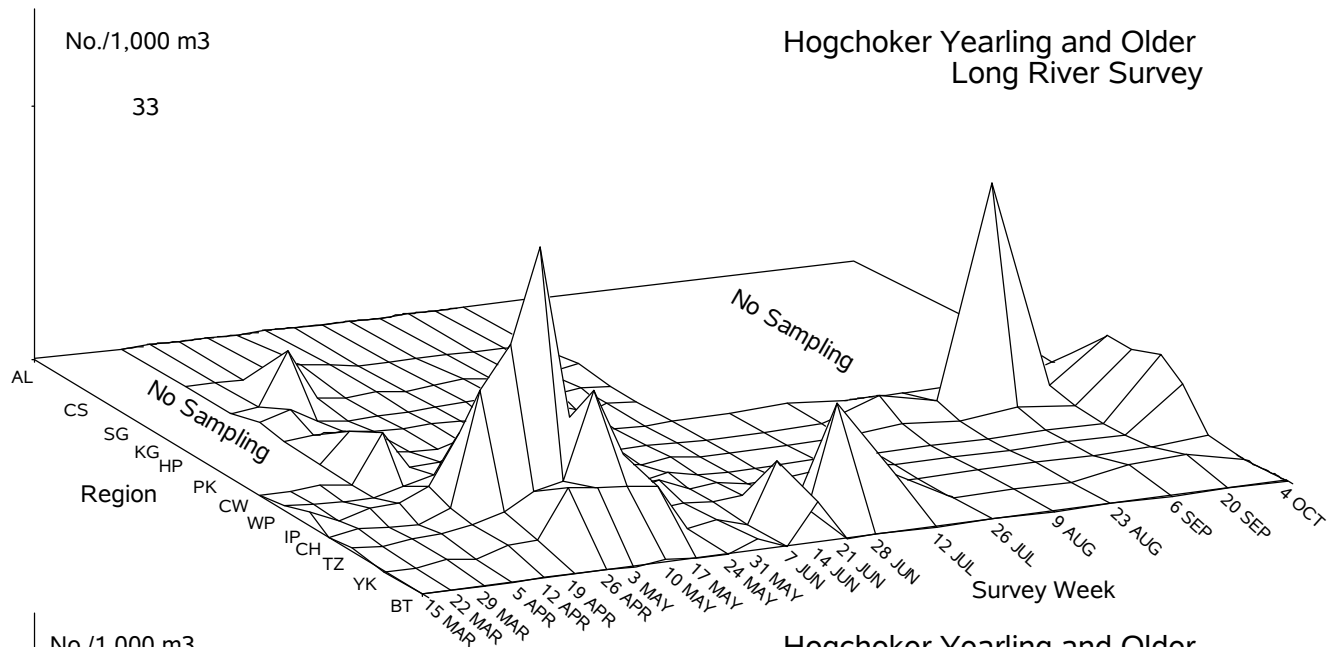


Figure 4-59. Spatiotemporal distribution of yearling and older hogchoker in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

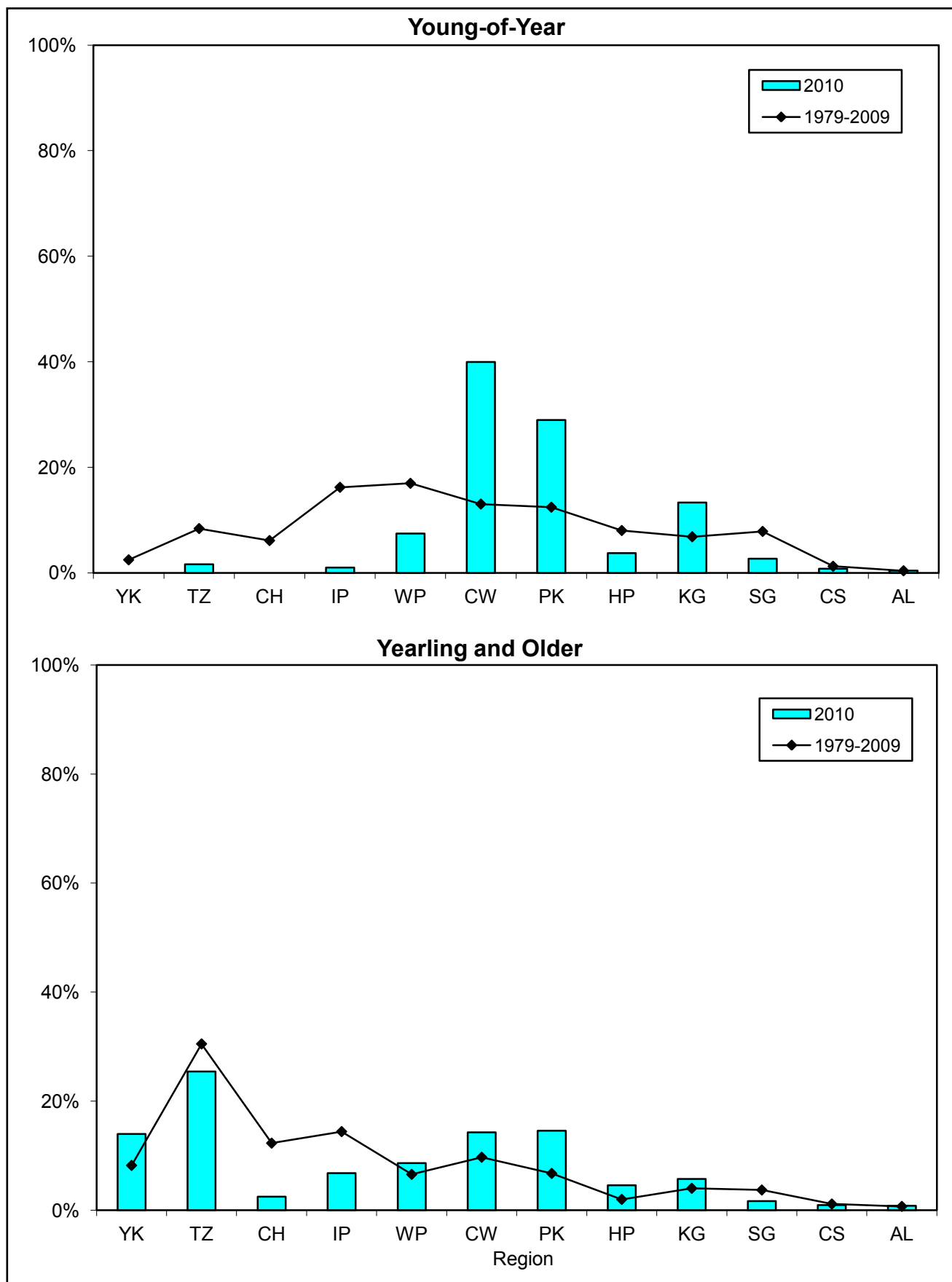


Figure 4-60. Geographic distribution indices for hogchoker collected during Fall Juvenile surveys of the Hudson River estuary, 1979-2010.

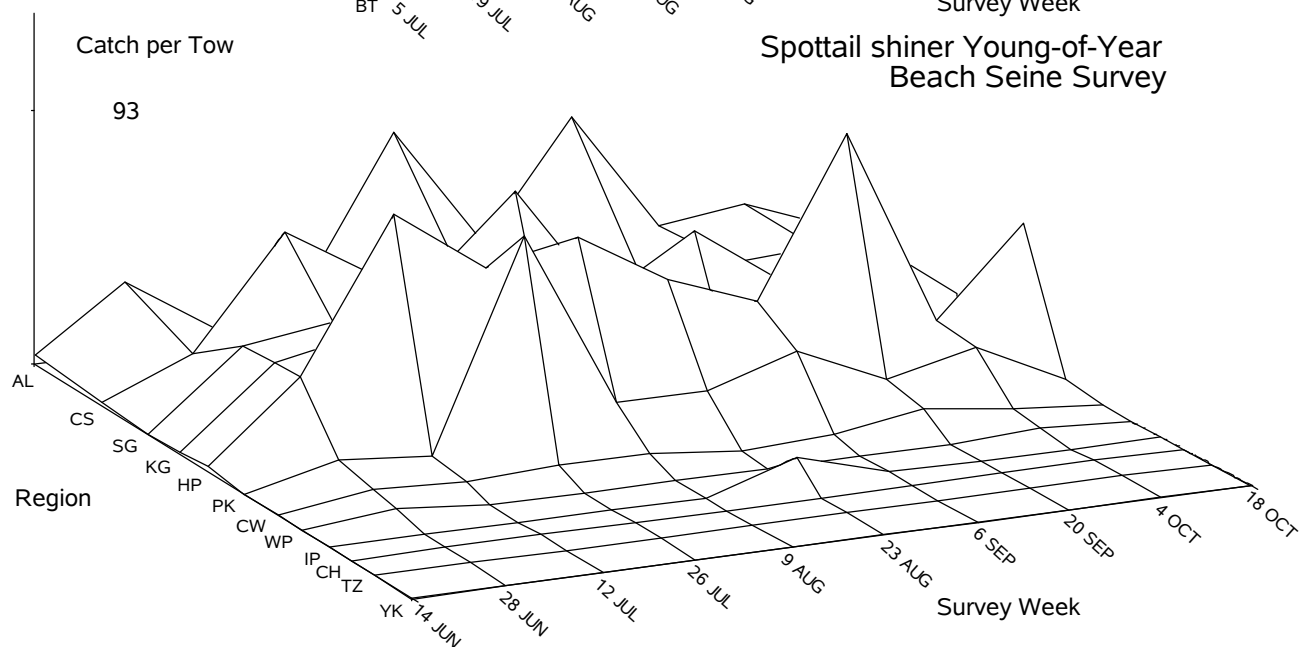
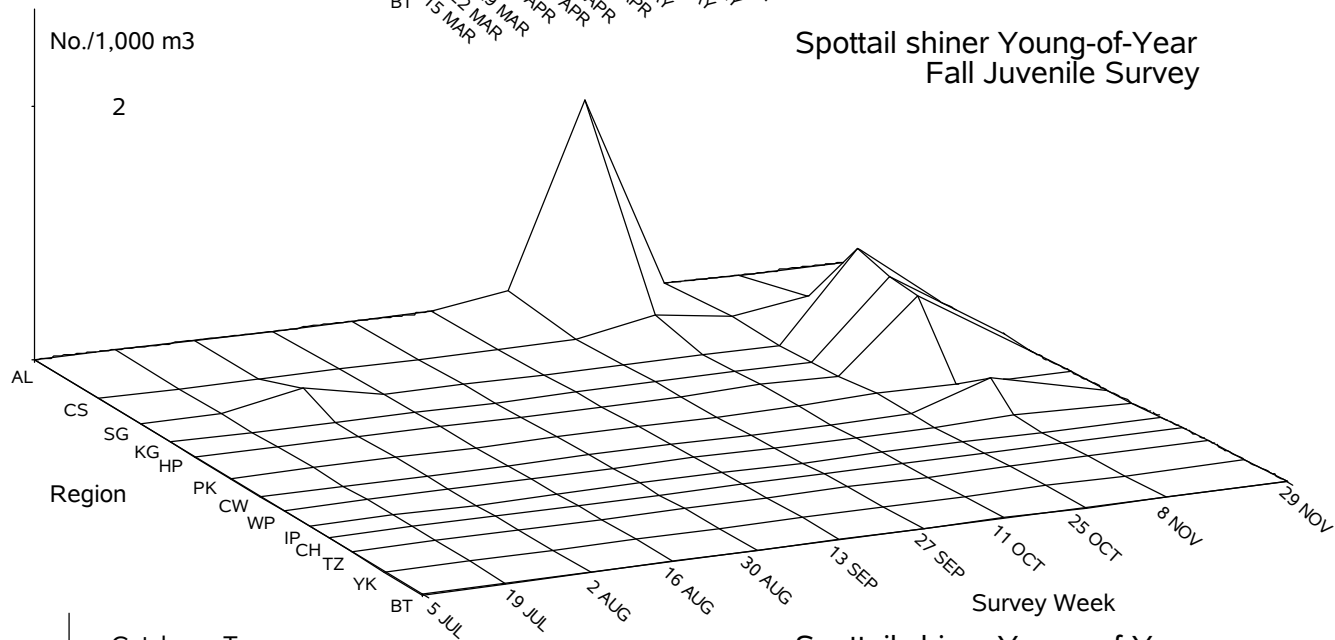
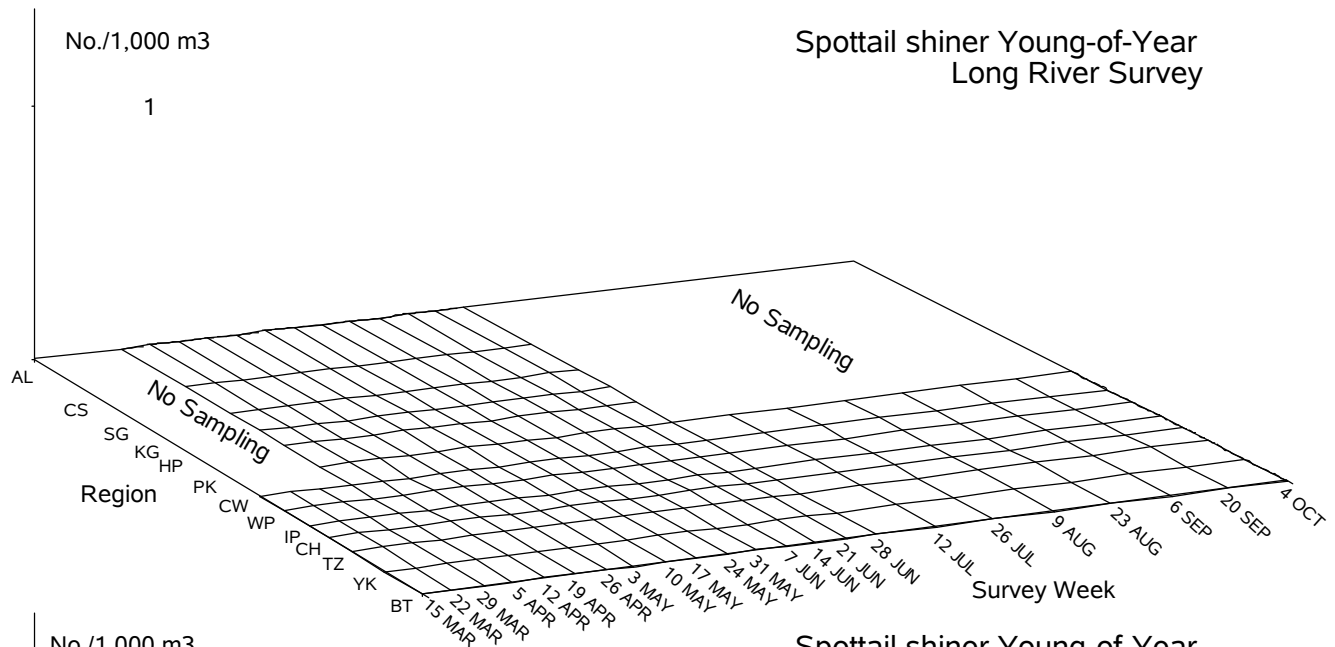


Figure 4-61. Spatiotemporal distribution of young-of-year spottail shiner in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

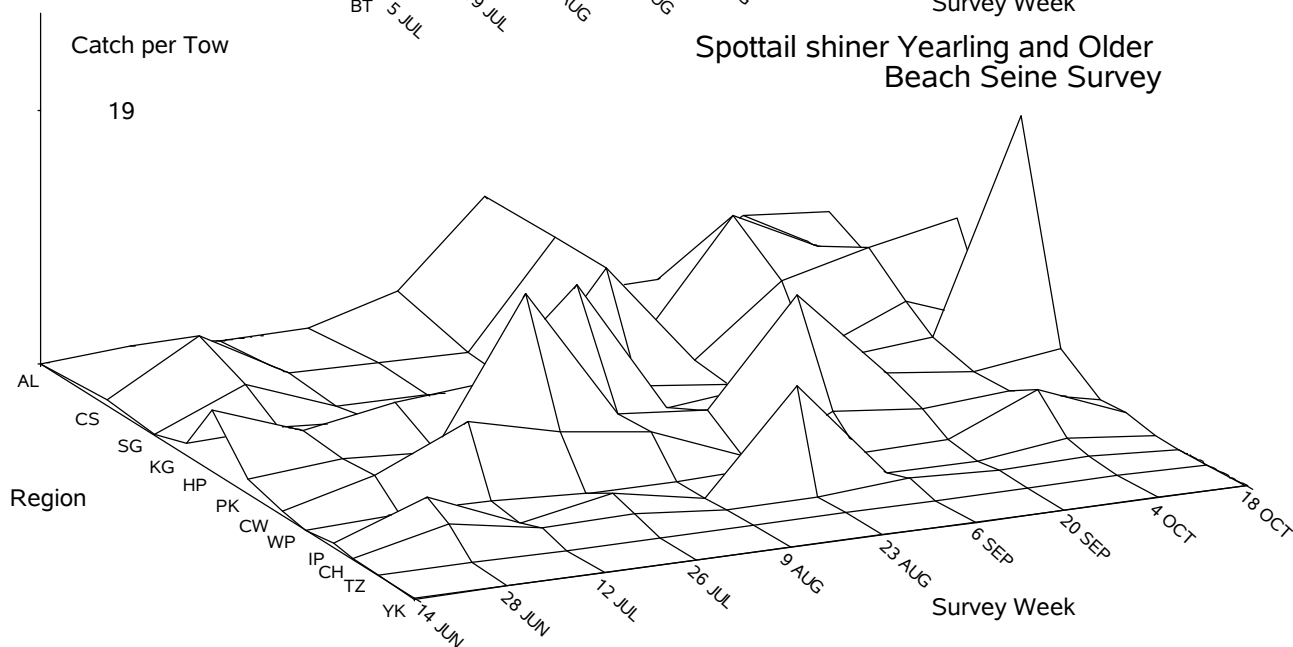
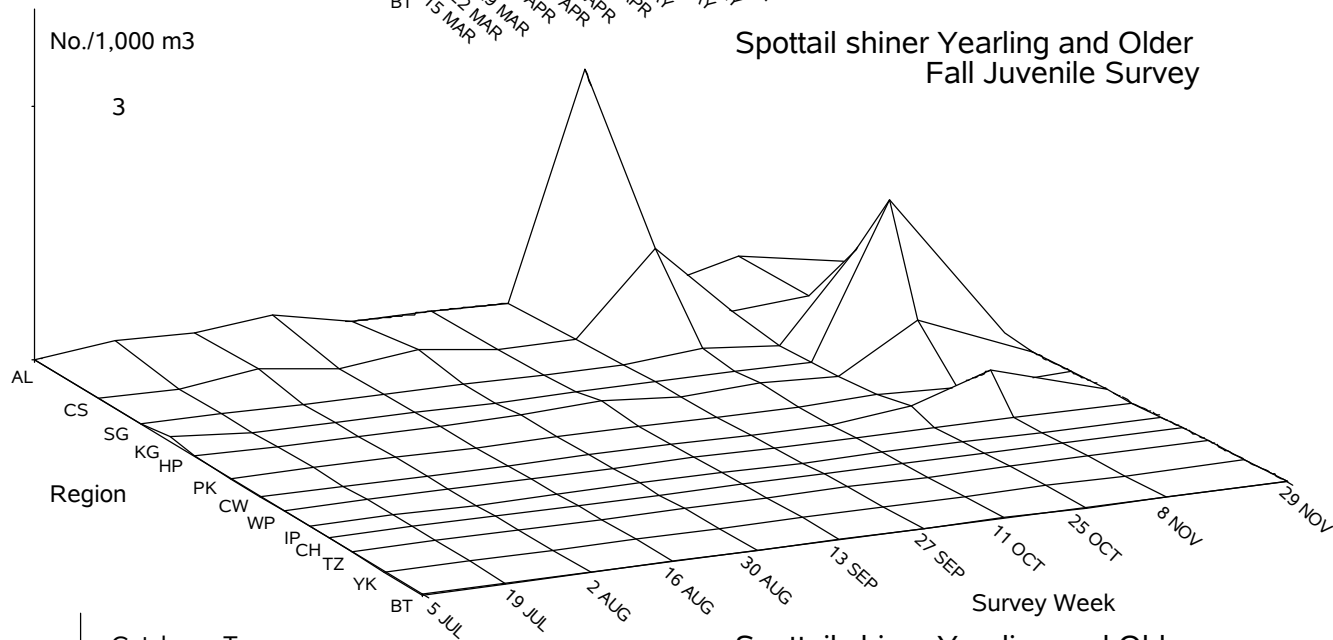
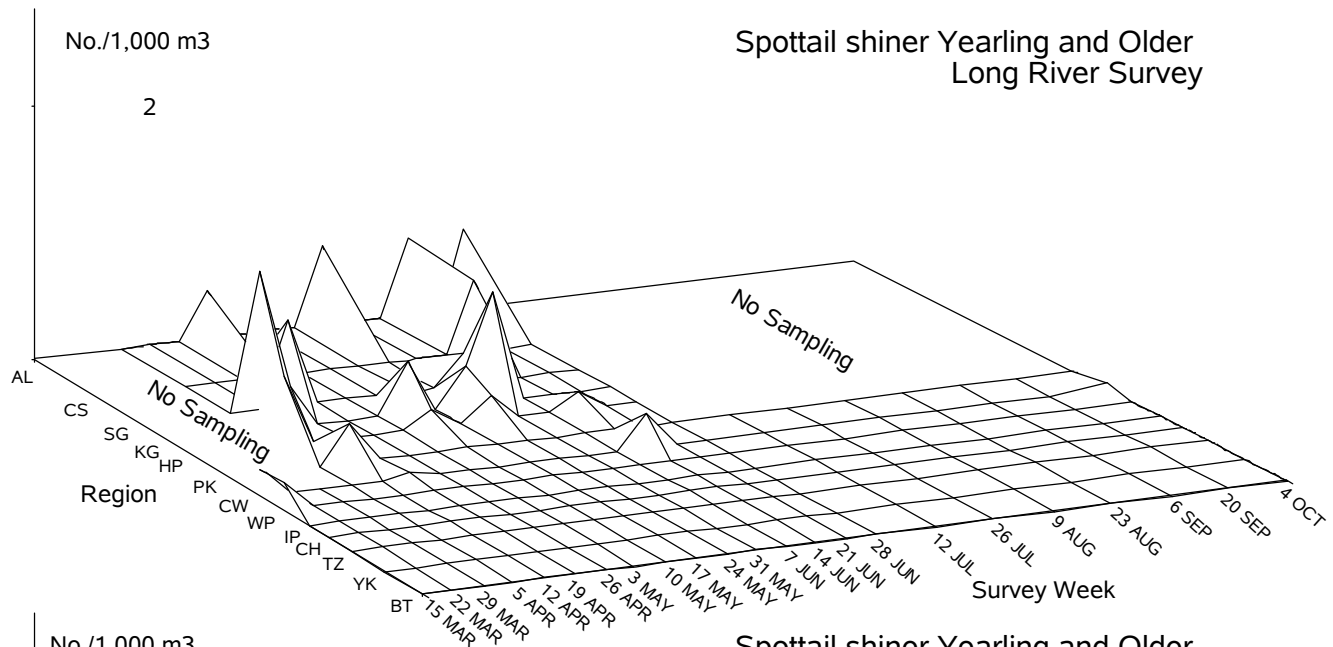


Figure 4-62. Spatiotemporal distribution of yearling and older spottail shiner in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

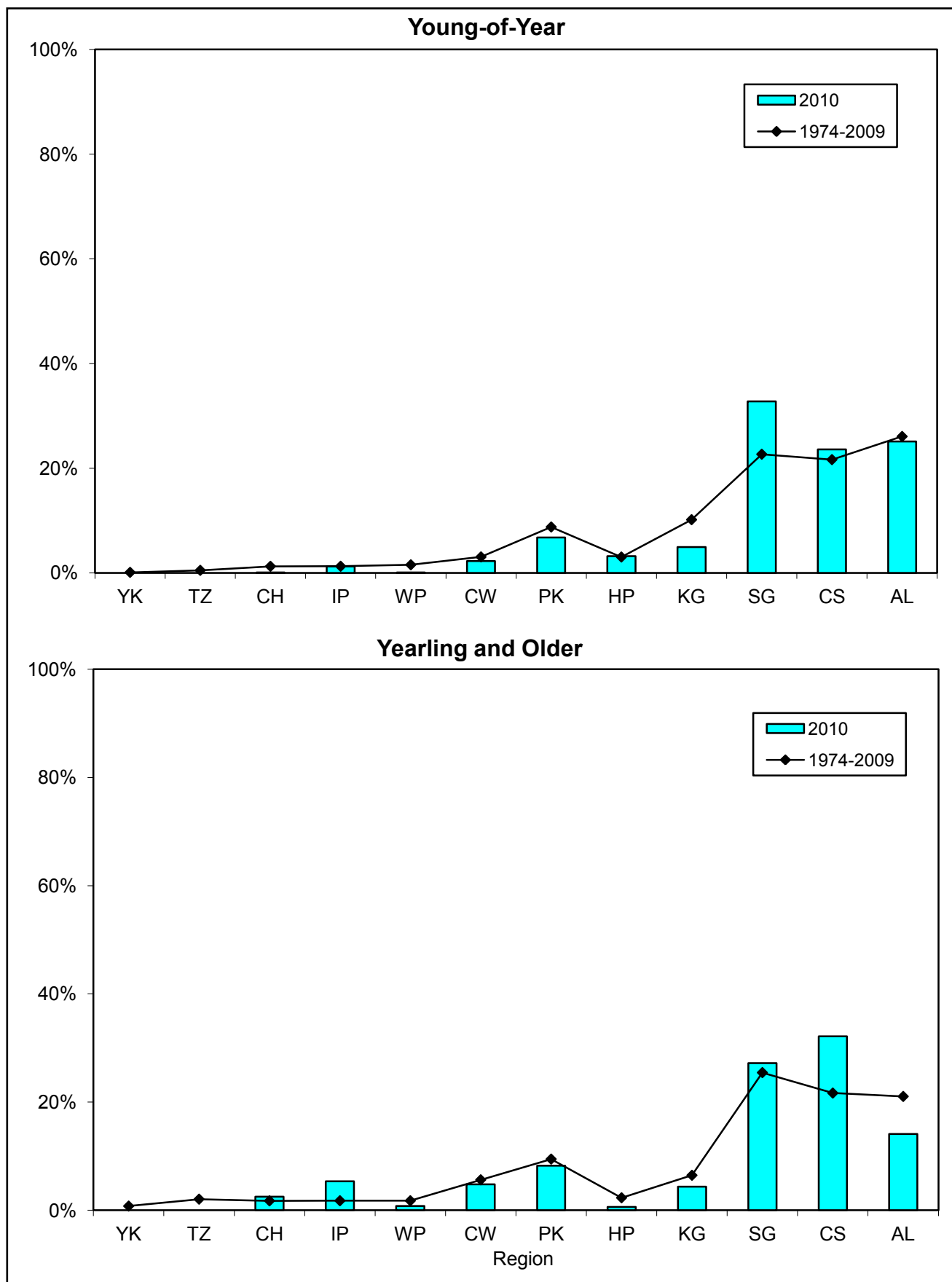


Figure 4-63. Geographic distribution indices for spottail shiner collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

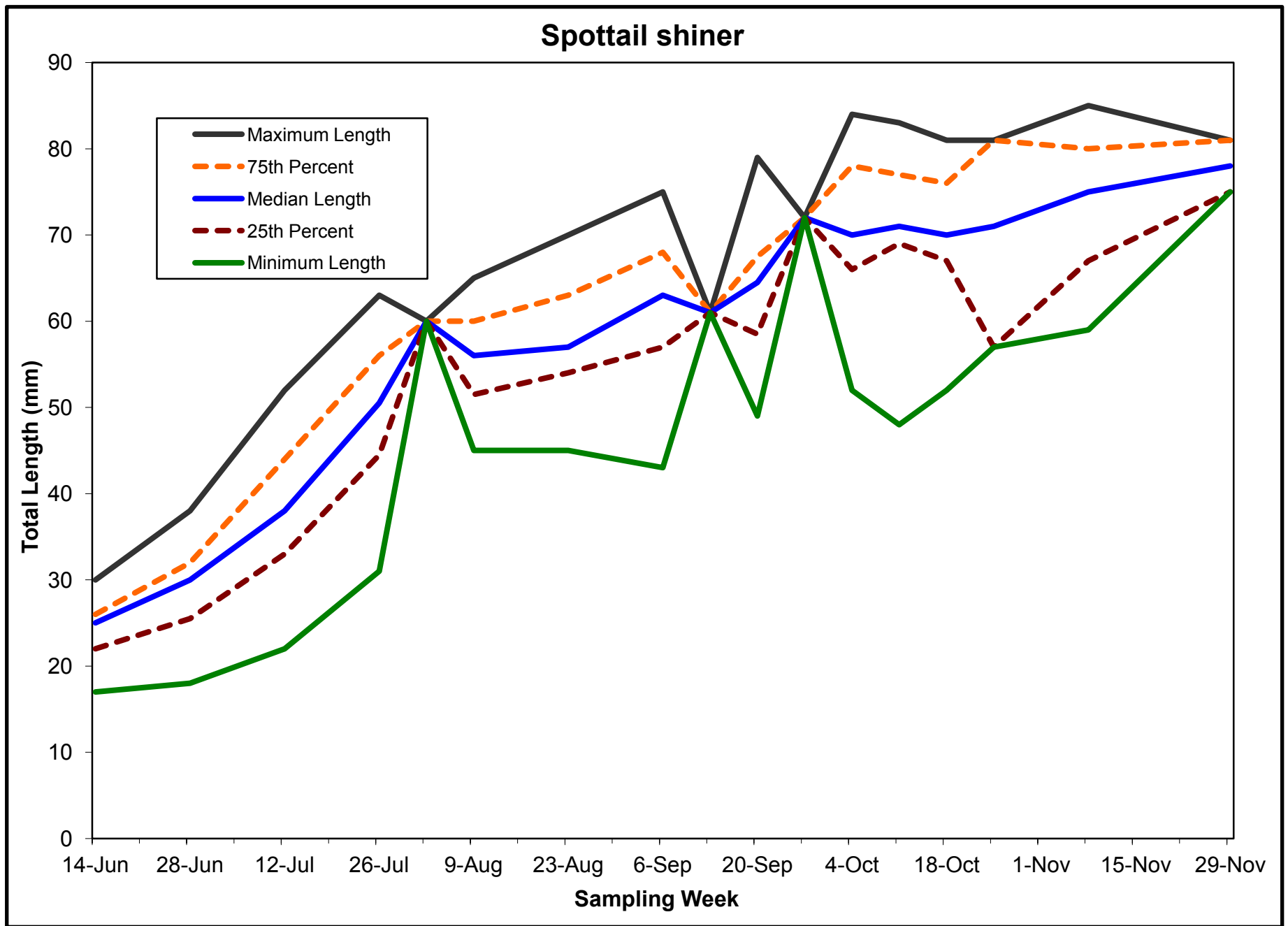


Figure 4-64. Weekly length statistics for young-of-year spottail shiner in the Hudson River estuary, 2010.

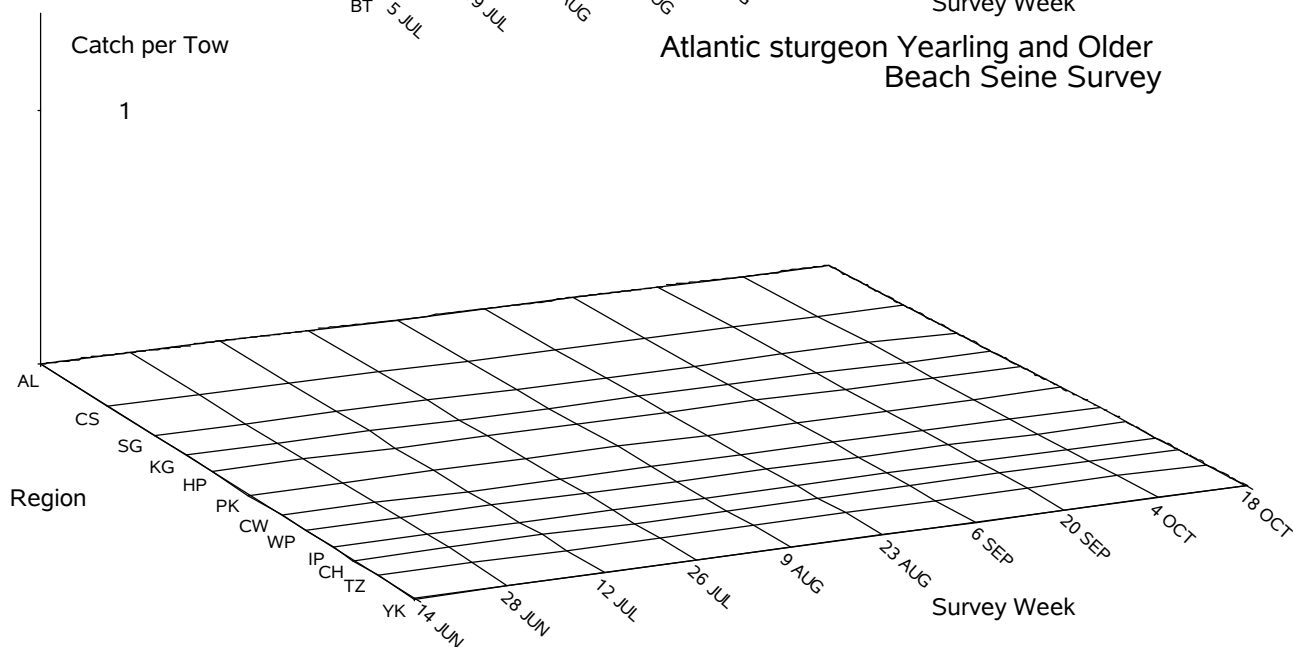
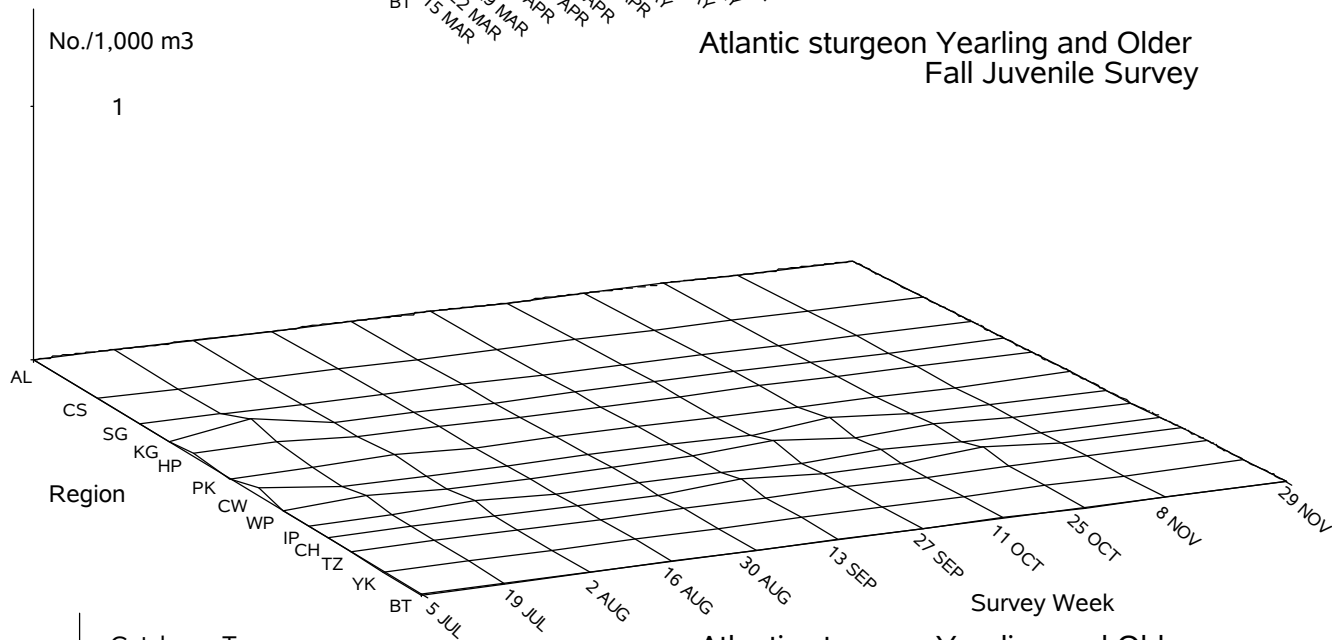
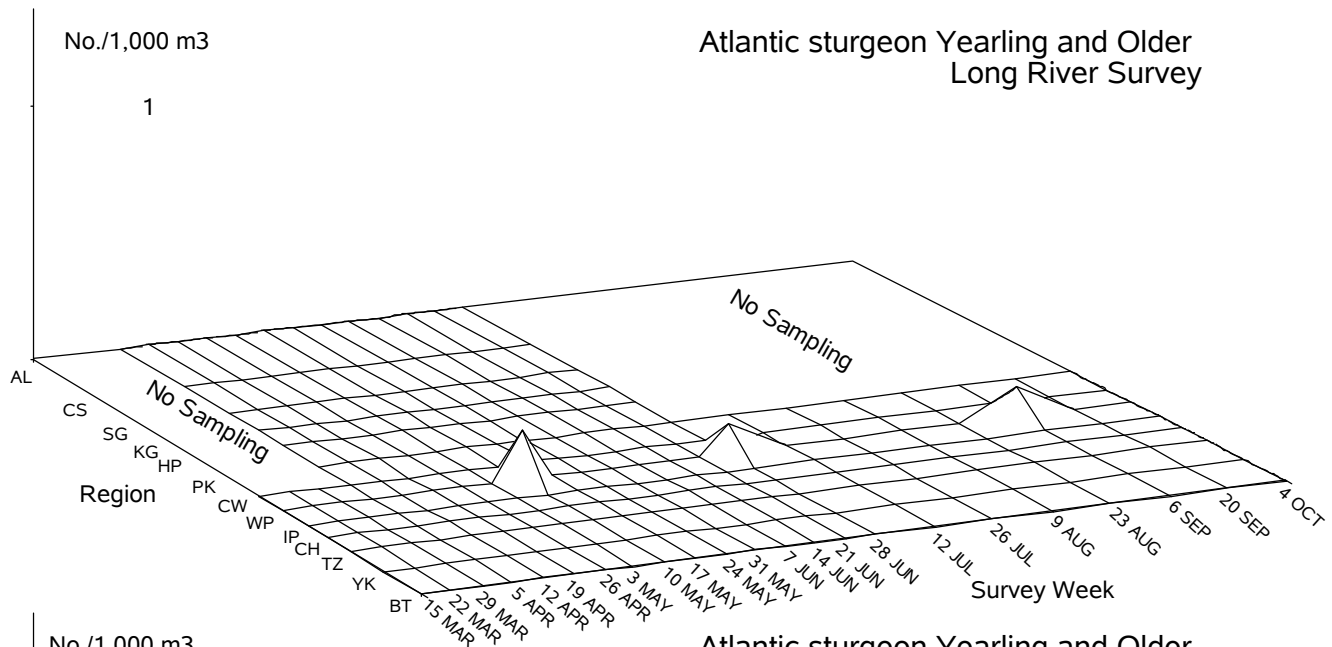


Figure 4-65. Spatiotemporal distribution of yearling and older Atlantic sturgeon in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

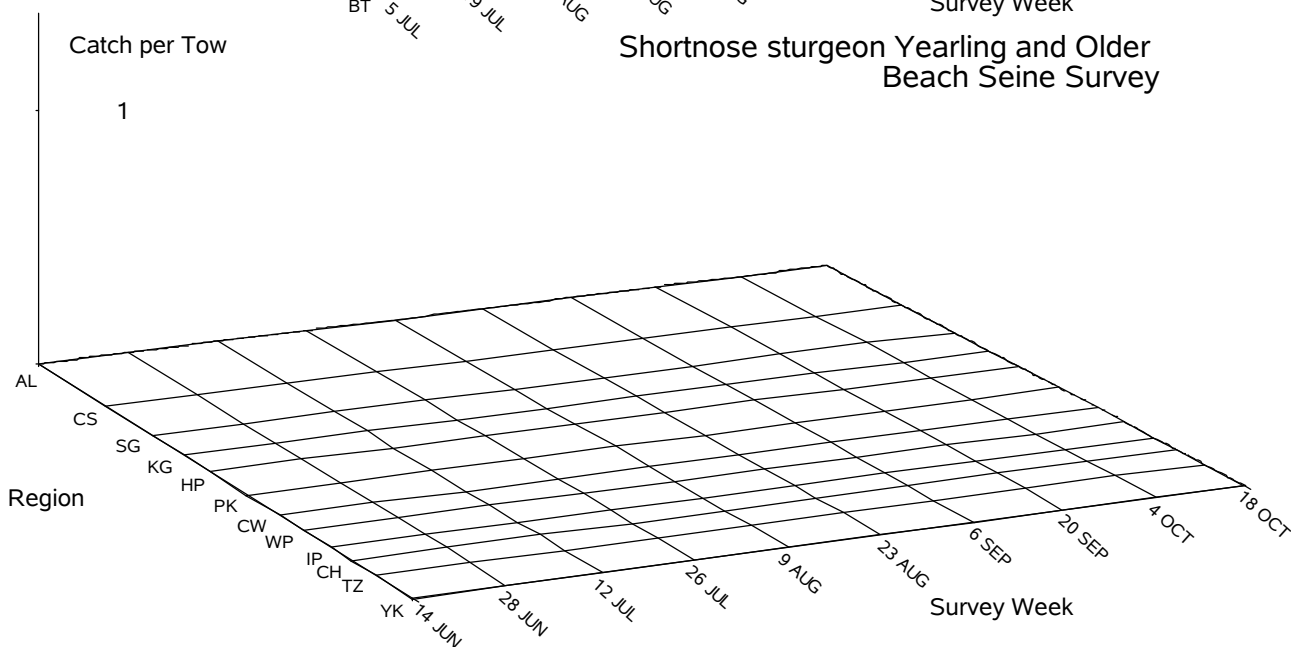
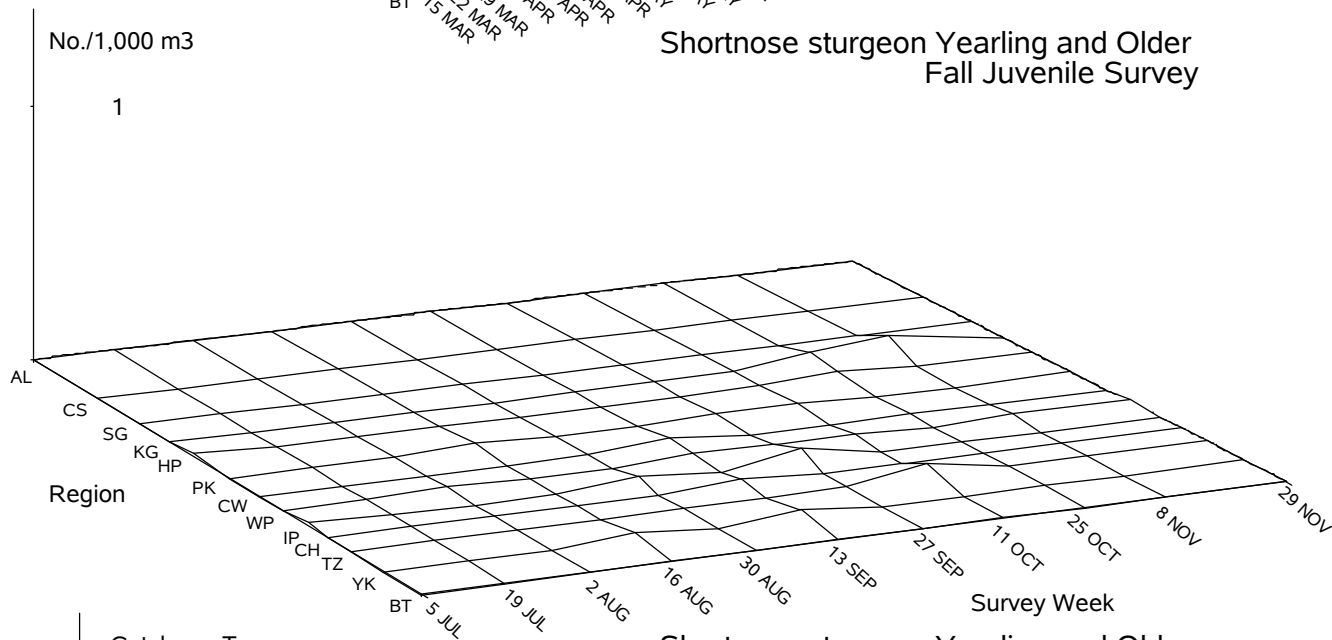
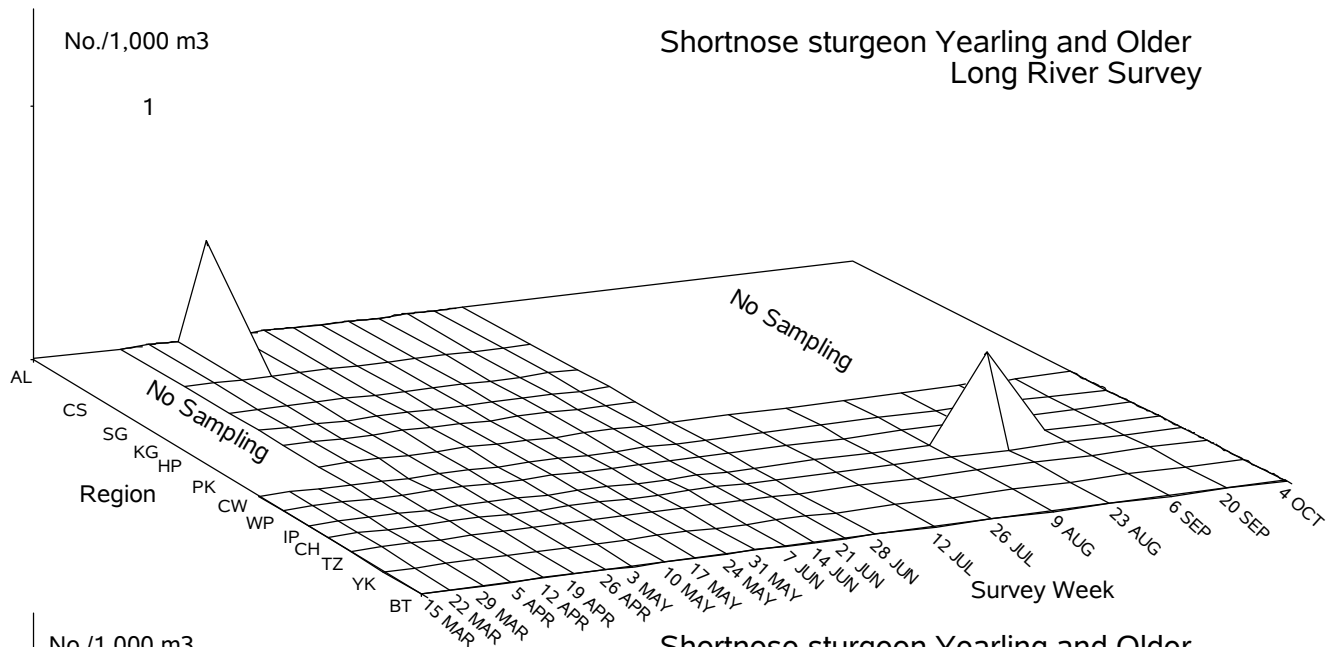


Figure 4-66. Spatiotemporal distribution of yearling and older shortnose sturgeon in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

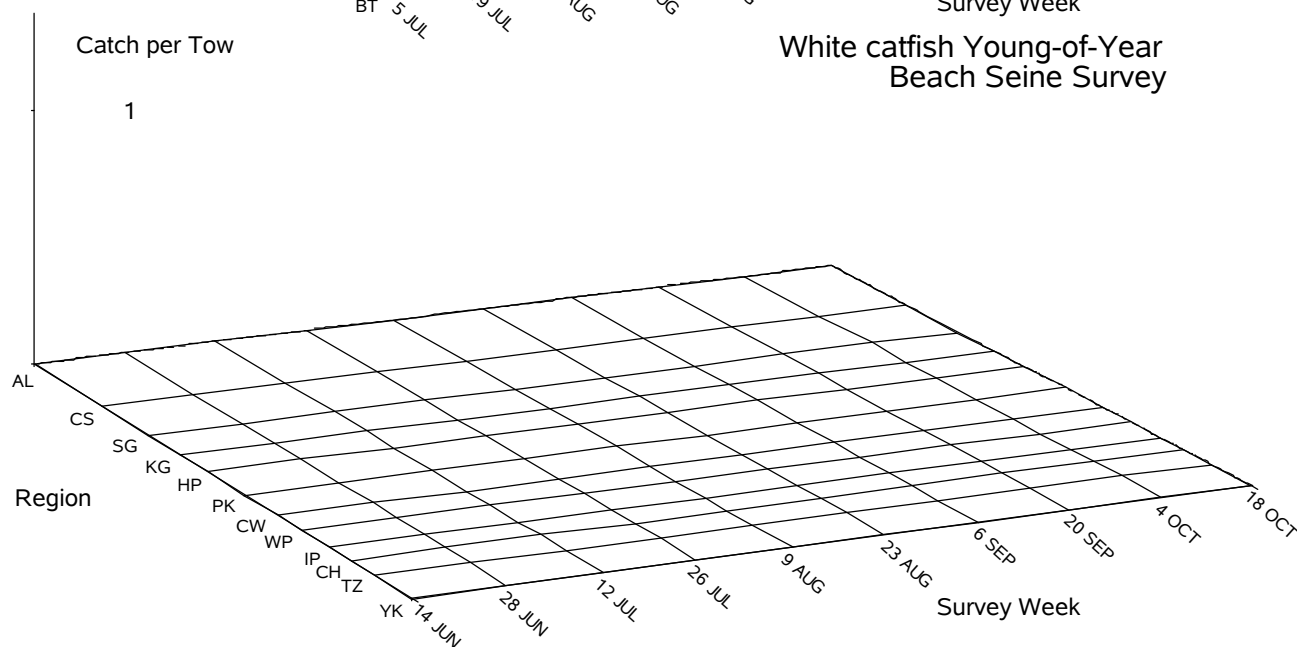
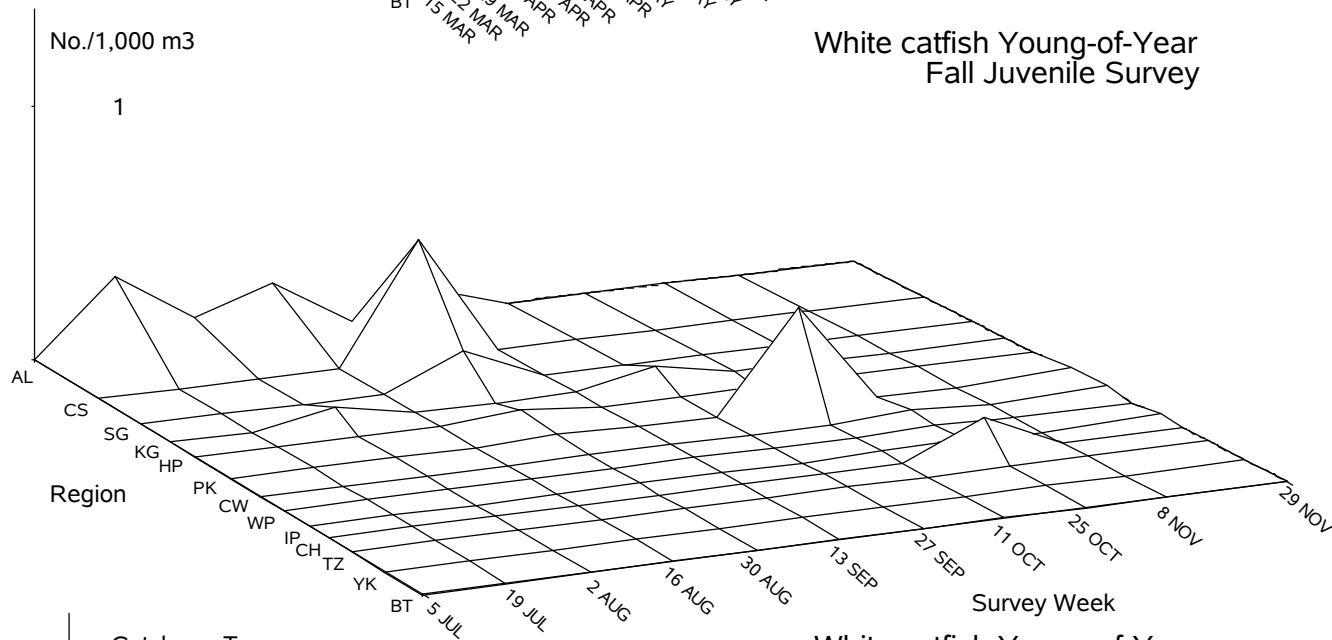
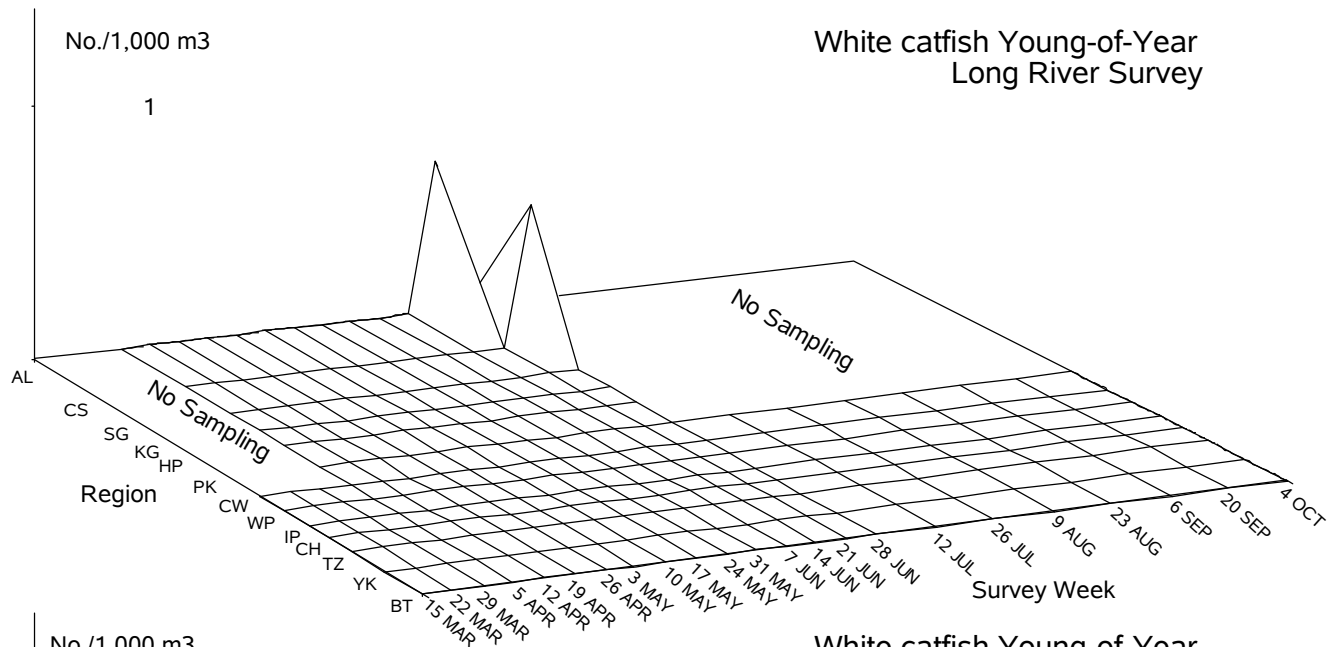


Figure 4-67. Spatiotemporal distribution of young-of-year white catfish in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

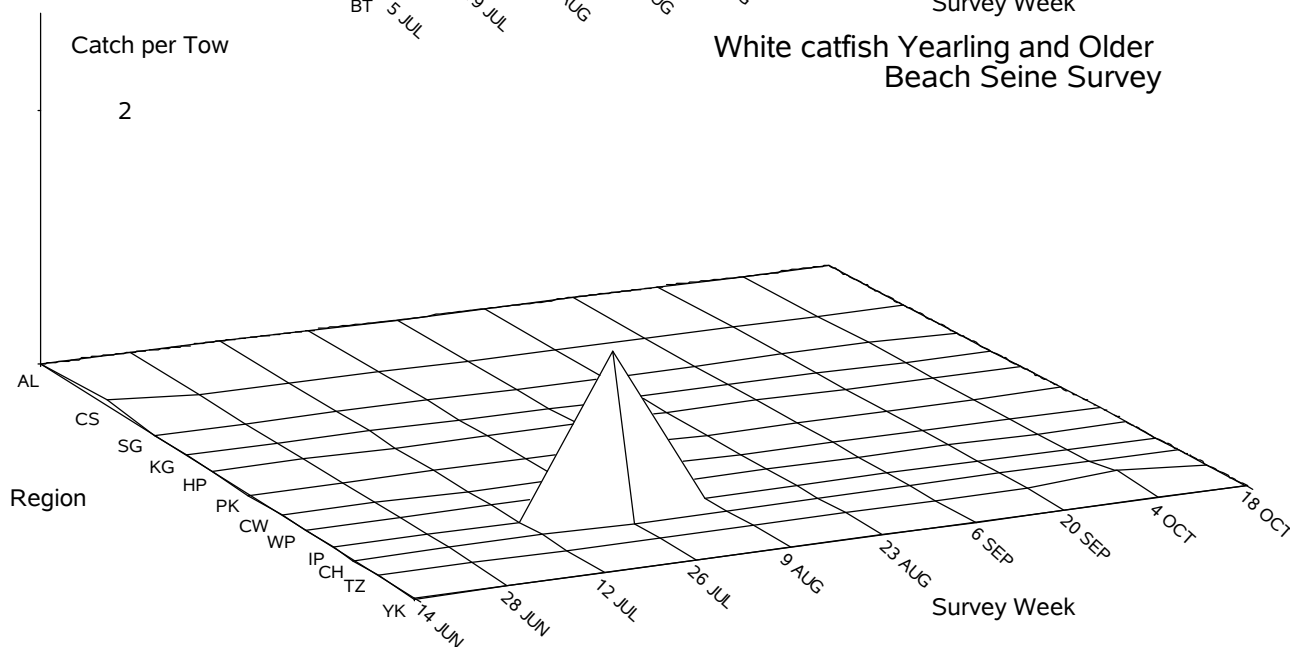
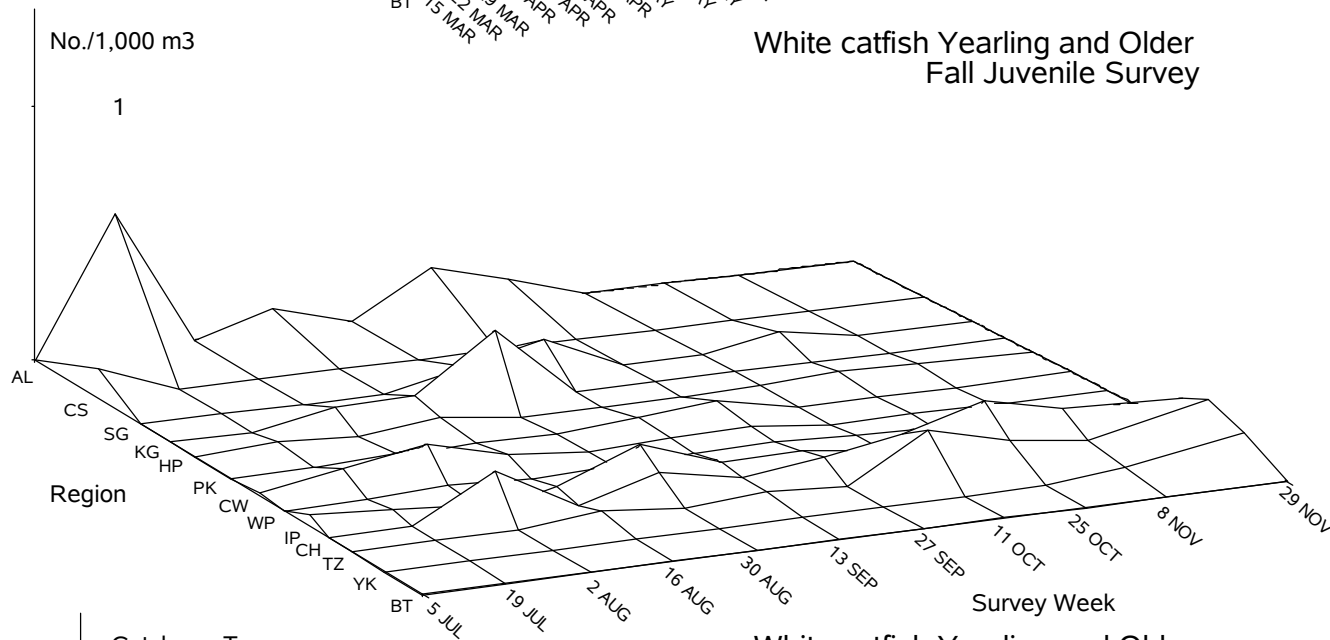
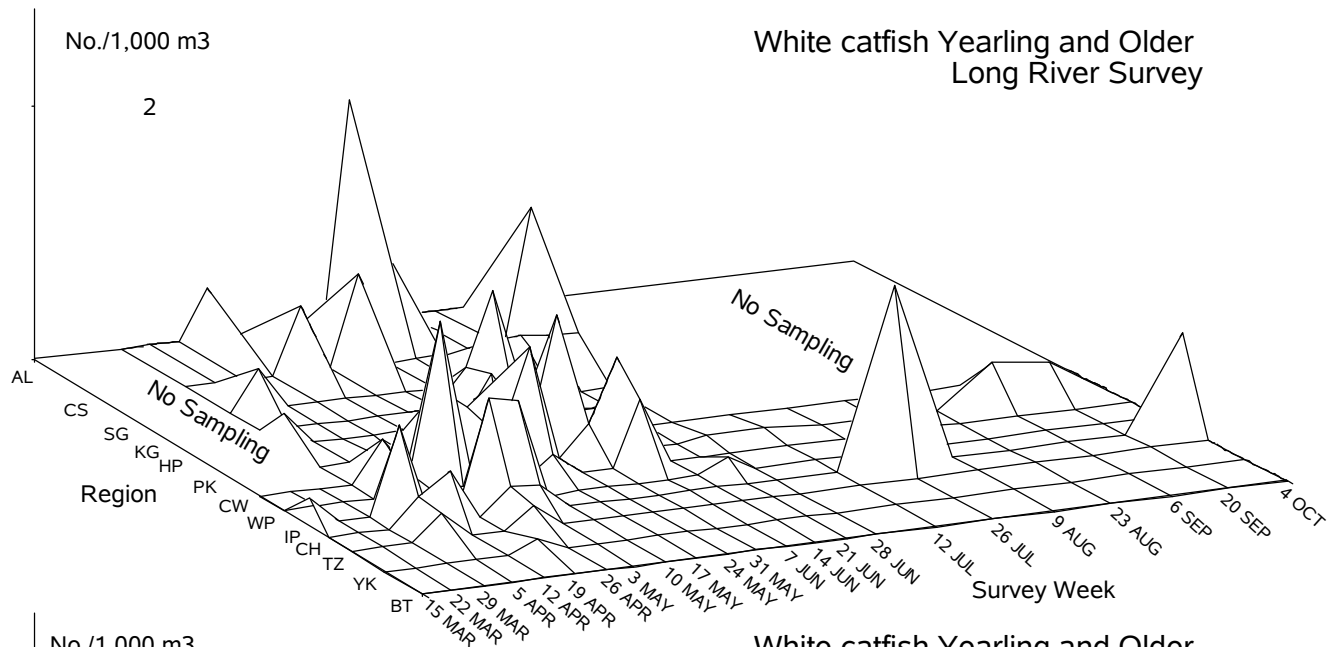


Figure 4-68. Spatiotemporal distribution of yearling and older white catfish in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

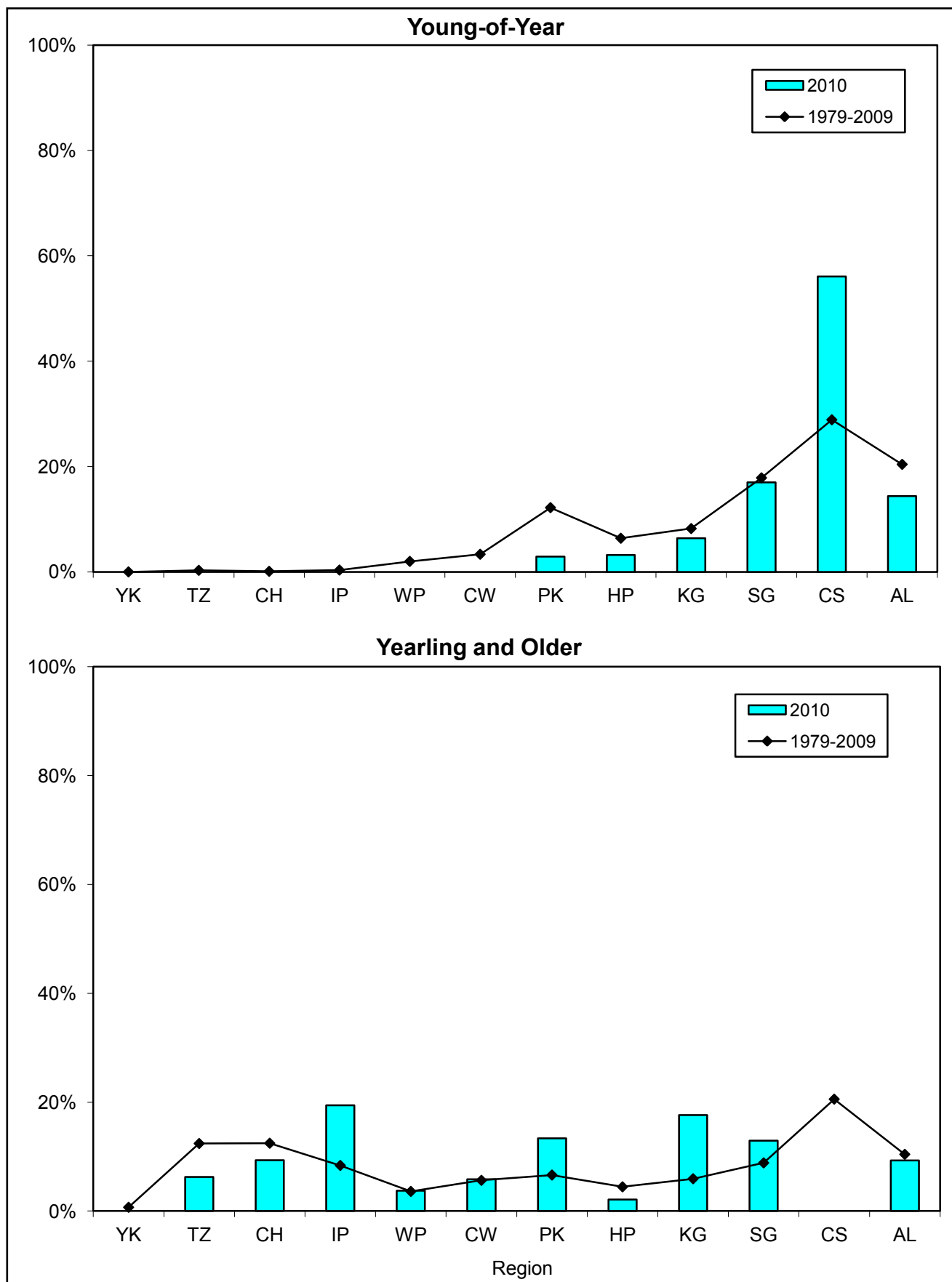


Figure 4-69. Geographic distribution indices for white catfish collected during Fall Juvenile surveys of the Hudson River estuary, 1979-2010.

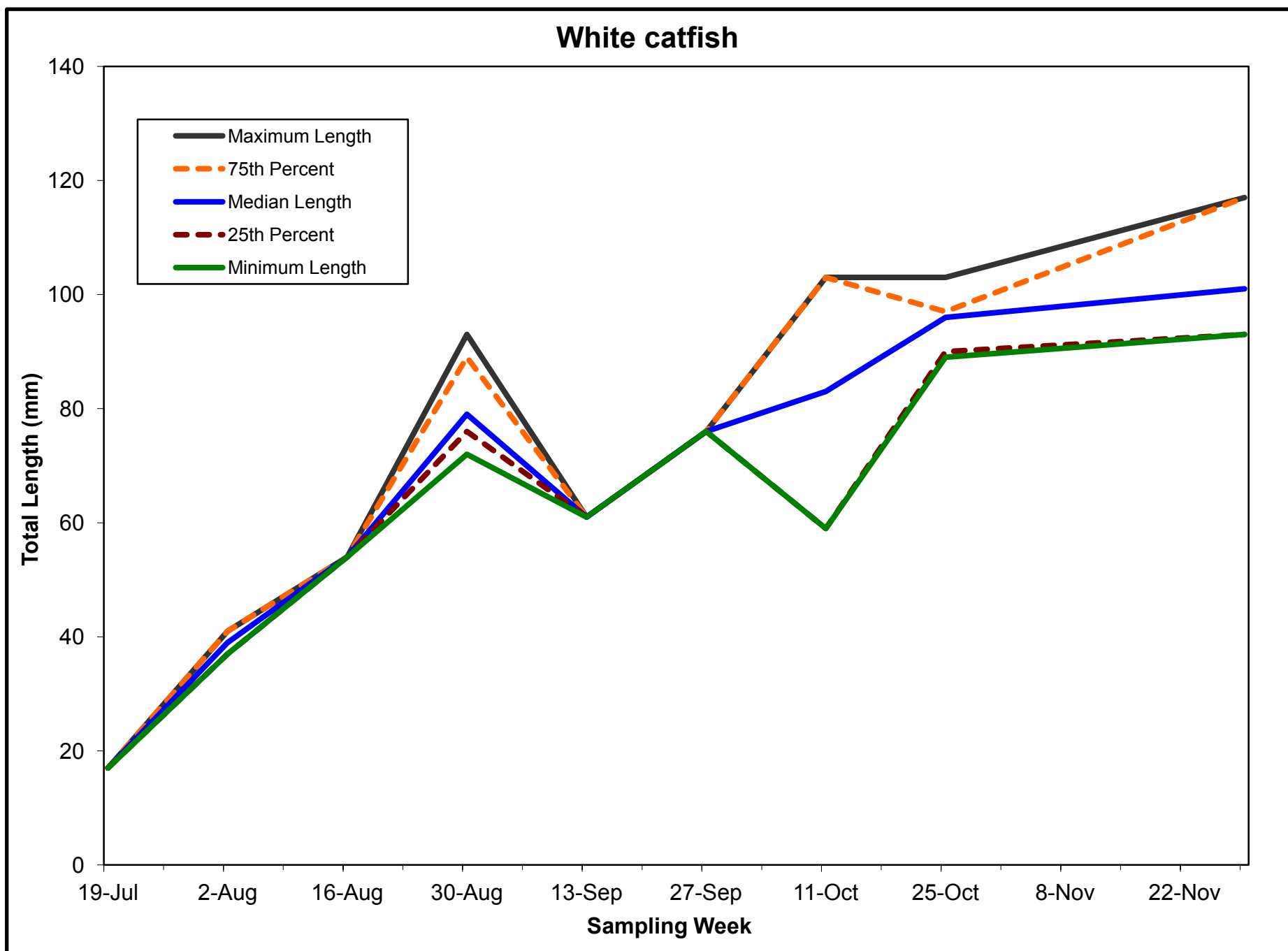


Figure 4-70. Weekly length statistics for young-of-year white catfish in the Hudson River estuary, 2010.

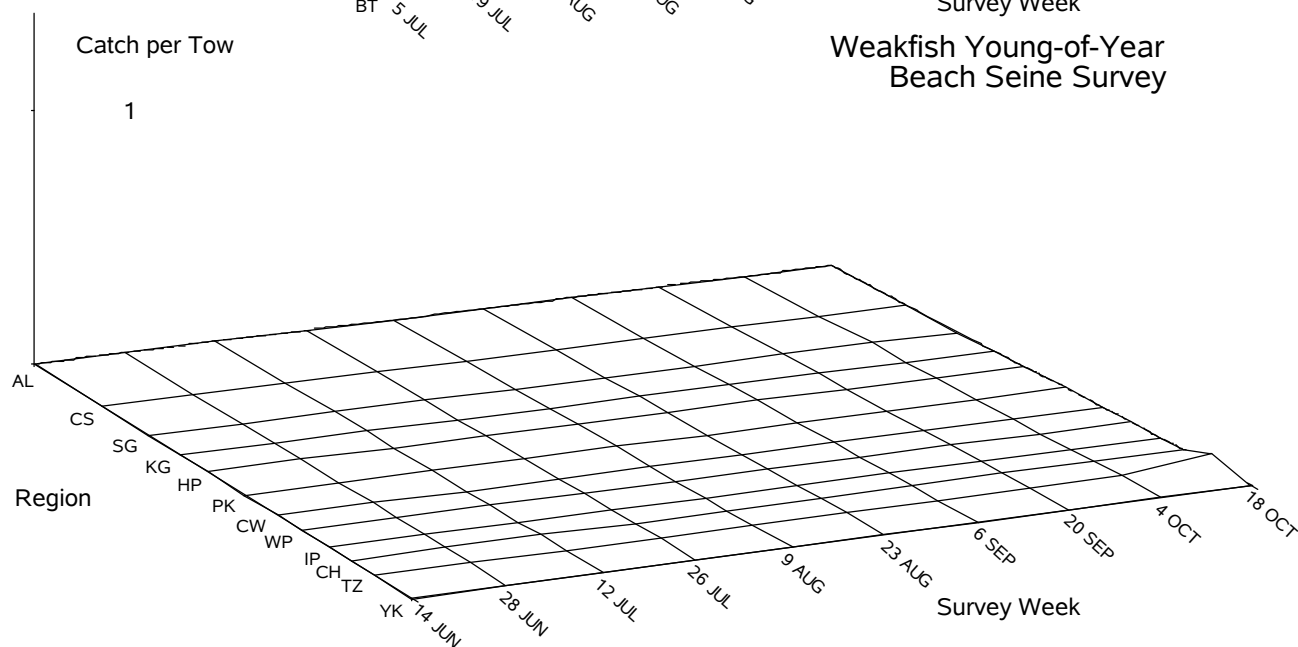
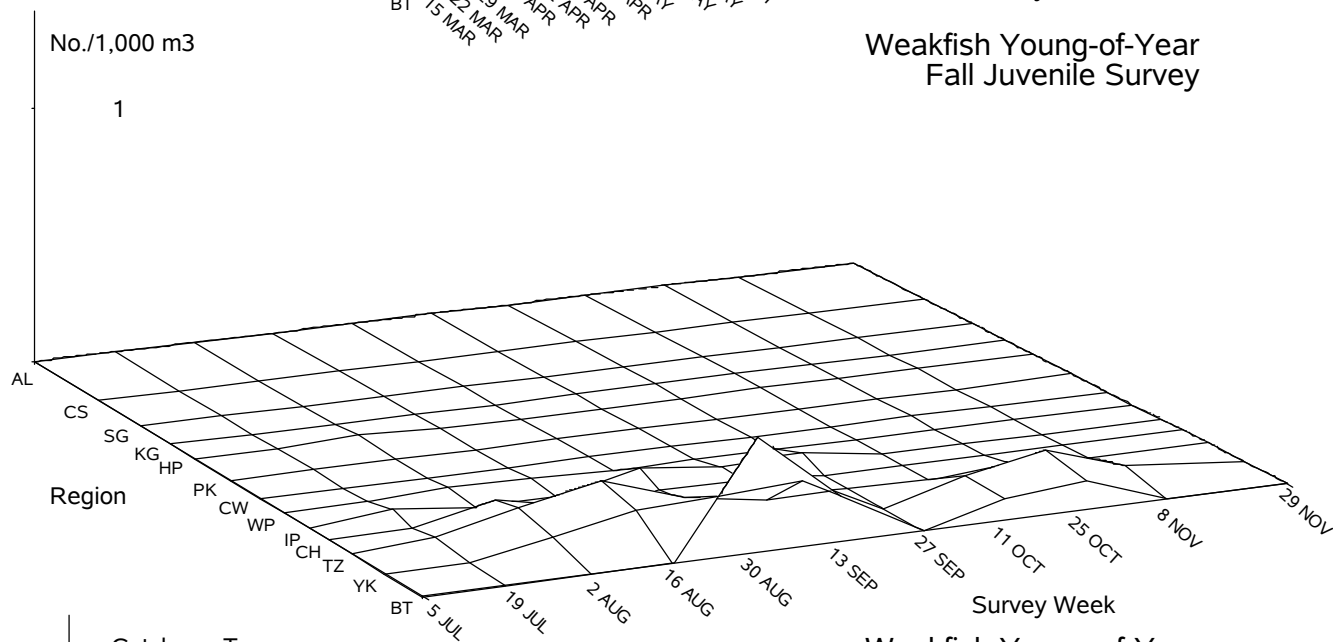
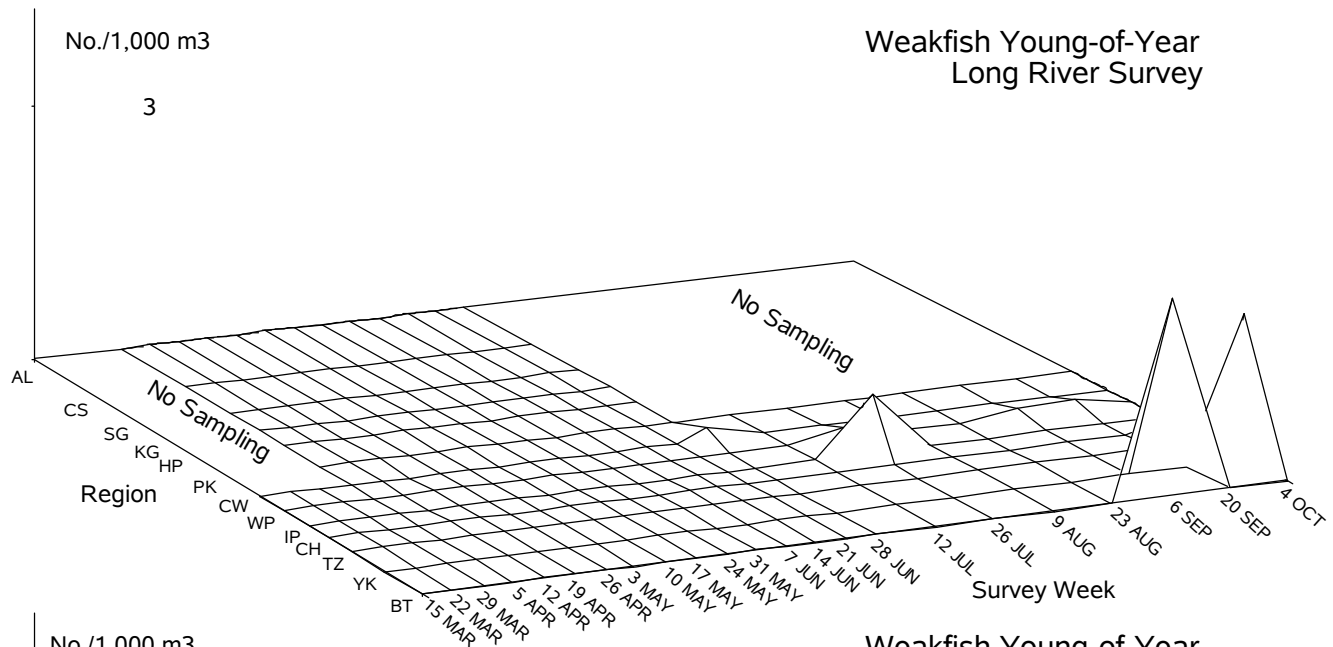


Figure 4-71. Spatiotemporal distribution of young-of-year weakfish in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

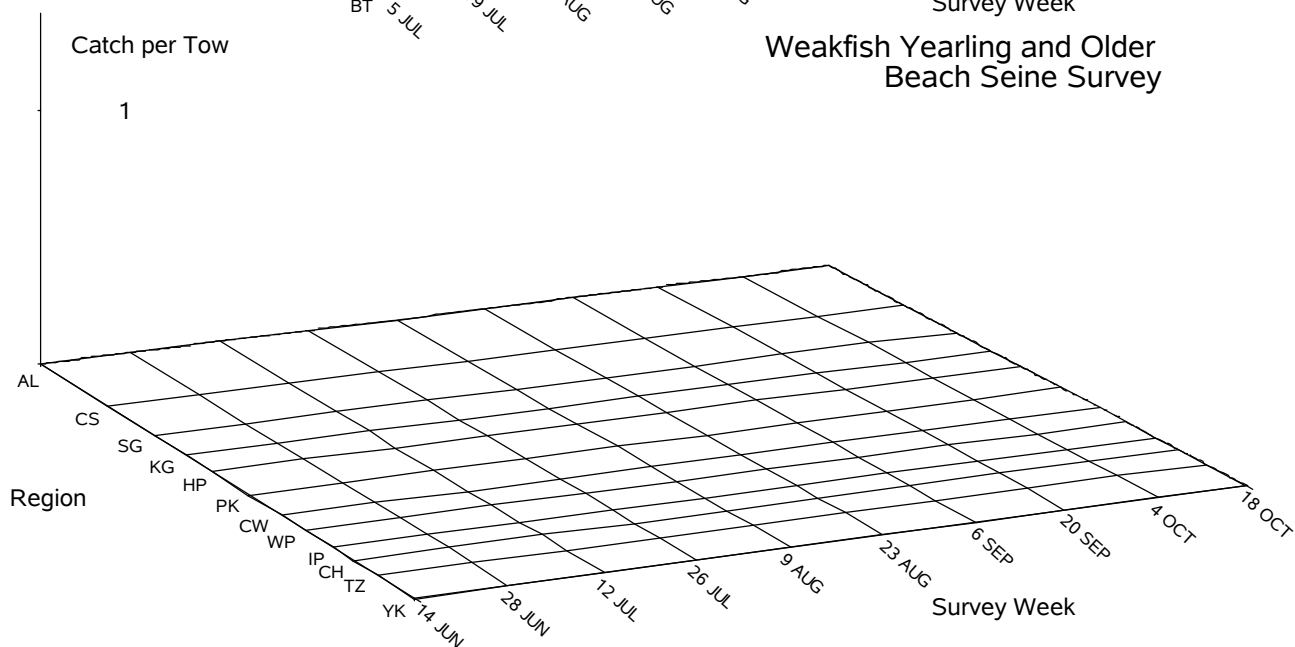
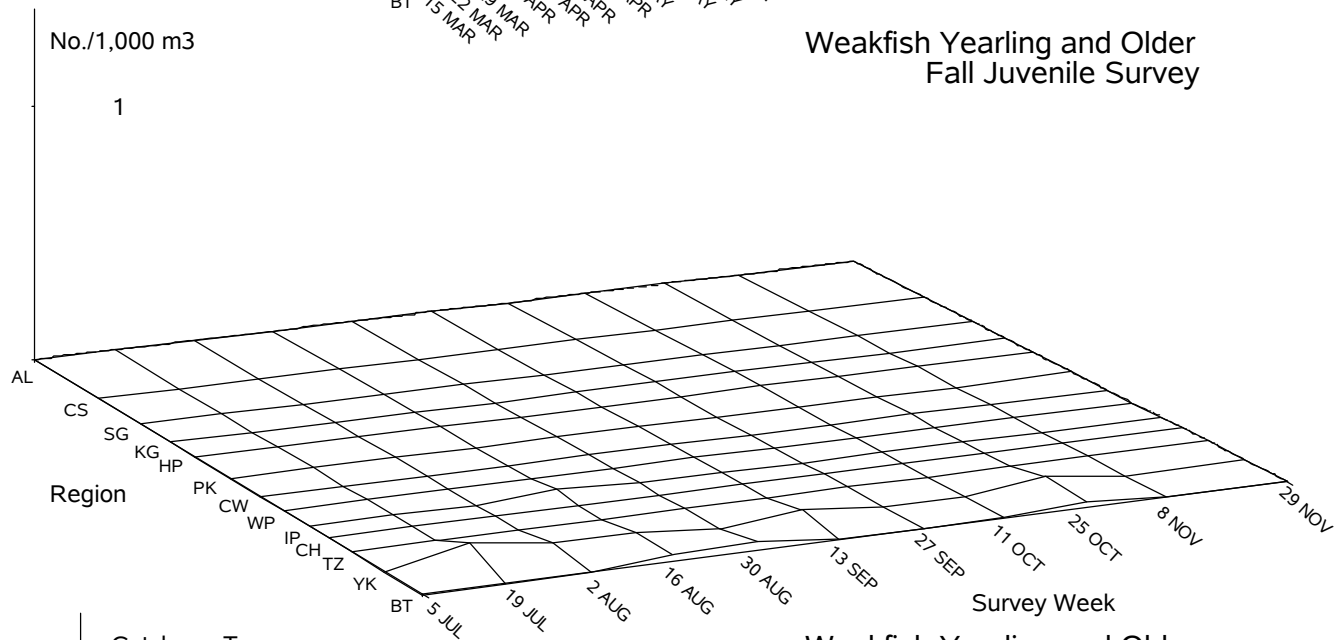
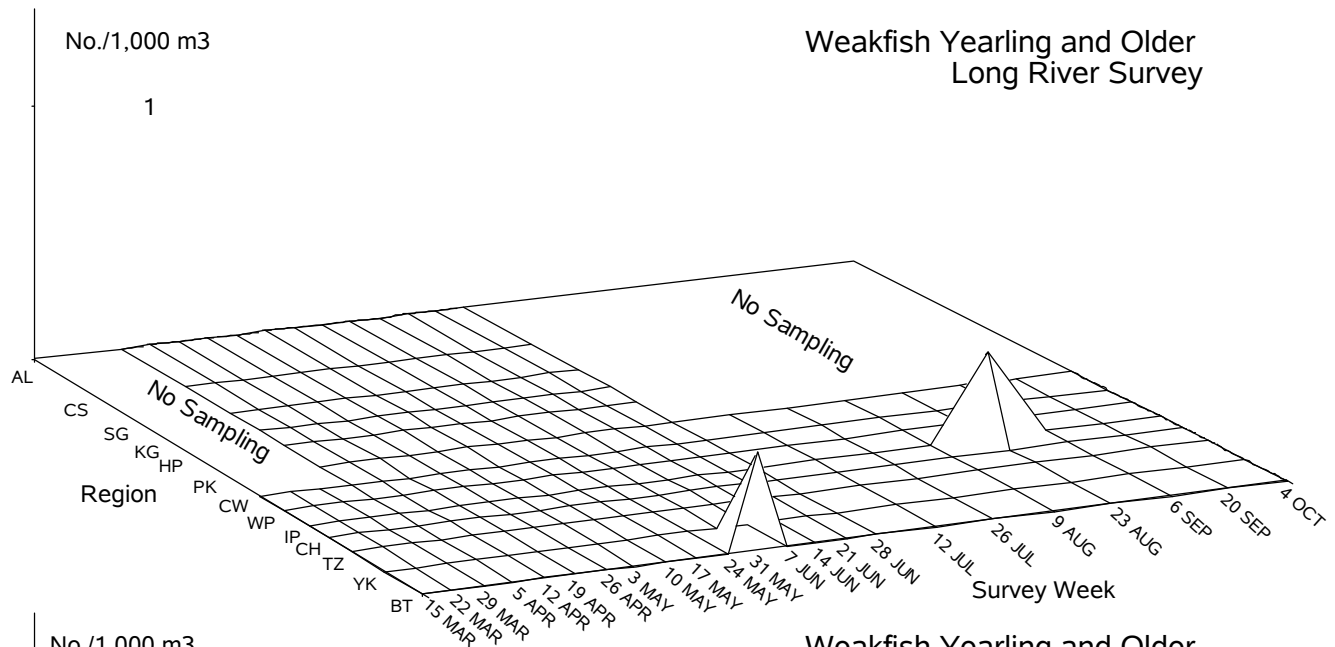


Figure 4-72. Spatiotemporal distribution of yearling and older weakfish in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

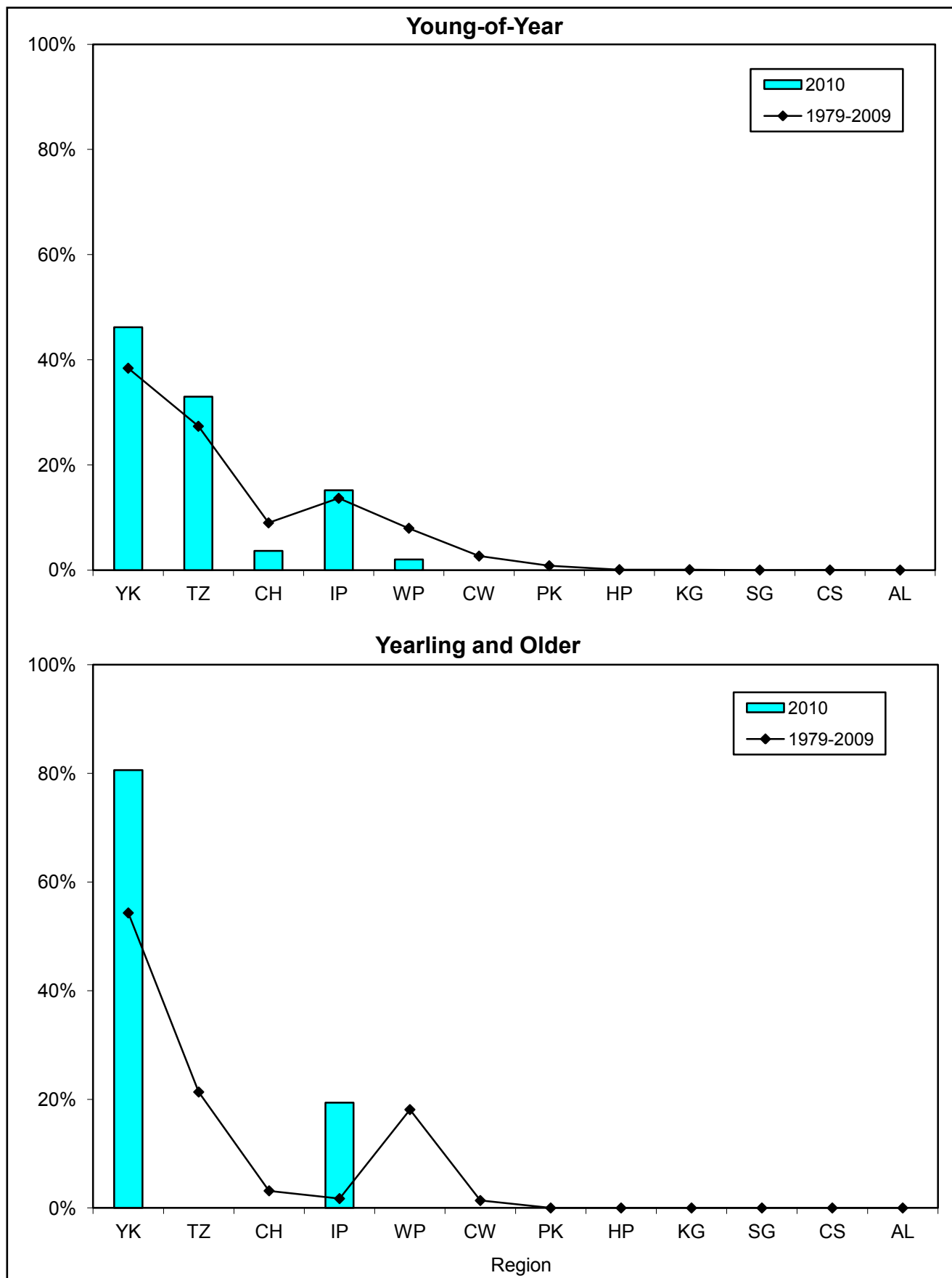


Figure 4-73. Geographic distribution indices for weakfish collected during Fall Juvenile surveys of the Hudson River estuary, 1979-2010.

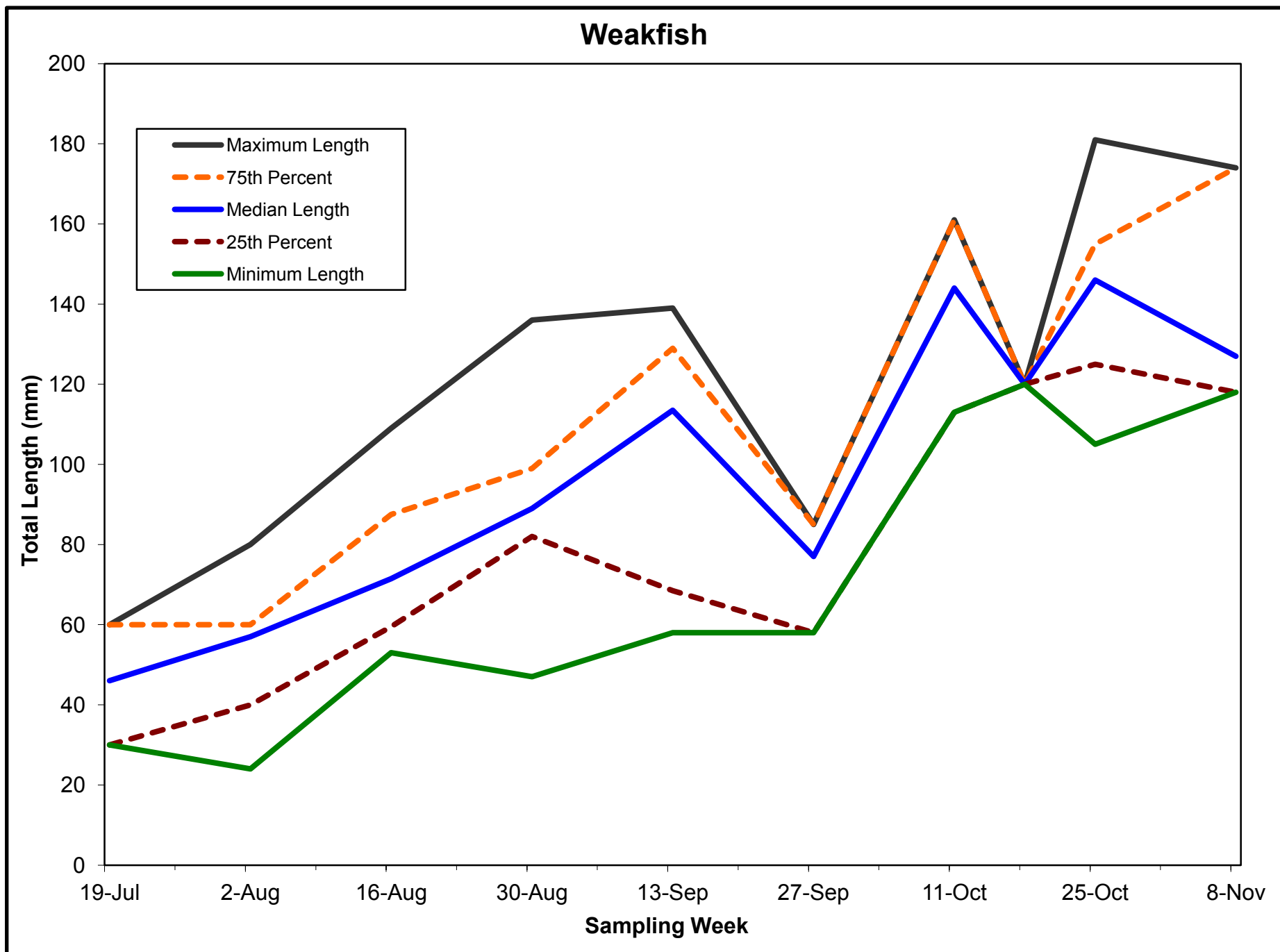


Figure 4-74. Weekly length statistics for young-of-year weakfish in the Hudson River estuary, 2010.

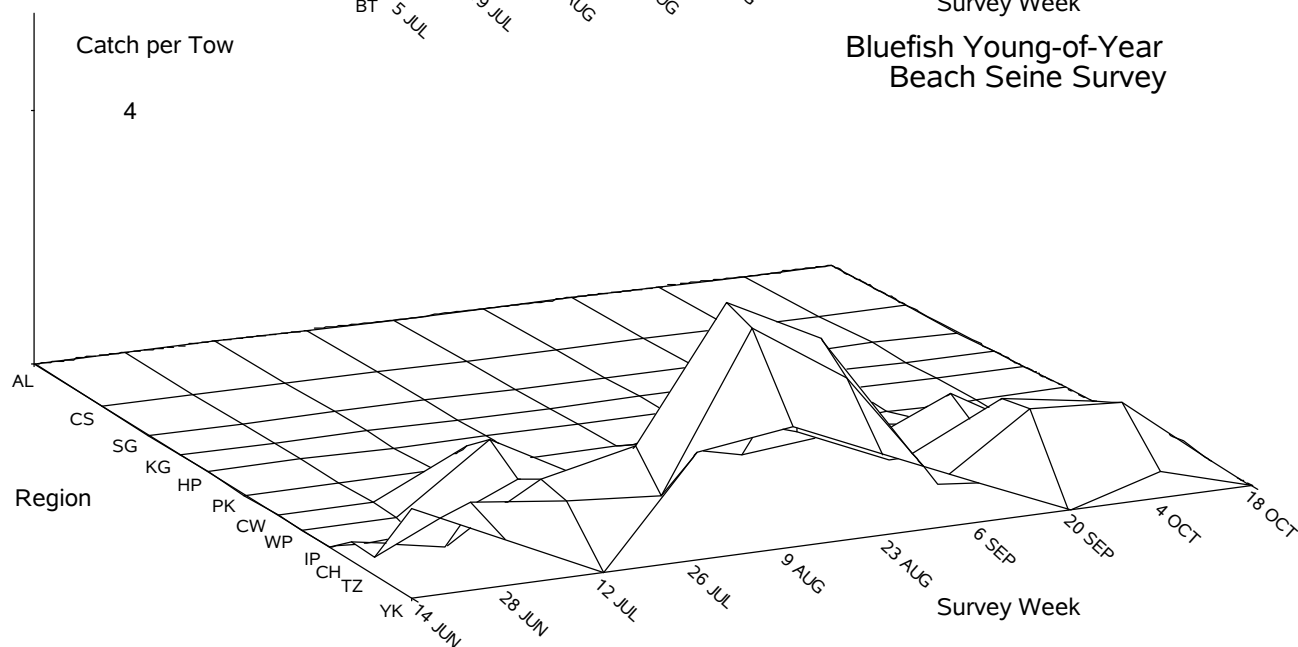
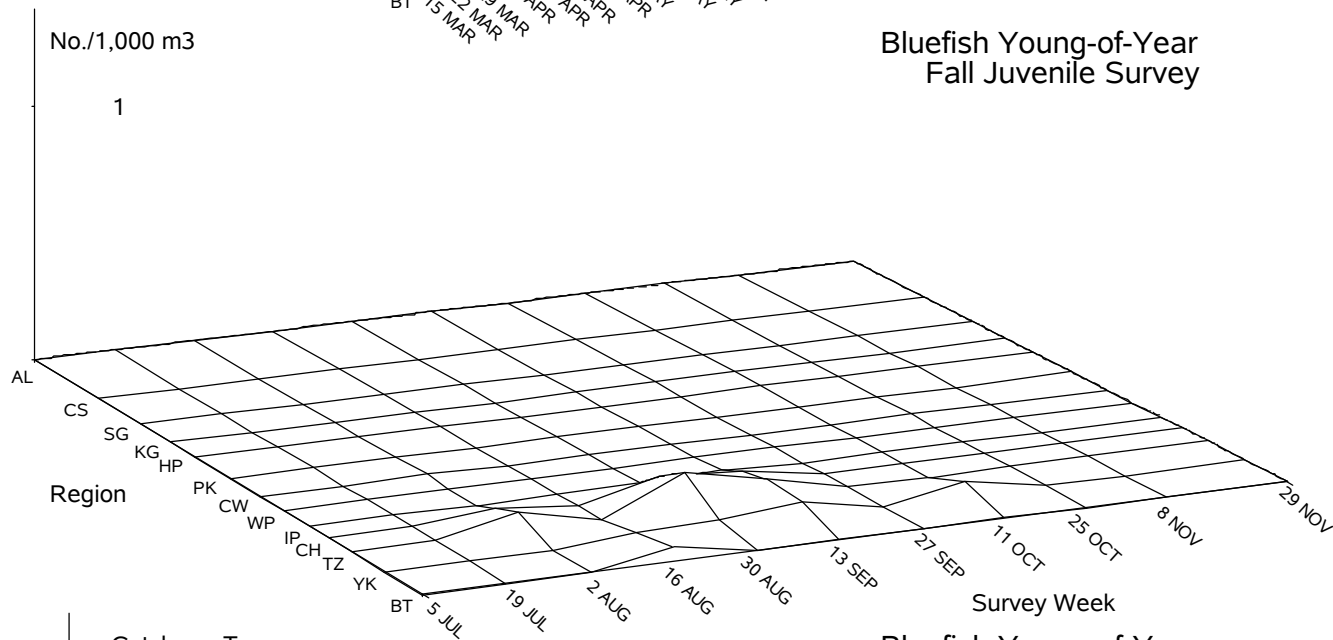
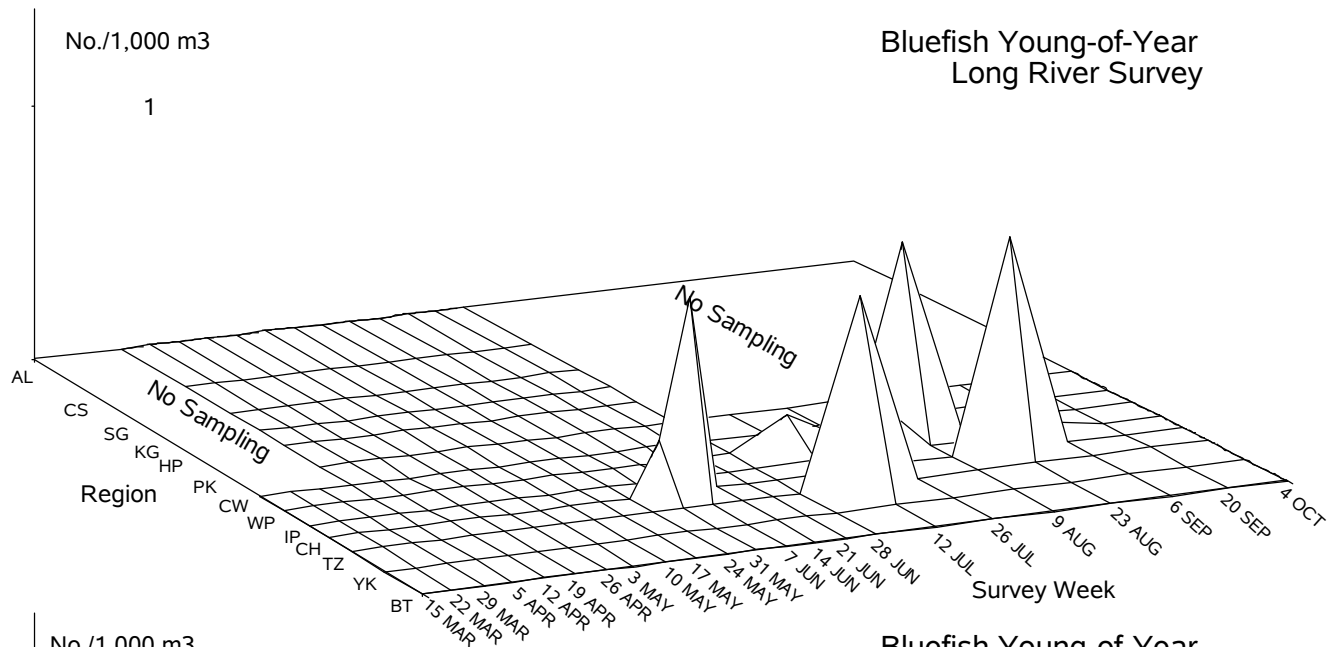


Figure 4-75. Spatiotemporal distribution of young-of-year bluefish in the Hudson River estuary based on the 2010 Long River, Fall Juvenile, and Beach Seine surveys.

Young-of-Year

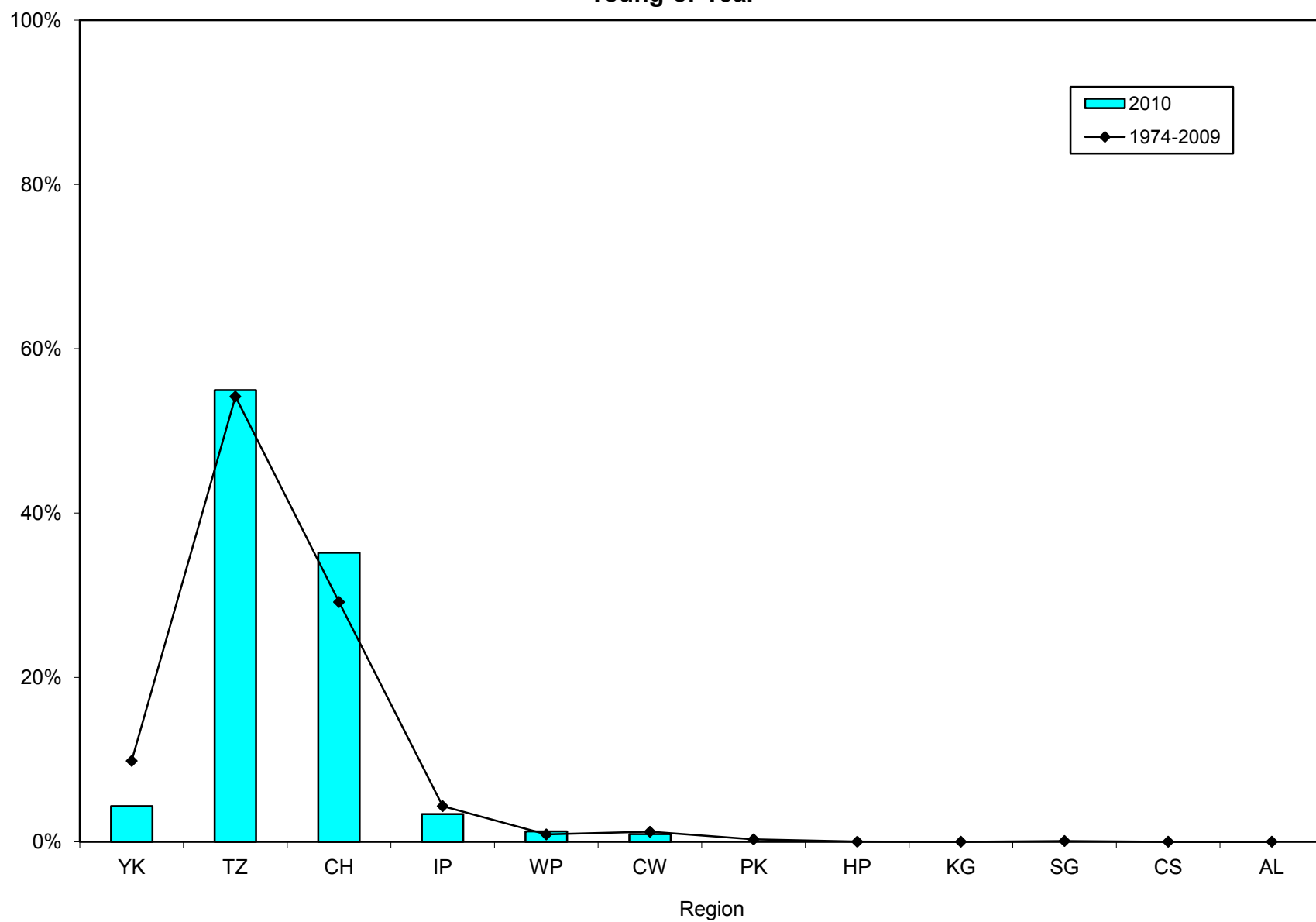


Figure 4-76. Geographic distribution indices for bluefish collected during Beach Seine surveys of the Hudson River estuary, 1974-2010.

Table 4-1 Species Composition of Fish Collected During Hudson River Studies from 1974 to 2010

Common Name	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
<u>Anadromous</u>																											
Alewife	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
American shad	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Atlantic sturgeon	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Atlantic tomcod	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Blueback herring	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hickory shad		X			X	X				X			X									X	X	X	X	X	
Rainbow smelt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	
Sea lamprey	X	X				X	X	X			X				X		X							X	X		
Striped bass	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Total	8	9	7	7	8	9	8	8	7	8	8	7	8	7	8	7	8	7	7	7	7	8	7	8	9	8	
<u>Catadromous</u>																											
American eel	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
<u>Estuarine</u>																											
Atlantic silverside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Banded killifish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fat sleeper													X													X	
Fourspine stickleback	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hogchoker	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Inland silverside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lined seahorse															X		X	X				X		X	X	X	
Mummichog	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Northern pipefish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Shortnose sturgeon	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Threespine stickleback	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	
White catfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
White mullet	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
White perch	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Total	12	11	12	12	11	12	12	11	12	12	12	12	13	11	12	12	13	13	11	12	10	12	11	12	11	13	
<u>Freshwater</u>																											
Black bullhead				X				X			X	X															
Black crappie	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Blacknose dace	X	X	X	X	X	X	X					X		X	X									X			
Bluegill		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Bluntnose minnow	X	X	X	X	X	X	X														X		X		X	X	
Bridle shiner	X		X						X																X	X	
Brook silverside																					X	X	X	X	X	X	
Brook stickleback	X	X	X	X				X								X											
Brook trout				X	X													X									

Table 4-1 (Continued)

Common Name	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Brown bullhead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brown trout			X	X	X	X	X	X				X					X	X	X	X	X	X				
Carp			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Central mudminnow			X				X							X												
Chain pickerel	X	X	X	X	X	X	X	X	X		X					X			X			X	X	X	X	X
Channel catfish	X							X					X	X	X	X	X	X	X		X	X	X	X	X	X
Comely shiner	X						X												X							
Common shiner	X	X	X	X	X	X	X	X		X					X		X		X	X						
Creek chub		X	X	X	X	X	X			X		X						X		X		X	X	X	X	X
Cutlips minnow	X	X	X	X	X	X									X	X						X	X	X	X	X
Eastern mudminnow		X					X																			
Emerald shiner	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Fallfish		X	X	X	X	X	X	X	X	X				X				X	X	X	X	X	X	X	X	X
Fathead minnow	X	X	X	X	X	X	X					X	X				X			X	X	X	X	X	X	X
Freshwater drum																X				X	X	X	X	X	X	X
Gizzard shad	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Golden shiner	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Goldfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Grass carp																										
Grass pickerel	X				X												X									
Green sunfish		X		X			X								X											
Largemouth bass	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Logperch	X		X	X		X	X			X					X	X			X	X			X		X	X
Longear sunfish																	X									
Longnose dace		X	X	X	X				X			X														
Margined madtom														X				X								
Mimic shiner	X																						X			
Northern hog sucker	X		X	X	X		X	X			X			X	X		X	X	X				X	X	X	X
Northern pike	X	X	X	X	X	X	X		X				X	X	X	X	X	X	X	X	X		X	X	X	X
Pugnose shiner																		X								
Pumpkinseed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rainbow trout						X																				
Redbreast sunfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Redfin pickerel	X	X	X	X	X	X	X	X	X		X				X			X					X		X	X
Rock bass	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
Rosyface shiner	X																									
Rudd																										
Satinfin shiner	X	X	X	X	X	X	X				X	X	X		X		X			X		X	X	X	X	X
Shield darter							X																			
Silvery minnow	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Slimy sculpin																										
Smallmouth bass	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Spotfin shiner	X	X	X	X	X	X	X	X			X	X	X	X	X				X	X	X	X	X	X	X	X
Spottail shiner	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Swallowtail shiner																			X						X	X
Tessellated darter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tiger muskellunge																			X							
Trout perch	X	X	X	X	X	X					X											X	X			
Walleye			X	X	X	X				X	X			X		X		X	X	X	X		X	X	X	
White bass				X																						

Table 4-1 (Continued)

Common Name	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
White crappie	X	X	X	X	X	X	X	X			X		X	X	X		X	X	X		X				X	
White sucker	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X		X	X	X	X
Yellow bullhead		X						X								X						X				
Yellow perch	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Total	37	36	40	42	38	36	38	30	23	23	27	26	24	28	30	28	26	30	31	29	30	29	35	30	35	33
Marine																										
American sand lance													X	X	X	X	X	X			X	X	X		X	X
<i>Ammodytes</i> sp.		X	X	X	X	X	X	X				X														
Atlantic cod							X							X	X											
Atlantic croaker			X	X		X						X	X	X		X	X		X	X	X	X	X	X	X	X
Atlantic cutlassfish																										X
Atlantic herring		X	X		X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
Atlantic mackerel															X			X	X				X	X	X	X
Atlantic menhaden	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Atlantic needlefish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Atlantic seasnail																										
Bay anchovy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Black seabass					X							X			X						X			X	X	X
Blackcheek tonguefish																			X							
Bluefish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Butterfish	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cobia																										
Conger eel						X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Crevalle jack	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Cunner									X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Cusk																										
Feather blenny																									X	X
Fourbeard rockling						X	X								X	X	X	X	X	X	X	X	X	X	X	X
Fourspot flounder	X						X	X			X	X	X		X	X	X				X			X		X
Goosefish																		X	X							
Gray snapper							X					X	X	X				X	X							
Grubby													X		X	X	X	X	X	X	X	X	X	X	X	X
Gulf Stream flounder																								X	X	X
Harvestfish																										X
Hightail goby																	X									X
Inshore lizardfish	X					X	X	X			X	X			X	X		X	X	X	X	X		X	X	X
Longhorn sculpin	X	X								X						X				X						
Lookdown	X	X	X	X		X	X	X				X	X	X	X	X	X				X			X	X	X
Moonfish			X										X	X		X			X						X	X
Naked goby	X		X								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Northern kingfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Northern puffer		X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Northern searobin			X		X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Northern stargazer	X						X		X	X	X	X			X		X	X	X	X	X	X	X	X	X	X
Orangespotted filefish													X													

Table 4-1 (Continued)

Common Name	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Oyster toadfish																			X			X			X	X
Permit																			X	X					X	
Pinfish																						X				
Pollack		X																						X		
Radiated shanny																										X
Red hake	X		X			X	X	X			X	X			X	X	X			X	X		X	X	X	X
Rock gunnel			X	X											X	X	X	X	X	X			X	X	X	X
Rough silverside		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Scup	X																					X				
Seaboard goby		X	X					X							X			X	X	X		X		X	X	X
Sea raven								X																		
Sheepshead minnow									X																	
Silver anchovy																										
Silver hake	X	X		X									X		X	X	X	X					X	X		X
Silver perch	X					X					X	X	X		X			X	X	X	X	X	X	X	X	X
Smallmouth flounder						X	X		X		X	X			X		X	X	X	X	X	X	X	X	X	X
Spanish mackerel																	X	X		X	X					
Speckled worm eel					X		X				X			X	X								X			
Spot	X	X	X	X			X		X	X		X	X	X	X		X	X	X	X	X		X		X	X
Spotfin butterflyfish									X			X														
Spotfin mojarra									X																	
Spotted goatfish																				X						
Spotted hake							X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Striped anchovy		X				X			X			X							X	X	X	X	X	X	X	X
Striped burrfish													X													
Striped cuskeel							X					X	X	X	X	X		X	X	X		X	X	X	X	X
Striped killifish			X																X							
Striped mullet	X		X	X		X	X	X	X	X	X	X	X	X	X		X	X				X				
Striped searobin		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Summer flounder	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tautog		X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Weakfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Windowpane	X	X		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Winter flounder	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Witch flounder																							X			
Yellowtail flounder	X																		X		X	X	X	X	X	X
Total	24	24	24	20	16	26	33	24	25	20	28	35	35	29	41	34	35	38	42	37	37	39	39	40	45	49
All Categories																										
Total	82	81	84	82	74	84	92	74	68	64	76	81	81	76	92	82	83	89	92	86	85	89	93	91	101	104

Table 4-1 (Continued)

Common Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<u>Anadromous</u>											
Alewife	X	X	X	X	X	X	X	X	X	X	X
American shad	X	X	X	X	X	X	X	X	X	X	X
Atlantic sturgeon	X	X	X	X	X	X	X	X	X	X	X
Atlantic tomcod	X	X	X	X	X	X	X	X	X	X	X
Blueback herring	X	X	X	X	X	X	X	X	X	X	X
Hickory shad						X			X		
Rainbow smelt	X	X	X				X	X		X	
Sea lamprey							X	X	X		
Striped bass	X	X	X	X	X	X	X	X	X	X	X
Total	7	7	7	6	6	7	8	8	8	7	6
<u>Catadromous</u>											
American eel	X	X	X	X	X	X	X	X	X	X	X
Total	1	1	1	1	1	1	1	1	1	1	1
<u>Estuarine</u>											
Atlantic silverside	X	X	X	X	X	X	X	X	X	X	X
Banded killifish	X	X	X	X	X	X	X	X	X	X	X
Fat sleeper											
Fourspine stickleback	X	X	X	X	X	X	X	X	X	X	X
Hogchoker	X	X	X	X	X	X	X	X	X	X	X
Inland silverside	X	X	X	X	X	X	X	X	X	X	X
Lined seahorse	X	X	X	X			X		X		X
Mummichog	X	X	X	X	X	X	X	X	X	X	X
Northern pipefish	X	X	X	X	X	X	X	X	X	X	X
Shortnose sturgeon	X	X	X	X	X	X	X	X	X	X	X
Threespine stickleback		X	X			X		X		X	X
White catfish	X	X	X	X	X	X	X	X	X	X	X
White mullet			X	X			X	X	X		
White perch	X	X	X	X	X	X	X	X	X	X	X
Total	11	12	13	12	10	11	12	12	12	11	12
<u>Freshwater</u>											
Black bullhead				X							
Black crappie	X	X	X	X	X	X	X	X	X	X	X
Blacknose dace					X					X	
Bluegill	X	X	X	X	X	X	X	X	X	X	X
Bluntnose minnow	X			X	X			X		X	X
Bridle shiner											
Brook silverside	X		X	X	X	X	X	X	X		X
Brook stickleback											
Brook trout											
Brown bullhead	X	X	X	X	X	X	X	X	X	X	X
Brown trout											
Carp	X	X	X	X	X	X	X	X	X	X	X

Table 4-1 (Continued)

<u>Common Name</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Central mudminnow											
Chain pickerel	X		X		X	X			X	X	X
Channel catfish	X	X	X	X	X	X	X	X	X	X	X
Comely shiner											
Common shiner		X								X	X
Creek chub				X	X						
Cutlips minnow									X		
Eastern mudminnow											
Emerald shiner	X	X	X	X	X	X	X	X	X	X	X
Fallfish				X	X	X	X		X	X	X
Fathead minnow	X				X		X			X	X
Freshwater drum	X	X	X	X	X	X	X	X	X	X	X
Gizzard shad	X	X	X	X	X	X	X	X	X	X	X
Golden shiner	X	X	X	X	X	X	X	X	X	X	X
Goldfish	X	X	X	X	X	X	X	X	X	X	X
Grass carp						X				X	
Grass pickerel											
Green sunfish				X							
Largemouth bass	X	X	X	X	X	X	X	X	X	X	X
Logperch		X	X	X	X	X	X	X	X	X	X
Longear sunfish								X			
Longnose dace											
Margined madtom											
Mimic shiner											
Northern hog sucker	X		X	X	X	X		X	X		
Northern pike	X	X		X	X		X	X	X		
Pugnose shiner											
Pumpkinseed	X	X	X	X	X	X	X	X	X	X	X
Rainbow trout										X	
Redbreast sunfish	X	X	X	X	X	X	X	X	X	X	X
Redfin pickerel	X			X	X				X	X	X
Rock bass	X	X	X	X	X	X	X		X	X	X
Rosyface shiner											
Rudd					X				X	X	X
Satinfin shiner		X	X	X	X	X	X	X	X	X	X
Shield darter									X		
Silvery minnow	X	X	X	X	X	X	X	X	X	X	
Slimy sculpin			X								
Smallmouth bass	X	X	X	X	X	X	X	X	X	X	X
Spotfin shiner	X	X	X	X	X	X	X	X	X	X	X
Spottail shiner	X	X	X	X	X	X	X	X	X	X	X
Swallowtail shiner		X		X							
Tessellated darter	X	X	X	X	X	X	X	X	X	X	X
Tiger muskellunge											
Trout perch				X					X		
Walleye	X	X	X	X	X	X	X	X	X	X	X
White bass											
White crappie											
White sucker	X	X	X	X	X	X	X	X	X	X	X
Yellow bullhead											

Table 4-1 (Continued)

Common Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Yellow perch	X	X	X	X	X	X	X	X	X	X	X
Total	29	27	28	35	35	29	28	28	34	34	31
Marine											
American sandlance	X	X	X	X	X	X	X	X	X	X	X
<i>Ammodytes</i> sp.											
Atlantic cod				X		X			X	X	
Atlantic croaker	X	X	X	X	X	X	X	X	X	X	X
Atlantic cutlassfish		X					X				
Atlantic herring	X	X	X	X	X	X	X	X	X	X	X
Atlantic mackerel	X	X	X	X	X			X		X	
Atlantic menhaden	X	X	X	X	X	X	X	X	X	X	X
Atlantic needlefish	X	X	X	X	X	X	X	X	X	X	X
Atlantic seasnail				X							
Bay anchovy	X	X	X	X	X	X	X	X	X	X	X
Black seabass								X			
Blackcheek tonguefish											
Bluefish	X	X	X	X	X	X	X	X	X	X	X
Butterfish	X	X	X	X	X	X	X	X	X	X	X
Cobia						X					
Conger eel	X	X	X	X	X	X	X	X	X	X	X
Crevalle jack	X	X	X	X	X	X	X	X	X	X	X
Cunner	X	X	X	X	X	X	X	X	X	X	X
Cusk	X							X			
Feather blenny	X		X						X		
Fourbeard rockling	X	X	X	X	X	X	X	X	X	X	X
Fourspot flounder		X							X		
Goosefish											
Gray snapper		X		X		X		X			
Grubby	X	X	X	X	X	X	X	X	X	X	X
Gulf Stream flounder			X		X						
Harvestfish			X							X	
Hightail goby											
Inshore lizardfish	X	X	X				X		X		X
Longhorn sculpin											
Lookdown	X			X		X	X		X	X	
Moonfish	X	X	X	X	X	X	X	X	X	X	X
Naked goby	X	X	X	X	X	X	X	X	X	X	X
Northern kingfish	X	X	X		X	X	X	X	X	X	X
Northern puffer	X	X	X		X	X		X	X	X	X
Northern searobin		X	X	X	X	X	X	X	X	X	
Northern stargazer	X	X	X	X	X	X	X	X	X	X	
Orangespotted filefish											
Oyster toadfish	X	X	X	X	X	X	X		X	X	X
Permit	X	X						X			
Pinfish					X						
Pollack											
Radiated shanny											

Table 4-1 (Continued)

<u>Common Name</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Red hake	X	X		X		X	X		X	X	X
Rock gunnel	X	X	X	X	X	X	X	X	X	X	X
Rough silverside	X	X	X	X	X	X	X	X	X	X	X
Scup	X	X	X	X	X	X		X			
Seaboard goby	X	X	X	X	X	X	X	X	X	X	X
Sea raven											
Sheepshead minnow											
Silver anchovy											X
Silver hake	X	X	X		X	X	X	X	X	X	X
Silver perch	X		X		X	X		X		X	X
Smallmouth flounder	X	X	X	X	X	X	X	X	X	X	X
Spanish mackerel					X						
Speckled worm eel	X		X								
Spot	X	X	X	X		X	X		X	X	
Spotfin butterflyfish										X	
Spotfin mojarra											
Spotted goatfish											
Spotted hake	X	X	X	X	X	X	X	X	X	X	X
Striped anchovy	X		X	X	X		X	X	X		X
Striped burrfish							X				
Striped cuskeel	X	X		X	X	X	X	X	X	X	X
Striped killifish											
Striped mullet	X		X				X		X	X	X
Striped searobin	X	X	X	X	X	X	X	X	X	X	X
Summer flounder	X	X	X	X	X	X	X	X	X	X	X
Tautog	X	X	X	X	X	X	X	X	X	X	X
Weakfish	X	X	X	X	X	X	X	X	X	X	X
Windowpane	X	X	X	X	X	X	X	X	X	X	X
Winter flounder	X	X	X	X	X	X	X	X	X	X	X
Witch flounder										X	
Yellowtail flounder	X	X	X			X			X	X	X
Total	46	43	44	39	40	42	40	40	43	45	38
<u>All Categories</u>											
Total	94	90	93	93	92	90	89	89	98	98	88

Table 4-2 Species Composition of Fish Collected in Each of the Hudson River Surveys During 2010

<u>Common Name</u>	<u>BSS</u>	<u>FSS</u>	<u>LRS</u>
<u>Anadromous</u>			
Alewife	X	X	X
American shad	X	X	X
Atlantic sturgeon		X	X
Atlantic tomcod		X	X
Blueback herring	X	X	X
Striped bass	X	X	X
Total	4	6	6
<u>Catadromous</u>			
American eel	X	X	X
Total	1	1	1
<u>Estuarine</u>			
Atlantic silverside	X	X	X
Banded killifish	X	X	X
Fourspine stickleback	X	X	X
Hogchoker	X	X	X
Inland silverside	X		X
Lined sea horse			X
Mummichog	X	X	X
Northern pipefish	X	X	X
Shortnose sturgeon		X	X
Threespine stickleback	X		
White catfish	X	X	X
White perch	X	X	X
Total	10	9	11
<u>Freshwater</u>			
Black crappie	X		X
Bluegill	X	X	
Bluntnose minnow	X		
Brook silverside	X		
Brown bullhead	X	X	X
Carp	X	X	X
Chain pickerel	X		
Channel catfish	X	X	X
Common shiner	X		
Emerald shiner	X		
Fall fish	X		
Fathead minnow	X		
Freshwater drum	X	X	X
Gizzard shad	X	X	X
Golden shiner	X	X	
Goldfish	X		
Largemouth bass	X		X
Logperch	X		
(Continued)			

Table 4-2 (Continued)

<u>Common name</u>	<u>BSS</u>	<u>FSS</u>	<u>LRS</u>
<u>Freshwater (continued)</u>			
Pumpkinseed	X	X	X
Redbreast sunfish	X		
Redfin pickerel	X		
Rock bass	X		
Rudd	X		
Satinfin shiner	X		
Smallmouth bass	X		
Spotfin shiner	X		
Spottail shiner	X	X	X
Tesselated darter	X	X	X
Walleye			X
White sucker	X	X	X
Yellow perch	X	X	X
Total	30	12	13
<u>Marine</u>			
American sand lance			X
Atlantic croaker	X	X	X
Atlantic herring			X
Atlantic menhaden	X	X	X
Atlantic needlefish	X	X	
Bay anchovy	X	X	X
Bluefish	X	X	X
Butterfish		X	X
Conger eel		X	X
Crevalle jack	X	X	
Cunner			X
Fourbeard rockling			X
Grubby		X	X
Inshore lizardfish	X		X
Moonfish		X	X
Naked goby	X	X	X
Northern kingfish	X	X	
Northern puffer		X	
Oyster toadfish		X	
Red hake		X	X
Rock gunnel			X
Rough silverside		X	X
Seaboard goby			X
Silver anchovy			X
Silver hake		X	
Silver perch		X	
Smallmouth flounder			X
Spotted hake		X	X
Striped anchovy	X		X
Striped cuskeel		X	X
Striped mullet	X		
Striped searobin		X	X
Summer flounder	X	X	X
(Continued)			

Table 4-2 (Continued)

<u>Common name</u>	<u>BSS</u>	<u>FSS</u>	<u>LRS</u>
<u>Marine (continued)</u>			
Tautog			X
Weakfish	X	X	X
Windowpane		X	X
Winter flounder	X	X	X
Yellowtail flounder			X
Total	14	25	30
<u>Undetermined</u>			
Alosa spp.	X	X	X
Centrarchidae	X		X
Cyprinidae	X		X
Gobiidae			X
Morone unidentified			X
Searobin			X
Unidentifiable			X
Total	3	1	7

Table 4-3 Collections Of Atlantic Sturgeon During The 2010 Hudson River Surveys

<u>Date</u>	<u>Survey</u>	<u>Region</u>	<u>River Mile</u>	<u>Gear</u>	<u>Number Collected</u>	<u>Total Length (mm)</u>
12-May	LRS	West Point	51	1-m Epibenthic Sled	1	629
1-Jul	LRS	West Point	51	1-m Epibenthic Sled	1	478
7-Jul	FJS	Hyde Park	78	3-m Beam Trawl	1	375
8-Jul	FJS	Cornwall	59	3-m Beam Trawl	1	441
21-Jul	FJS	Hyde Park	82	3-m Beam Trawl	1	400
21-Jul	FJS	Kingston	89	3-m Beam Trawl	1	410
22-Jul	FJS	West Point	55	3-m Beam Trawl	1	400
22-Jul	FJS	West Point	55	3-m Beam Trawl	1	820
5-Aug	FJS	Poughkeepsie	68	3-m Beam Trawl	1	645
6-Aug	FJS	Indian Point	42	3-m Beam Trawl	1	615
2-Sep	FJS	West Point	50	3-m Beam Trawl	1	470
9-Sep	LRS	West Point	55	1-m Epibenthic Sled	1	603
15-Sep	FJS	West Point	51	3-m Beam Trawl	1	435
16-Sep	FJS	Croton-Haverstraw	36	3-m Beam Trawl	1	610
29-Sep	FJS	West Point	54	3-m Beam Trawl	1	470
29-Sep	FJS	West Point	55	3-m Beam Trawl	1	512
29-Sep	FJS	West Point	55	3-m Beam Trawl	1	655
12-Oct	FJS	Cornwall	61	3-m Beam Trawl	1	485
13-Oct	FJS	Indian Point	40	3-m Beam Trawl	1	840
26-Oct	FJS	Croton-Haverstraw	36	3-m Beam Trawl	1	663
27-Oct	FJS	West Point	50	3-m Beam Trawl	1	505
27-Oct	FJS	West Point	55	3-m Beam Trawl	1	660

Table 4-4 Collections of Shortnose Sturgeon During the 2010 Hudson River Surveys

<u>Date</u>	<u>Survey</u>	<u>Region</u>	<u>River Mile</u>	<u>Gear</u>	<u>Number Collected</u>	<u>Total Length (mm)</u>
27-Apr	LRS	Albany	137	1-m Epibenthic Sled	1	660
7-Jul	FJS	Hyde Park	78	3-m Beam Trawl	1	706
9-Jul	FJS	Indian Point	41	3-m Beam Trawl	1	770
5-Aug	FJS	West Point	55	3-m Beam Trawl	1	763
18-Aug	FJS	Poughkeepsie	65	3-m Beam Trawl	1	700
19-Aug	FJS	Yonkers	14	3-m Beam Trawl	1	770
26-Aug	LRS	Indian Point	41	1-m Epibenthic Sled	1	764
2-Sep	FJS	Indian Point	39	3-m Beam Trawl	2	761, 805
14-Sep	FJS	Cornwall	58	3-m Beam Trawl	1	755
15-Sep	FJS	Yonkers	17	3-m Beam Trawl	1	847
15-Sep	FJS	West Point	54	3-m Beam Trawl	1	681
15-Sep	FJS	West Point	55	3-m Beam Trawl	1	785
16-Sep	FJS	Croton-Haverstraw	38	3-m Beam Trawl	1	765
28-Sep	FJS	Poughkeepsie	76	3-m Beam Trawl	1	735
29-Sep	FJS	Indian Point	41	3-m Beam Trawl	4	655, 675, 709, 820
29-Sep	FJS	West Point	55	3-m Beam Trawl	1	680
12-Oct	FJS	Poughkeepsie	72	3-m Beam Trawl	1	810
13-Oct	FJS	Tappan Zee	27	3-m Beam Trawl	2	820, 1040
13-Oct	FJS	West Point	53	3-m Beam Trawl	1	781
13-Oct	FJS	West Point	55	3-m Beam Trawl	1	710
28-Oct	FJS	Hyde Park	84	3-m Beam Trawl	1	730
28-Oct	FJS	Kingston	91	3-m Beam Trawl	1	667
9-Nov	FJS	Kingston	87	3-m Beam Trawl	2	710, 935
10-Nov	FJS	West Point	55	3-m Beam Trawl	2	695, 1600
30-Nov	FJS	West Point	48	3-m Beam Trawl	1	765

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Appendix A

Quality Control Report for the 2010 Hudson River Ichthyoplankton Laboratory Program and 2010 Fall Juvenile Survey

**Quality Control Report for the
2010 Hudson River
Ichthyoplankton Laboratory Program
and 2010 Fall Juvenile Survey**

September 2011

**Quality Control Report for the
2010 Hudson River
Ichthyoplankton Laboratory Program
and 2010 Fall Juvenile Survey**

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QUALITY CONTROL REPORT FOR THE 2010 HUDSON RIVER ICHTHYOPLANKTON LABORATORY PROGRAM AND 2010 FALL JUVENILE SURVEY

1.0 INTRODUCTION

This quality control report for the laboratory tasks of the 2010 Hudson River Ichthyoplankton Survey and the 2010 Fall Juvenile Survey was prepared for Entergy Nuclear Northeast by Normandeau Associates Inc. (Normandeau).

To comply with Entergy's requirements for valid and reliable data on the Hudson River Ichthyoplankton Laboratory Program and the Fall Juvenile Survey, Normandeau implemented a Quality Assurance Plan that provides a 10% Average Outgoing Quality Limit (AOQL) for all measurement parameters collected. The Quality Assurance Plan consists of two systems: a quality control (QC) system and a quality assurance (QA) system. The QC system is managed by the program manager and conducted by operational personnel. The system monitors and documents the reliability and validity (accuracy, precision, completeness) of daily operations. The specific features of the QC system are determined by the Quality Assurance Department to insure that all procedures conform to Entergy's data requirements. The QA system is managed by Normandeau's Quality Assurance Director and utilizes project independent personnel familiar with the work or activities under evaluation to conduct performance and systems audits. These audits are designed to provide objective evidence that the quality control program and technical requirements, methods, and procedures as outlined in the program Standard Operating Procedures are being implemented. The outcomes of the QA system activities are

- verification of the effectiveness of the QC system,
- assignment of corrective actions to resolve nonconforming procedures or data deficiencies,
- communication of audit results to project and staff managers for follow-up, and
- objective validation or improvement of project operations.

This report provides a compilation of QC system data verifying the results of the 2010 Hudson River Ichthyoplankton Laboratory Program and 2010 Fall Juvenile Survey activities. Determinations of the fraction inspected, percent nonconforming, and average outgoing quality are presented for both programs. In addition, for the 2010 Hudson River Ichthyoplankton Laboratory Program the results include percent measurement error, a summary of the number of each taxon-life stage found during sorting QC, and cumulative error rates for each taxon-life stage.

2.0 METHODS

2.1 LABORATORY QUALITY CONTROL PROCEDURES

2.1.1 Ichthyoplankton Survey

For sorting and identification of samples from the 2010 Hudson River Ichthyoplankton Laboratory Program, Normandeau used a continuous sampling plan designed to provide a 10% AOQL (U.S. Department of Defense 1981). A flow diagram of how the sampling plan was applied is presented in Figure 1. A summary of the sampling plan, tolerances, and QC sample definitions used for each measurement parameter is presented in Table 1. Quality control inspection was applied on a laboratory-wide basis for the sorting task and to each individual processor for the identification task. Quality control samples were selected in a random manner utilizing random number tables. As determined from the sampling plan outlined in Table 1, a given number of quality control samples were reprocessed by QC inspectors with expertise in the task being inspected. In cases where a sample was subdivided and counted, counts for all subdivisions were combined before calculating percent error for that sample. If the difference between the quality control value and the original value exceeded acceptable tolerances (Table 1), a third measurement could be obtained to verify one of the measurements. If a sample was found to have exceeded acceptable tolerances, all subsequent samples processed by the same technician were subjected to 100% quality control until an appropriate number of consecutive samples (i) were found within tolerance as determined by the continuous sampling plan (Table 1 and Figure 1). The standard operating procedures manual (Normandeau 2003) documents specific QA/QC methods utilized for this program.

Table 1. Task specific applications of continuous sampling plans for the 2010 Hudson River Ichthyoplankton Laboratory Program

Laboratory Task	CSP-1 AOQL 10%		Sample Tolerance	QC Sample Definition
	i	f		
Sorting	8	1/7	± 2 if ≤20 organisms ± 10% if >20 organisms	one sample
Identification	8	1/7	± 2 if ≤20 ± 10% if >20 for every taxon in the sample (in identifying, assigning a life stage, or counting any species, errors are cumulative by life stage within each taxon)	one sample

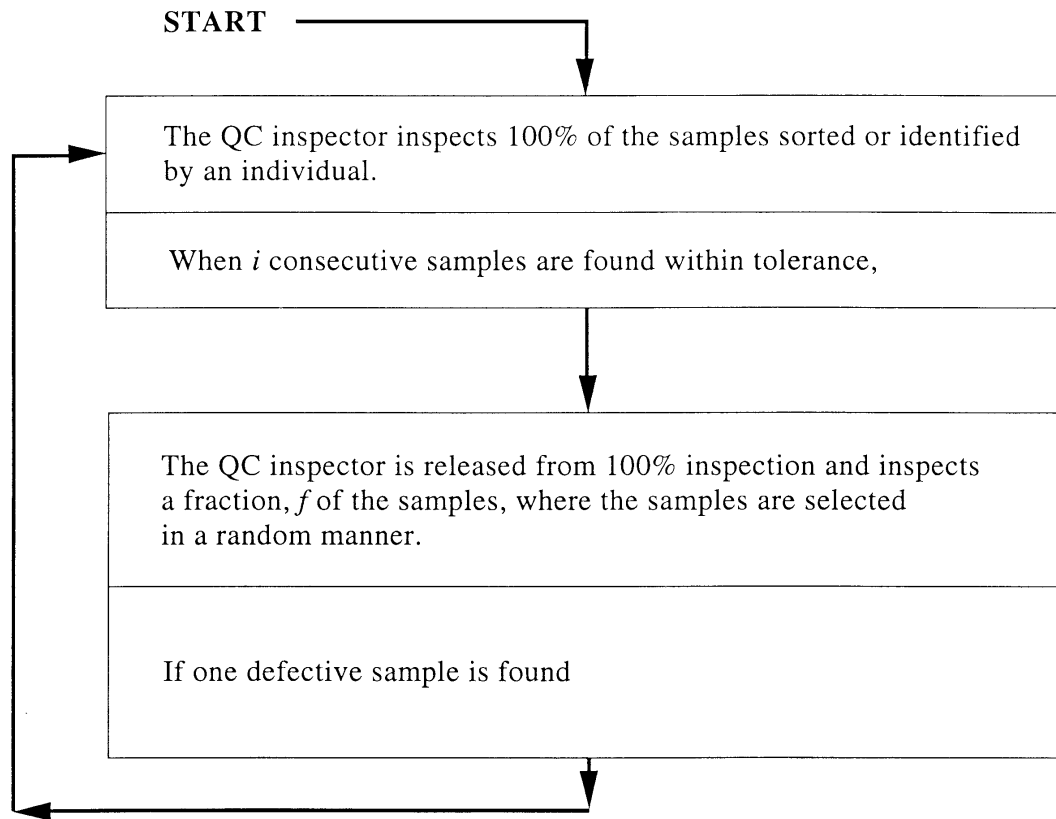


Figure 1. Quality control inspection plan for ichthyoplankton sorting and identification tasks.

In some cases one of the taxonomists (either the original identifier or the QC inspector) was able to determine the taxon or life stage of damaged specimens when the other taxonomist recorded them as unknown life stage, unidentified taxon, or a higher level taxon (genus or family). If a more general taxon or life stage used by one taxonomist *included* the more specific category used by the other taxonomist, and that was the only reason for a count discrepancy, then that sample was not considered as failing the QC inspection. For example, damaged specimens recorded as *Morone* sp. by the original identifier and as striped bass by the QC inspector were considered to be in agreement because the category *Morone* sp. includes striped bass. In contrast, an original determination of unidentified gobiid would not be acceptable if the QC determination was striped bass, because striped bass is not included in the family Gobiidae.

2.1.2 Fall Juvenile Survey

The Fall Juvenile Survey consisted of two types of collections, referred to as the Fall Shoals Survey (which used Tucker trawls) and the Beach Seine Survey. For laboratory identification and length measurements of young-of-the-year fishes in the 2010 Fall Juvenile Survey, Normandeau used a continuous sampling plan designed to provide a 10% Average Outgoing Quality Limit (U.S. Department of Defense, 1981). A flow diagram of how the plan was applied is presented in Figure 2. A summary of the sampling plan, tolerances, and QC sample definitions used for each task is shown in Table 2. QC samples were selected as specified by the appropriate plan in Table 2, using random

numbers, and reprocessed by QC inspectors. If the difference between original and QC values exceeded the acceptable tolerance, a third value was obtained as a resolution. The standard operating procedures manual (Normandeau 2010) documents specific QA/QC methods used for the 2010 Fall Juvenile Survey. Young-of-the-year fishes were identified in the laboratory for the first two Fall Shoals Survey “river runs” (sampling weeks) and the first three Beach Seine Survey river runs. Young-of-the-year fishes were identified in the field starting with Fall Shoals Survey river run 3 and Beach Seine Survey river run 4. The same quality control procedures applied to both field and laboratory identifications. All length measurements of young-of-the-year fishes occurred in the laboratory.

Table 2. Task specific applications of continuous sampling plans for the 2010 Fall Juvenile Survey.

Task	QC Plan	AOQL	i	f	x	Tolerance	QC Sample Definition
Identification	CSP-V	7%	21	1/15	7	±10% of total count or ±2 individuals when <25 fish	One taxon
Length	CSP-V	7%	30	1/50	10	±1 mm when <34 mm TL ±3% when ≥34 mm TL	One fish

2.2 REPORTING PROCEDURES

The 2010 Hudson River Ichthyoplankton Laboratory Program Sort and Identification Quality Control Logs were keyed, verified, and error-checked to produce SAS data sets. From these data, fraction inspected, percent nonconforming, and percent measurement error (precision) were determined for each river run and for the entire study. For the 2010 Fall Juvenile Survey, QC data were used to determine fraction inspected and percent nonconforming for the entire study (combining all river runs processed in the laboratory for both the Fall Shoals Survey and the Beach Seine Survey).

2.2.1 Fraction Inspected

Fraction Inspected

$$= \frac{\text{Number of Samples Inspected}}{\text{Total Number of Samples}} \times 100 \quad (\text{Equation 1})$$

River Run: Fraction inspected for a river run (Equation 1) was one hundred times the number of samples inspected divided by the total number of samples analyzed for that river run. For the ichthyoplankton sorting task, the number of samples inspected includes “training QC samples” for new sorters, which do not represent the independent performance of the technician, as well as the samples inspected as part of the QC plan. For the identification task, the total number of samples identified excludes empty (“no catch”) samples, which did not require processing by an identifier.

Entire Study: Fraction inspected for the entire study was one hundred times the number of samples inspected divided by the total number of samples analyzed during the study.

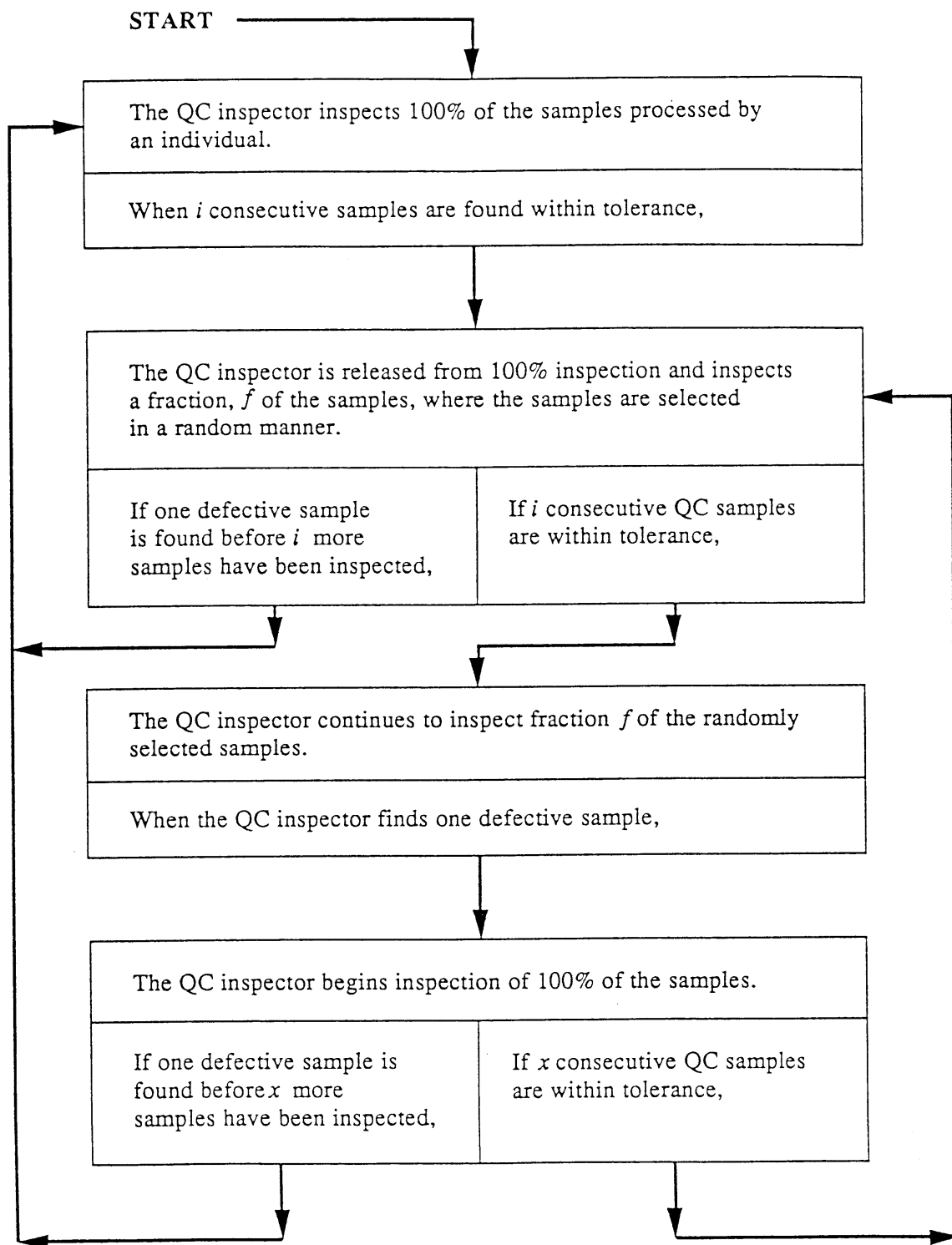


Figure 2. Quality control inspection plan for identification and length measurement of young-of-the-year fishes.

2.2.2 Percent Nonconforming

Percent Nonconforming

$$= \frac{\text{Number of Nonconforming Samples Inspected}}{\text{Number of Samples Inspected}} \times 100 \quad (\text{Equation 2})$$

River Run: Percent nonconforming for a river run (Equation 2) was one hundred times the number of nonconforming quality control samples found for that river run divided by the total number of quality control samples inspected for that river run.

Entire Study: Percent nonconforming for the entire study was one hundred times the total number of nonconforming quality control samples for the study divided by the total number of quality control samples inspected for the study. The result of this analysis was a determination of the actual incoming quality level of each measurement parameter. (Note that because samples checked by QC found to be defective were rectified during QC, the average outgoing quality of the final data set was better than that indicated by the percent nonconforming.)

2.2.3 Percent Measurement Error

Sorting Task

Sorting Percent Measurement Error

$$= \frac{\text{Quality Control Value}}{(\text{Original Value} + \text{Quality Control Value})} \times 100 \quad (\text{Equation 3})$$

Sample: Percent measurement error for a sorted sample (Equation 3) was one hundred times the quality control value divided by the sum of the original value and the quality control value. If the total count (original value plus quality control value) was less than or equal to 20, and the quality control value (i.e., the number of organisms missed by the sorter and found during sort QC inspection) was one or two, the percent measurement error for the sorted sample was defined as zero.

River Run: Mean percent measurement error for sorted samples for a river run was the sum of the percent measurement errors for each sample inspected during the river run divided by the total number of samples inspected for the river run.

Entire Study: Mean percent measurement error for sorted samples for the entire study was the sum of the percent measurement errors for each sample inspected during the study divided by the total number of samples inspected for the study. (Note that this method of averaging gives equal weight to each sample, regardless of the number of organisms present).

Identification Task

Life Stage Percent Measurement Error

$$= \frac{(\text{Original Value} - \text{Quality Control Value})}{\text{Quality Control Value}} \times 100 \quad (\text{Equation 4})$$

Life Stage: Percent measurement error for a life stage (Equation 4) was one hundred times the difference between the original value and the quality control value divided by the quality control

value. For life stages where the quality control value was 20 or less, if the original and quality control values differed by less than or equal to two organisms the percent measurement error was defined as zero. For life stages where the quality control value was 20 or less and the original and quality control values differed by more than two organisms, the percent measurement error was calculated utilizing Equation 4. If the quality control value was zero, the percent measurement error was calculated by multiplying the difference between the original and quality control values by 100. This can occasionally result in extremely large percent measurement error values (as much as several hundred percent for a life stage of a taxon in a sample), which are not truly indicative of the actual proportion of specimens misidentified, assigned to the wrong life stage, or miscounted in a sample. If the original count for a life stage was acceptably close to a resolution value but not to the quality control value, the percent measurement error was calculated as described above except that the resolution value was substituted for the quality control value.

Taxon: Percent measurement error for an identified taxon was the sum of the absolute values of percent measurement error for each life stage within the taxon. Refer to Figure 3 for an example of taxon percent measurement error calculations.

		Eggs	Post Yolk-Sac Larvae	Young-of- the-Year	Total
Taxon 1	Original Value	103	176	25	
	Quality Control Value	100	194	26	
	% Measurement Error Life Stage	3.0	-9.3	-3.8	16.1
Taxon 2	Original Value		2		
	Quality Control Value		1		
	% Measurement Error Life Stage		0		0
Taxon 3	Original Value		8		
	Quality Control Value		2		
	% Measurement Error Life Stage		300		300

Figure 3. Example of percent measurement error calculations for individual taxa during the identification task.

River Run: Mean percent measurement error for the identification task for a river run was the sum of the percent measurement errors for all taxa inspected during the river run divided by the total number of taxa inspected for the river run. This statistic was computed by averaging taxa rather than samples because even though complete samples were inspected and reworked for identification quality control, the pass/fail criterion was whether any taxon in the sample individually exceeded the 10% tolerance.

Entire Study: Mean percent measurement error for identified taxa for the entire study was the sum of the percent measurement errors for all taxa inspected during the study divided by the total number of taxa inspected for the study.

2.2.4 Average Outgoing Quality

At the completion of these studies, the Average Outgoing Quality (AOQ) was calculated for each measurement parameter inspected. Continuous sampling plans were used for all tasks. Continuous sampling plans are devised for processes involving a continuous or nearly continuous flow of products or other entities. For these types of processes, it is extremely difficult to organize units into discrete groups commonly referred to as lots. As a result, inspection must be performed on individual units drawn from a continuous flow of products and a decision made concerning the quality of units produced based on the inspection results. Rectification is performed on any nonconforming unit found during inspection, followed by 100% screening of a number of subsequent units depending on the sampling plan. Average Outgoing Quality for each laboratory task was calculated as a function of the percent nonconforming and the fraction of total units inspected (Stephens 1979). This calculation applies to continuous sampling plans when nonconforming units found are rectified:

$$AOQ = \frac{p'(1-f)q^i}{f + (1-f)q^i} \times 100 \quad (\text{Equation 5})$$

where

- p' = Percent nonconforming as a decimal fraction
- f = Fraction of units inspected. This is a parameter of the sampling plan.
- q = 1-p' = Percent conforming as a decimal fraction
- i = Clearing interval. This is a parameter of the sampling plan.

Example:

$$\begin{aligned} p' &= 0.0689 \\ f &= 1/7 = 0.1429 \\ q &= 1-0.0689 = 0.9311 \\ i &= 8 \end{aligned}$$

$$AOQ = \frac{0.0689(1-0.1429)(0.9311)^8}{0.1429 + (1-0.1429)(0.9311)^8} \times 100 = 5.32\%$$

The above equation for calculating AOQ was formulated specifically for CSP-1 sampling plans such as those used for the ichthyoplankton sorting and identification (Table 1). The same equation was used to calculate AOQ for young-of-the-year identifications and measurements, which used CSP-V plans (Table 2). When Equation 5 is used for CSP-V plans, the calculated AOQ is conservatively high, because the equation does not take into account the times when the number of consecutive reinspections following a failure is x (which is smaller than i).

2.2.5 Cumulative Error Rates

Due to the non-independence of identification errors across taxa and life stages, and to the accumulation of errors within taxa, a relatively high fraction of samples may fail QC inspection even though only a small fraction of organisms are incorrectly identified or counted. In order to present

the error frequencies more realistically for particular taxa-life stages, two additional statistics were calculated for each taxon-life stage for the identification/counting process.

Absolute Error Rate =

$$\sum_{i=1}^n |I_i - Q_i| / \sum_{i=1}^n Q_i \quad \text{Equation 6}$$

Net Error Rate =

$$\sum_{i=1}^n (I_i - Q_i) / \sum_{i=1}^n Q_i \quad \text{Equation 7}$$

where

- I_i = initial count for taxon-life stage in sample i
- Q_i = QC count for taxon-life stage in sample i (or the resolution count, if I_i was acceptably close to it but not to the QC count)
- n = number of samples in the entire study

If the sum of Q_i for the entire study was zero for the taxon-life stage, then the sum of Q_i was set equal to one for the purpose of calculating absolute and net error rate.

The absolute error rate is the approximate fraction of the taxon-life stage that was originally identified or counted incorrectly. This is an estimate of the fraction of erroneous countable items in the uninspected samples.

Net error rate is the approximate relative error in the total counts for the taxon-life stage. For this index, positive (original count too high) and negative (original count too low) errors cancel each other so that the index reflects the relative net bias to the taxon-life stage abundance.

3.0 RESULTS

3.1 ICHTHYOPLANKTON LABORATORY PROGRAM

The Average Outgoing Quality (AOQ) of the 2010 Hudson River Ichthyoplankton Laboratory Program was 0.48% for the sorting task and 0.00% for the identification task. These AOQ levels represent the actual or achieved quality for measurement parameters and were well within the 10% AOQL requirement of the study. The Average Fraction Inspected (AFI) was 28.89% for sorting and 13.06% for identification (Table 3).

Table 3. Fraction inspected, percent nonconforming, mean percent measurement error, and average outgoing quality of tasks performed by Normandeau for the 2010 Hudson River Ichthyoplankton Laboratory Program.

Task	Fraction Inspected (%)	Percent Nonconforming (%)	Mean Percent Measurement Error (%)	AOQ (%)
Sorting	28.89	0.57	1.26	0.48
Identification	13.06	0.00	0.51	0.00

The AFI for the sorting task as calculated here is higher than required by the QC inspection plan, because it includes samples used as “training QCs” for new sorters. Only after a new sorter demonstrated proficiency in the training program were subsequent samples processed by that sorter entered into the laboratory-wide QC plan.

Sorting and identification tasks were also evaluated on the basis of river runs (sampling weeks). Sorted samples were inspected at a rate of 11.11% to 70.27% for individual river runs (Table 4). Nonconformance for the sorting task among the inspected samples ranged from 0% to 6.06% in the 23 river runs, and averaged 0.57% overall (Table 5). Sorting measurement error was between 0% and 3.51% and averaged 1.26% for the study (Table 6). For the task of sample identification, 3.57% to 15.38% of samples were inspected from individual river runs (Table 7). Percent nonconforming for the identification task was zero in all 23 river runs (Table 8). Measurement error for individual river runs ranged from 0% to 0.88% and overall measurement error was 0.51% for the identification task of this study (Table 9).

Measurement error results for the identification task are skewed towards high values as a result of the method of computation at the life stage level. In addition, measurement errors are summed over life stages within each taxon, which then amplifies the already skewed life stage values. These data are not indicative of actual measurement error and should only be compared to other measurement error results that are calculated using exactly the same methods. In all cases of failed QC samples, the data were corrected and the QC sample inspection frequency was maintained at 100% for that individual until acceptable results were demonstrated as determined by the QC sampling plan.

Table 4. Sample sorting fraction inspected results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	Total # of Samples Inspected	Total # of Samples Sorted	Fraction Inspected
8 Mar 10	13	74	17.57
15 Mar 10	52	74	70.27
22 Mar 10	43	74	58.11
29 Mar 10	24	126	19.05
5 Apr 10	38	126	30.16
12 Apr 10	20	126	15.87
19 Apr 10	41	135	30.37
26 Apr 10	33	135	24.44
3 May 10	80	135	59.26
10 May 10	77	126	61.11
17 May 10	74	126	58.73
24 May 10	30	126	23.81
31 May 10	23	123	18.70
7 Jun 10	25	123	20.33
14 Jun 10	22	123	17.89
28 Jun 10	19	123	15.45
12 Jul 10	15	81	18.52
26 Jul 10	9	81	11.11
9 Aug 10	13	81	16.05
23 Aug 10	21	81	25.93
6 Sep 10	9	80	11.25
20 Sep 10	13	81	16.05
4 Oct 10	11	80	13.75
Study	705	2,440	28.89

Table 5. Sample sorting percent nonconformance results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	# of Noncon- formities	Total # of Samples Inspected	% Non- conformance (Week)	% Non- conformance (Study)
8 Mar 10	0	13	0.00	0.00
15 Mar 10	0	52	0.00	0.00
22 Mar 10	0	43	0.00	0.00
29 Mar 10	0	24	0.00	0.00
5 Apr 10	0	38	0.00	0.00
12 Apr 10	1	20	5.00	0.53
19 Apr 10	0	41	0.00	0.43
26 Apr 10	2	33	6.06	1.14
3 May 10	0	80	0.00	0.87
10 May 10	0	77	0.00	0.71
17 May 10	1	74	1.35	0.81
24 May 10	0	30	0.00	0.76
31 May 10	0	23	0.00	0.73
7 Jun 10	0	25	0.00	0.70
14 Jun 10	0	22	0.00	0.67
28 Jun 10	0	19	0.00	0.65
12 Jul 10	0	15	0.00	0.64
26 Jul 10	0	9	0.00	0.63
9 Aug 10	0	13	0.00	0.61
23 Aug 10	0	21	0.00	0.60
6 Sep 10	0	9	0.00	0.59
20 Sep 10	0	13	0.00	0.58
4 Oct 10	0	11	0.00	0.57
Study	4	705		

Table 6. Sample sorting mean percent measurement error results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	Total # of Samples Inspected	Mean Percent Measurement Error
8 Mar 10	13	0.27
15 Mar 10	52	0.34
22 Mar 10	43	0.18
29 Mar 10	24	0.00
5 Apr 10	38	0.48
12 Apr 10	20	2.50
19 Apr 10	41	1.93
26 Apr 10	33	3.51
3 May 10	80	1.26
10 May 10	77	1.22
17 May 10	74	1.78
24 May 10	30	0.99
31 May 10	23	1.95
7 Jun 10	25	2.65
14 Jun 10	22	1.68
28 Jun 10	19	0.86
12 Jul 10	15	2.25
26 Jul 10	9	0.86
9 Aug 10	13	0.35
23 Aug 10	21	0.84
6 Sep 10	9	0.76
20 Sep 10	13	0.36
4 Oct 10	11	0.00
Study	705	1.26

Table 7. Sample identification fraction inspected results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	Total # of Samples Inspected	Total # of Samples Identified	Fraction Inspected
8 Mar 10	9	63	14.29
15 Mar 10	4	28	14.29
22 Mar 10	1	23	4.35
29 Mar 10	1	28	3.57
5 Apr 10	12	84	14.29
12 Apr 10	17	116	14.66
19 Apr 10	19	134	14.18
26 Apr 10	18	131	13.74
3 May 10	19	130	14.62
10 May 10	18	126	14.29
17 May 10	16	126	12.70
24 May 10	15	126	11.90
31 May 10	12	123	9.76
7 Jun 10	18	123	14.63
14 Jun 10	18	123	14.63
28 Jun 10	14	123	11.38
12 Jul 10	10	81	12.35
26 Jul 10	6	81	7.41
9 Aug 10	11	80	13.75
23 Aug 10	12	78	15.38
6 Sep 10	10	79	12.66
20 Sep 10	10	73	13.70
4 Oct 10	11	73	15.07
Study	281	2,152	13.06

Table 8. Sample identification percent nonconformance results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	# of Noncon- formities	Total # of Samples Inspected	% Non- conformance (Week)	% Non- conformance (Study)
8 Mar 10	0	9	0.00	0.00
15 Mar 10	0	4	0.00	0.00
22 Mar 10	0	1	0.00	0.00
29 Mar 10	0	1	0.00	0.00
5 Apr 10	0	12	0.00	0.00
12 Apr 10	0	17	0.00	0.00
19 Apr 10	0	19	0.00	0.00
26 Apr 10	0	18	0.00	0.00
3 May 10	0	19	0.00	0.00
10 May 10	0	18	0.00	0.00
17 May 10	0	16	0.00	0.00
24 May 10	0	15	0.00	0.00
31 May 10	0	12	0.00	0.00
7 Jun 10	0	18	0.00	0.00
14 Jun 10	0	18	0.00	0.00
28 Jun 10	0	14	0.00	0.00
12 Jul 10	0	10	0.00	0.00
26 Jul 10	0	6	0.00	0.00
9 Aug 10	0	11	0.00	0.00
23 Aug 10	0	12	0.00	0.00
6 Sep 10	0	10	0.00	0.00
20 Sep 10	0	10	0.00	0.00
4 Oct 10	0	11	0.00	0.00
Study	0	281		

Table 9. Sample identification mean percent measurement error results, 2010 Hudson River Ichthyoplankton Laboratory Program.

Sampling Week (Beginning Monday)	Total # of Samples Inspected	Mean Percent Measurement Error	Number of Taxa Inspected
8 Mar 10	9	0.00	26
15 Mar 10	4	0.00	16
22 Mar 10	1	0.28	2
29 Mar 10	1	0.00	1
5 Apr 10	12	0.00	23
12 Apr 10	17	0.26	41
19 Apr 10	19	0.06	67
26 Apr 10	18	0.48	51
3 May 10	19	0.75	73
10 May 10	18	0.47	92
17 May 10	16	0.38	72
24 May 10	15	0.83	78
31 May 10	12	0.88	84
7 Jun 10	18	0.85	103
14 Jun 10	18	0.50	85
28 Jun 10	14	0.49	61
12 Jul 10	10	0.48	43
26 Jul 10	6	0.44	15
9 Aug 10	11	0.68	22
23 Aug 10	12	0.30	37
6 Sep 10	10	0.47	24
20 Sep 10	10	0.20	23
4 Oct 10	11	0.38	34
Study	281	0.51	1,073

Additional organisms found during the sort QC were identified independently to determine the frequency of species and life stages missed during the initial sort. Six taxa accounted for 94% of the additional organisms found during sort QC: striped bass, bay anchovy, white perch, clupeids, Atlantic tomcod, and *Morone* sp. (Table 10). For these six taxa, the additional number found in the sort QC amounted to less than 1% of the total found during sample processing (Table 11). For most taxa-life stages the percentage missed by the original sorter was well under 2%.

Table 10. Ranking of taxa missed during initial sort and found during sort QC.

Taxon	Number of Organisms found in Sort QC	Percent
Striped bass	814	33.97
Bay anchovy	488	20.37
White perch	477	19.91
Herring family	212	8.85
Atlantic tomcod	155	6.47
<i>Morone</i> species	96	4.01
Fourbeard rockling	30	1.25
Goby family	23	0.96
Windowpane	14	0.58
Winter flounder	13	0.54
Yellow perch	13	0.54
Grubby	11	0.46
Unidentified	11	0.46
Freshwater drum	7	0.29
Tessellated darter	7	0.29
Atlantic menhaden	4	0.17
Carp and minnow family	3	0.13
Common carp	3	0.13
Cunner	3	0.13
Hogchoker	3	0.13
Northern pipefish	2	0.08
American eel	1	0.04
American sand lance	1	0.04
Atlantic silverside	1	0.04
Inland silverside	1	0.04
Summer flounder	1	0.04
Tautog	1	0.04
Weakfish	1	0.04
Total	2,396	100.00

Table 11. Summary by life stage of the six highest ranked taxa missed during original sort and found during sort QC compared to total count.

Taxon	Life Stage	Number	Percent in Each Stage	Percent of Total Found	Total Organisms Found^a
Atlantic tomcod	Yolk-sac larvae	0	0.00	0.00	66
	Post yolk-sac larvae	14	9.03	0.17	8,169
	Young-of-the-year	141	90.97	1.10	12,845
	Unidentified	0	0.00	0.00	1
Bay anchovy	Eggs	310	63.52	0.39	79,006
	Yolk-sac larvae	1	0.20	2.22	45
	Post yolk-sac larvae	177	36.27	0.57	31,020
	Young-of-the-year	0	0.00	0.00	14,565
	Unidentified	0	0.00	0.00	32
Herring family	Eggs	9	4.25	0.16	5,679
	Yolk-sac larvae	45	21.23	1.26	3,569
	Post yolk-sac larvae	157	74.06	0.82	19,146
	Unidentified	1	0.47	10.00	10
<i>Morone</i> species	Yolk-sac larvae	1	1.04	0.93	107
	Post yolk-sac larvae	66	68.75	2.03	3,249
	Unidentified	29	30.21	1.42	2,049
Striped bass	Eggs	300	36.86	0.80	37,445
	Yolk-sac larvae	262	32.19	0.66	39,513
	Post yolk-sac larvae	250	30.71	0.26	95,347
	Young-of-the-year	2	0.25	0.27	744
	Unidentified	0	0.00	0.00	105
White perch	Eggs	79	16.56	0.70	11,321
	Yolk-sac larvae	97	20.34	0.97	9,988
	Post yolk-sac larvae	301	63.10	0.51	59,006
	Young-of-the-year	0	0.00	0.00	159
	Unidentified	0	0.00	0.00	9

^a Includes both original count and additional organisms found during sort QC.

The life stage most commonly missed by sorters was eggs for bay anchovy and striped bass; post yolk-sac larvae for white perch, clupeids, and *Morone* sp.; and young-of-the-year for Atlantic tomcod (Table 11). The life stage most frequently missed by sorters was usually the most abundant life stage.

Absolute error rates of the identification process for individual life stages of commonly encountered taxa ranged from 0 to 0.22, but most taxa-life stages had rates less than 0.05. Generally, only those taxa-life stages with low total counts had absolute error rates above 0.05 (Table 12).

Net error rates were substantially lower than the absolute error rates in most cases, demonstrating that errors often tended to cancel each other out. This was noticeable for many of the more abundant taxa-life stages, such as striped bass yolk-sac larvae; bay anchovy, striped bass, and white perch post yolk-sac larvae; and bay anchovy young-of-the-year.

Table 12. Cumulative net and absolute error rates for commonly encountered taxa in samples selected for QC inspection of identification and counting process.

Taxon	Stage	Total Count	Net Error	Absolute Error	N
Alewife	Young-of-the-year	245	-0.0163	0.0408	28
Atlantic menhaden	Eggs	154	0.0065	0.0065	8
	Post yolk-sac larvae	95	0.0105	0.0316	24
	Young-of-the-year	37	-0.0270	0.0270	6
Atlantic tomcod	Yolk-sac larvae	13	0.1539	0.1539	6
	Post yolk-sac larvae	1,114	0.0027	0.0081	26
	Young-of-the-year	1,917	-0.0010	0.0010	61
Bay anchovy	Unidentified	2	0.0000	0.0000	1
	Eggs	9,067	0.0033	0.0077	48
	Yolk-sac larvae	13	0.0000	0.0000	3
	Post yolk-sac larvae	3,582	-0.0039	0.0173	103
	Young-of-the-year	1,447	0.0021	0.0131	62
Blueback herring	Young-of-the-year	554	0.0036	0.0072	18
Freshwater drum	Eggs	205	0.0049	0.0049	11
	Yolk-sac larvae	48	0.1250	0.1250	9
	Post yolk-sac larvae	29	-0.0345	0.1724	10
Goby family	Post yolk-sac larvae	462	0.0000	0.0087	46
Herring family	Unidentified	3	0.0000	0.0000	3
	Eggs	645	0.0047	0.0078	16
	Yolk-sac larvae	378	-0.0079	0.0238	43
	Post yolk-sac larvae	2,887	0.0035	0.0118	101
Hogchoker	Eggs	371	0.0000	0.0108	18
	Yolk-sac larvae	3	0.0000	0.0000	3
	Post yolk-sac larvae	4	0.0000	0.0000	2
	Young-of-the-year	40	0.0250	0.0250	9
<i>Morone</i> species	Unidentified	74	0.0946	0.0946	10
	Yolk-sac larvae	2	0.0000	0.0000	2
	Post yolk-sac larvae	388	0.0387	0.0644	27
Striped bass	Unidentified	9	0.2222	0.2222	4
	Eggs	6,149	0.0005	0.0005	62
	Yolk-sac larvae	6,145	-0.0015	0.0106	68
	Post yolk-sac larvae	11,201	0.0022	0.0158	100
	Young-of-the-year	52	-0.0769	0.1539	22
White perch	Eggs	678	0.0074	0.0074	27
	Yolk-sac larvae	1,908	0.0042	0.0105	62
	Post yolk-sac larvae	9,125	-0.0027	0.0176	103
	Young-of-the-year	24	-0.0833	0.0833	10

3.2 FALL JUVENILE SURVEY

Results of the laboratory quality control program for the 2010 Fall Juvenile Survey (consisting of the Beach Seine Survey and the Fall Shoals Survey) were summarized by the same methods as the QC results for the 2010 Hudson River Ichthyoplankton Laboratory Program and are presented in Table 13.

A total of 494 and 1,250 young-of-the-year fish identification records were made in the laboratory for the Fall Shoals and Beach Seine surveys respectively and 5,646 and 5,300 young-of-the-year fish length measurement records were made for the Fall Shoals and Beach Seine surveys respectively.

Table 13. Fraction inspected, percent nonconforming, and average outgoing quality of laboratory tasks performed by Normandeau for the 2010 Fall Juvenile Survey.

Task	Average Fraction Inspected (%)	Percent Nonconforming (%)	Average Outgoing Quality (%)
Identification	6.59	0.00	0.00
Measurement	1.96	0.00	0.00

4.0 LITERATURE CITED

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Appendix B

Physical/Chemical Parameters

APPENDIX B
LIST OF TABLES

<u>Number</u>	<u>Title</u>
B-1	Daily freshwater flow (m ³ /sec/day) estimated for Green Island, New York, 2010
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Table B-1 Daily Freshwater Flow (m³/sec/day) Estimated for Green Island, New York, 2010

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT ¹	NOV ¹	DEC ¹
DAY OF MONTH												
1	274	241	252	770	170	102	250	102	171	NA	158	351
2	271	252	247	662	161	100	208	97	178	NA	125	761
3	252	252	286	620	146	99	173	99	165	NA	105	651
4	240	255	258	589	148	103	151	86	157	NA	130	507
5	258	255	250	541	140	110	156	91	100	NA	209	408
6	238	258	262	450	151	128	142	112	82	NA	223	342
7	195	246	268	385	132	162	95	98	81	NA	189	308
8	184	221	278	357	149	145	88	84	76	NA	178	317
9	175	232	263	425	211	133	110	82	97	NA	189	303
10	156	241	243	385	200	132	103	87	76	NA	192	286
11	153	235	248	342	182	145	115	88	72	NA	171	297
12	150	224	253	320	173	138	109	77	68	NA	151	294
13	167	235	272	294	171	177	113	87	74	NA	126	467
14	147	232	357	277	163	174	123	78	79	NA	103	461
15	144	241	481	252	170	173	121	85	85	NA	114	340
16	156	235	501	248	170	135	101	91	95	NA	126	357
17	147	232	461	265	164	133	96	83	88	NA	138	325
18	153	238	444	365	140	133	98	80	89	NA	223	331
19	158	235	447	334	131	125	122	78	107	124	178	311
20	156	171	515	300	138	113	103	78	112	129	152	303
21	153	137	532	289	121	121	99	85	90	133	155	286
22	147	129	521	283	127	113	99	90	106	121	137	270
23	133	126	804	271	112	146	106	140	93	113	589	265
24	124	144	999	245	111	145	137	211	68	106	499	266
25	223	171	835	198	115	121	116	233	82	92	297	246
26	824	300	736	221	111	134	118	189	86	150	303	228
27	637	323	608	226	103	138	108	213	85	234	323	241
28	430	269	509	201	103	143	104	197	85	300	294	222
29	325	NA	481	181	106	174	98	187	107	207	275	233
30	275	NA	634	161	85	264	92	181	167	184	282	235
31	260	NA	821	NA	93	NA	111	176	NA	176	NA	234

¹ October through December data are incomplete and provisional.

Table B-2 Long-Term (1947-2009) and 2010 Monthly Mean Freshwater Flow (m³/sec/day) Estimated for Green Island, New York

<u>MONTH</u>	<u>2010 AVERAGE</u>	<u>LONG-TERM AVERAGE</u>	<u>LONG-TERM MINIMUM</u>	<u>LONG-TERM MAXIMUM</u>
JAN	236	409	118	961
FEB	226	402	128	885
MAR	454	627	258	1,077
APR	349	872	257	1,749
MAY	142	524	156	1,147
JUN	139	301	101	909
JUL	121	201	87	670
AUG	118	174	48	414
SEP	101	183	58	482
OCT ¹	159	262	71	853
NOV ¹	211	379	93	758
DEC ¹	337	432	173	989
ANNUAL AVERAGE ²	216	397		

¹ October through December data for 2010 are incomplete and provisional.

² Weighted by number of days in each month. 2010 average is provisional.

Table B-3 Monthly Mean Freshwater Flow (m³/sec/day) Estimated for Green Island, New York, 1974 to 2009

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
JAN	623	540	417	225	744	571	256	148	321	259	133	439	310	262	268	196	383	512
FEB	527	548	885	227	400	335	128	851	356	352	552	319	362	201	349	256	703	496
MAR	587	670	897	987	619	1,077	633	349	613	580	281	581	1,018	605	461	332	994	696
APR	854	724	1,040	1,092	950	1,009	748	384	897	1,062	761	456	689	981	476	548	894	655
MAY	650	566	900	421	530	508	274	328	354	1,036	651	232	363	156	357	620	990	346
JUN	249	367	431	207	282	216	192	169	431	358	275	157	428	175	123	389	250	144
JUL	333	211	432	162	131	131	144	140	182	127	127	133	250	162	131	92	157	112
AUG	180	254	414	154	169	149	130	133	124	155	48	104	350	118	139	61	248	123
SEP	294	482	271	408	175	221	118	233	122	133	58	171	218	341	164	120	159	136
OCT	256	662	658	853	244	313	158	456	124	71	178	206	336	504	211	254	477	216
NOV	486	637	507	663	227	465	242	393	196	224	277	423	544	453	565	407	653	301
DEC	548	532	398	749	303	430	273	319	233	624	447	338	524	437	330	180	687	364
ANNUAL AVERAGE	466	516	604	512	398	452	275	325	329	415	316	296	449	366	298	288	549	342
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
JAN	304	550	239	490	736	465	922	426	417	291	168	331	488	624	814	849	645	421
FEB	236	276	337	263	503	516	437	473	473	346	423	279	297	391	634	331	710	345
MAR	408	453	562	514	461	683	873	584	861	413	540	914	651	456	491	825	1,032	841
APR	648	1,749	1,375	257	939	873	652	593	1,069	1,375	693	833	676	1,059	566	1,240	1,203	644
MAY	501	375	534	158	1,081	643	349	214	898	341	652	621	526	385	553	496	385	429
JUN	342	203	233	130	353	180	550	115	573	451	483	413	298	301	909	195	204	423
JUL	254	136	248	94	384	153	243	142	314	195	152	188	259	214	670	151	333	343
AUG	203	140	265	97	191	126	153	84	393	105	112	332	399	126	257	114	331	400
SEP	217	158	190	102	185	127	133	257	228	116	138	257	452	161	187	110	173	219
OCT	286	192	177	361	288	133	169	266	264	115	248	533	222	683	569	211	313	273
NOV	531	347	251	693	613	293	190	280	309	163	525	736	350	758	752	427	482	324
DEC	438	403	396	328	989	268	187	298	469	220	406	846	759	639	584	472	750	307
ANNUAL AVERAGE	364	415	401	291	560	372	405	311	522	344	378	524	448	483	582	452	547	414

Table B-3 (Continued)

	2010	Minimum	Maximum	Average
JAN	236	133	922	433
FEB	226	128	885	415
MAR	454	281	1,077	649
APR	349	257	1,749	838
MAY	142	142	1,081	502
JUN	139	115	909	306
JUL	121	92	670	209
AUG	118	48	414	189
SEP	101	58	482	198
OCT ¹	159	71	853	315
NOV ¹	211	163	758	430
DEC ¹	337	180	989	454
ANNUAL AVERAGE	216	139	899	411

¹ October through December data for 2010 are incomplete and provisional.

Table B-4 Average Annual Freshwater Flow (m³/sec/day) Estimated for Green Island, New York, 1947 to 2010

YEAR	FLOW	YEAR	FLOW
1947	457	1979	452
1948	366	1980	275
1949	350	1981	325
1950	398	1982	329
1951	479	1983	415
1952	432	1984	316
1953	395	1985	296
1954	408	1986	449
1955	414	1987	366
1956	393	1988	298
1957	273	1989	288
1958	363	1990	549
1959	401	1991	342
1960	397	1992	364
1961	304	1993	415
1962	299	1994	401
1963	266	1995	291
1964	247	1996	560
1965	219	1997	372
1966	285	1998	405
1967	316	1999	311
1968	353	2000	522
1969	377	2001	344
1970	337	2002	378
1971	420	2003	524
1972	595	2004	448
1973	493	2005	483
1974	466	2006	582
1975	516	2007	452
1976	604	2008	547
1977	512	2009	414
1978	398	2010 ¹	216

¹ Data for 2010 are incomplete and provisional.

Table B-5 Mean, Minimum, And Maximum Temperature (°C) for Each Day of the Year, Hudson River near Poughkeepsie, 1951 to 2010¹

MONTH	DAY	LONG-TERM	TEMPERATURE (1951-2009)		2010 ACTUAL TEMPERATURES
		MEAN	MINIMUM	MAXIMUM	
1	1	1.4	0.0	4.4	0.0
1	2	1.4	0.0	4.4	0.0
1	3	1.4	0.0	4.4	0.0
1	4	1.4	0.0	3.5	0.0
1	5	1.3	0.0	3.5	0.0
1	6	1.2	0.0	4.0	0.0
1	7	1.2	0.0	3.5	0.0
1	8	1.1	0.0	4.0	0.0
1	9	1.1	0.0	3.5	0.0
1	10	1.1	0.0	3.5	0.0
1	11	1.1	0.0	3.5	0.0
1	12	1.0	0.0	4.0	0.0
1	13	1.0	0.0	4.0	0.0
1	14	1.0	0.0	4.0	0.0
1	15	1.0	0.0	4.0	0.0
1	16	1.0	0.0	3.5	0.0
1	17	1.0	-0.1	2.8	0.0
1	18	0.9	0.0	3.3	0.0
1	19	0.9	0.0	2.8	0.0
1	20	0.9	0.0	2.2	0.0
1	21	0.8	0.0	2.4	0.0
1	22	0.9	0.0	2.2	0.0
1	23	0.9	0.0	3.0	0.0
1	24	0.8	0.0	3.0	0.0
1	25	0.8	0.0	3.5	0.7
1	26	0.8	0.0	3.5	0.0
1	27	0.8	0.0	3.0	0.1
1	28	0.8	0.0	3.0	0.0
1	29	0.8	-0.1	2.5	0.0
1	30	0.8	0.0	2.5	0.0
1	31	0.8	0.0	2.5	0.0
2	1	0.8	0.0	2.5	0.0
2	2	0.8	0.0	2.2	0.0
2	3	0.8	0.0	2.2	0.0
2	4	0.8	0.0	2.0	0.0
2	5	0.7	0.0	2.0	0.0
2	6	0.8	0.0	2.5	0.0
2	7	0.8	0.0	2.5	0.0
2	8	0.8	0.0	3.0	0.0
2	9	0.8	0.0	3.0	0.0
2	10	0.8	0.0	3.3	0.0
2	11	0.8	0.0	3.0	0.0
2	12	0.8	0.0	2.5	0.0
2	13	0.9	0.0	2.5	0.0
2	14	0.9	0.0	2.8	0.0
2	15	0.9	0.0	2.8	0.0
2	16	0.9	0.0	2.8	0.0
2	17	0.9	0.0	2.8	0.0
2	18	0.9	0.0	2.8	0.0
2	19	1.0	0.0	2.8	0.0
2	20	1.0	0.0	2.8	0.0
2	21	1.0	0.0	2.8	0.0
2	22	1.0	0.0	3.9	0.0
2	23	1.0	0.0	2.8	0.0
2	24	1.0	0.0	3.9	0.0
2	25	1.0	0.0	2.8	0.0
2	26	1.2	0.0	3.3	0.0
2	27	1.2	0.0	4.4	0.1
2	28	1.3	0.0	5.0	0.3
2	29	1.4	0.0	4.4	
3	1	1.2	0.0	4.4	0.7
3	2	1.3	0.0	4.4	1.0
3	3	1.2	0.0	3.9	1.2
3	4	1.3	0.0	3.5	1.5
3	5	1.4	0.0	3.5	1.7
3	6	1.4	0.0	4.0	1.8
3	7	1.5	0.0	4.7	2.1
3	8	1.6	0.0	4.9	2.4
3	9	1.6	0.0	4.5	2.9
3	10	1.6	0.0	4.8	3.2
3	11	1.8	0.0	4.4	3.5
3	12	1.9	0.0	4.4	3.7
3	13	2.0	0.0	4.5	4.0

¹ Data from 1951 through 1992 from Poughkeepsie's Water Treatment Facility. Data from 1993 through 2010 from USGS gaging site 01372058 Hudson River below Poughkeepsie, NY.

Table B-5 (Continued)

MONTH	DAY	LONG-TERM	TEMPERATURE (1951-2009)		2010 ACTUAL TEMPERATURES
		MEAN	MINIMUM	MAXIMUM	
3	14	2.2	0.0	4.5	4.2
3	15	2.2	0.0	5.0	4.6
3	16	2.3	0.0	5.6	4.5
3	17	2.4	0.0	5.7	4.7
3	18	2.5	0.0	5.9	4.9
3	19	2.5	0.0	7.7	5.2
3	20	2.7	0.0	7.5	5.5
3	21	2.8	0.0	7.3	5.8
3	22	3.0	0.0	7.2	6.0
3	23	3.2	0.0	7.1	6.3
3	24	3.4	0.5	7.1	6.9
3	25	3.5	0.5	6.0	6.7
3	26	3.7	0.5	6.5	6.5
3	27	4.0	0.5	6.7	6.2
3	28	4.2	1.0	7.0	6.0
3	29	4.5	1.1	7.0	6.0
3	30	4.7	1.1	7.8	5.6
3	31	5.0	1.1	8.3	5.6
4	1	5.2	1.7	9.4	5.8
4	2	5.4	2.0	8.5	6.2
4	3	5.6	2.5	10.0	6.6
4	4	5.8	2.5	10.0	7.2
4	5	5.8	2.8	9.5	7.8
4	6	6.0	3.0	9.0	8.4
4	7	6.2	2.8	9.4	9.2
4	8	6.3	2.8	9.4	9.8
4	9	6.4	2.8	9.2	10.3
4	10	6.5	2.8	10.2	10.9
4	11	6.8	2.8	11.2	11.5
4	12	7.0	2.8	11.4	11.8
4	13	7.2	2.8	11.4	12.1
4	14	7.4	2.8	11.4	12.3
4	15	7.6	2.8	11.5	12.6
4	16	7.7	3.3	11.8	12.7
4	17	7.9	3.9	11.7	12.7
4	18	8.1	4.5	11.8	12.7
4	19	8.4	5.0	12.5	12.7
4	20	8.7	5.0	13.5	12.8
4	21	9.0	5.5	13.5	12.9
4	22	9.2	6.5	13.5	13.1
4	23	9.4	6.7	13.5	13.1
4	24	9.7	6.7	14.0	13.2
4	25	9.8	6.7	13.5	13.1
4	26	10.1	6.7	13.5	13.2
4	27	10.3	7.2	13.5	13.2
4	28	10.6	7.8	13.5	12.9
4	29	10.8	8.3	13.9	13.0
4	30	11.1	8.9	13.9	13.3
5	1	11.3	8.9	14.4	13.5
5	2	11.5	8.9	14.4	13.9
5	3	11.7	8.9	14.4	14.3
5	4	11.9	8.9	15.0	14.4
5	5	12.1	8.9	15.0	14.7
5	6	12.3	8.9	15.0	14.9
5	7	12.5	8.9	15.0	15.0
5	8	12.7	8.9	15.1	15.2
5	9	12.8	8.9	15.6	14.9
5	10	13.0	8.9	16.1	15.0
5	11	13.2	9.4	16.1	14.9
5	12	13.3	9.4	16.1	14.7
5	13	13.5	10.0	16.2	15.0
5	14	13.8	10.6	16.7	15.4
5	15	14.0	11.1	17.5	15.7
5	16	14.3	11.1	18.0	15.9
5	17	14.4	11.7	18.0	16.1
5	18	14.6	11.5	17.5	16.0
5	19	14.8	12.0	17.5	16.0
5	20	15.1	12.2	18.0	16.4
5	21	15.3	12.5	18.0	16.7
5	22	15.5	12.8	18.5	16.9
5	23	15.7	12.8	19.0	17.1
5	24	15.9	12.8	19.0	17.2
5	25	16.0	12.8	20.0	17.6

Table B-5 (Continued)

MONTH	DAY	LONG-TERM	TEMPERATURE (1951-2009)		2010 ACTUAL TEMPERATURES
		MEAN	MINIMUM	MAXIMUM	
5	26	16.3	12.2	20.5	18.0
5	27	16.5	12.2	20.6	18.3
5	28	16.8	12.2	21.0	18.5
5	29	17.0	12.8	20.7	18.8
5	30	17.2	12.8	21.5	19.0
5	31	17.3	13.3	21.3	19.4
6	1	17.6	13.3	22.0	19.7
6	2	17.9	13.3	22.2	20.0
6	3	18.1	14.4	22.1	20.4
6	4	18.3	13.9	22.5	20.7
6	5	18.5	15.0	22.2	21.2
6	6	18.6	15.6	22.4	21.3
6	7	18.7	15.0	22.4	21.4
6	8	19.0	16.1	22.5	21.4
6	9	19.3	16.5	23.0	21.3
6	10	19.5	16.5	23.2	21.5
6	11	19.7	17.0	23.4	21.7
6	12	19.9	17.0	23.3	21.8
6	13	20.0	17.0	23.4	21.9
6	14	20.1	17.0	23.3	22.1
6	15	20.3	17.0	23.5	22.3
6	16	20.4	17.5	23.8	22.3
6	17	20.5	17.8	23.8	22.4
6	18	20.7	17.5	24.2	22.6
6	19	20.9	17.8	24.1	22.9
6	20	21.1	17.8	24.0	23.2
6	21	21.2	17.8	24.3	23.4
6	22	21.4	17.2	24.3	23.5
6	23	21.5	17.2	24.1	23.8
6	24	21.7	17.8	24.1	24.0
6	25	21.8	17.8	24.5	24.1
6	26	22.0	17.8	24.5	24.3
6	27	22.2	17.8	25.0	24.4
6	28	22.4	17.8	25.0	24.6
6	29	22.6	17.8	25.0	24.8
6	30	22.7	17.8	25.5	24.7
7	1	22.8	18.9	25.5	24.6
7	2	22.9	18.9	25.5	24.7
7	3	23.0	19.4	25.5	24.8
7	4	23.2	19.4	26.0	25.1
7	5	23.4	20.0	26.0	25.3
7	6	23.5	20.0	26.0	25.6
7	7	23.5	20.0	26.0	25.9
7	8	23.6	20.0	26.0	26.3
7	9	23.7	20.0	26.0	26.4
7	10	23.8	20.6	26.0	26.4
7	11	23.9	20.6	26.0	26.5
7	12	24.0	21.1	26.1	26.6
7	13	24.2	21.7	26.7	26.7
7	14	24.2	21.7	26.7	26.7
7	15	24.4	21.7	26.7	26.8
7	16	24.5	22.2	26.7	27.0
7	17	24.5	22.2	26.5	27.2
7	18	24.6	22.2	26.5	27.3
7	19	24.8	22.2	27.0	27.3
7	20	24.9	22.2	27.0	27.4
7	21	24.9	22.8	27.0	27.5
7	22	25.0	22.2	27.0	27.4
7	23	25.0	22.2	27.0	27.2
7	24	25.0	22.8	27.0	27.5
7	25	25.1	22.8	27.0	27.5
7	26	25.1	22.8	27.5	27.4
7	27	25.3	22.8	27.5	27.3
7	28	25.3	22.8	27.5	27.4
7	29	25.3	22.8	27.5	27.5
7	30	25.3	23.0	27.5	27.4
7	31	25.4	23.0	28.0	27.3
8	1	25.4	23.0	28.0	27.2
8	2	25.4	22.8	28.0	27.2
8	3	25.5	23.3	28.0	27.1
8	4	25.5	23.3	28.0	27.2
8	5	25.5	23.3	28.0	27.4
8	6	25.5	23.3	28.0	27.4

Table B-5 (Continued)

MONTH	DAY	LONG-TERM	TEMPERATURE (1951-2009)		2010 ACTUAL TEMPERATURES
		MEAN	MINIMUM	MAXIMUM	
8	7	25.4	23.3	28.0	27.2
8	8	25.4	23.3	28.0	27.2
8	9	25.5	23.3	28.0	27.2
8	10	25.5	23.3	28.0	27.3
8	11	25.4	22.8	28.0	27.4
8	12	25.4	22.8	28.1	27.4
8	13	25.3	22.2	28.5	27.3
8	14	25.3	22.2	28.5	27.2
8	15	25.2	22.2	28.4	26.9
8	16	25.2	22.2	28.4	26.8
8	17	25.1	22.2	28.1	26.8
8	18	25.1	22.8	28.0	26.8
8	19	25.1	22.2	27.7	26.8
8	20	25.1	22.8	27.6	26.8
8	21	25.0	22.2	27.5	26.6
8	22	24.9	22.2	27.5	26.5
8	23	24.8	22.8	27.0	26.1
8	24	24.8	22.2	27.0	25.4
8	25	24.7	21.7	27.0	24.9
8	26	24.7	21.7	27.0	24.8
8	27	24.7	22.2	26.5	24.5
8	28	24.6	22.2	26.5	24.4
8	29	24.5	22.2	26.7	24.4
8	30	24.5	22.2	26.5	24.5
8	31	24.4	22.2	26.5	24.6
9	1	24.3	22.2	26.5	24.8
9	2	24.2	22.2	26.7	24.9
9	3	24.1	22.2	26.1	25.0
9	4	24.1	22.2	26.0	25.0
9	5	24.0	21.7	26.0	24.5
9	6	24.0	22.0	26.0	24.4
9	7	23.8	21.7	26.0	24.5
9	8	23.7	21.7	26.0	24.6
9	9	23.6	21.7	25.6	24.2
9	10	23.5	21.1	25.6	23.9
9	11	23.4	21.1	25.6	23.8
9	12	23.3	21.1	25.6	23.7
9	13	23.1	20.0	25.6	23.6
9	14	23.0	18.9	25.5	23.5
9	15	22.8	17.8	25.5	23.3
9	16	22.6	17.2	25.5	23.1
9	17	22.4	17.2	25.5	23.0
9	18	22.2	16.7	25.5	22.9
9	19	22.1	16.7	25.5	22.8
9	20	22.0	17.2	25.5	22.5
9	21	21.7	16.7	25.0	22.4
9	22	21.5	16.1	25.0	22.3
9	23	21.2	16.1	25.0	22.3
9	24	21.1	15.6	24.5	22.4
9	25	20.9	15.6	24.5	22.5
9	26	20.8	15.6	24.0	22.2
9	27	20.6	16.1	24.0	22.1
9	28	20.4	15.6	23.5	22.1
9	29	20.2	15.6	23.5	22.0
9	30	20.0	15.6	23.0	21.9
10	1	19.8	16.1	22.7	21.3
10	2	19.6	15.6	22.5	20.3
10	3	19.5	15.6	22.6	19.5
10	4	19.2	15.6	22.7	18.8
10	5	19.0	15.0	22.7	18.1
10	6	18.8	15.0	22.7	17.8
10	7	18.7	15.0	22.6	17.4
10	8	18.4	14.4	22.6	16.7
10	9	18.1	14.4	22.4	16.3
10	10	18.0	14.4	22.2	15.9
10	11	17.8	13.9	22.0	15.8
10	12	17.6	13.3	21.5	15.7
10	13	17.3	13.3	21.1	15.5
10	14	17.1	12.8	21.1	15.2
10	15	16.9	12.2	20.5	15.0
10	16	16.7	12.2	20.3	14.5
10	17	16.5	12.8	20.2	14.4
10	18	16.3	12.2	20.2	14.2

Table B-5 (Continued)

MONTH	DAY	LONG-TERM	TEMPERATURE (1951-2009)		2010 ACTUAL TEMPERATURES
		MEAN	MINIMUM	MAXIMUM	
10	19	16.0	11.7	20.2	14.1
10	20	15.8	10.6	20.0	14.0
10	21	15.4	10.6	19.7	13.8
10	22	15.1	10.0	19.6	13.4
10	23	14.9	10.0	19.6	13.1
10	24	14.7	10.0	19.3	13.1
10	25	14.6	10.0	19.0	13.2
10	26	14.3	10.0	18.6	13.4
10	27	13.9	9.4	18.2	13.4
10	28	13.8	8.9	17.8	13.0
10	29	13.5	8.3	17.8	12.5
10	30	13.2	7.8	16.7	12.2
10	31	13.1	7.2	16.7	11.9
11	1	12.8	7.2	16.7	11.6
11	2	12.6	7.2	16.1	11.4
11	3	12.4	7.2	16.1	11.3
11	4	12.2	7.2	15.6	11.1
11	5	12.0	7.2	15.6	11.0
11	6	11.7	6.7	15.6	10.6
11	7	11.5	6.1	15.0	10.1
11	8	11.3	6.1	15.0	9.7
11	9	11.1	5.6	15.0	9.4
11	10	10.8	5.0	14.4	9.3
11	11	10.5	5.0	13.9	9.1
11	12	10.3	5.0	13.3	8.9
11	13	10.1	5.0	13.3	8.6
11	14	9.9	5.0	13.3	8.4
11	15	9.8	5.0	12.8	8.3
11	16	9.5	5.0	12.8	8.1
11	17	9.2	5.0	12.8	8.1
11	18	9.1	5.0	12.8	7.6
11	19	8.9	5.0	12.2	7.4
11	20	8.6	5.0	11.1	7.2
11	21	8.4	3.9	11.1	7.1
11	22	8.2	3.9	11.1	7.2
11	23	8.0	3.9	11.1	7.2
11	24	7.7	3.9	10.6	6.9
11	25	7.4	3.9	10.6	6.7
11	26	7.2	3.3	10.5	6.8
11	27	7.0	3.3	10.5	6.5
11	28	6.9	3.3	10.5	6.4
11	29	6.7	3.3	10.5	6.3
11	30	6.5	2.8	10.5	6.3
12	1	6.2	2.2	10.5	6.6
12	2	6.0	3.0	10.0	6.0
12	3	5.7	2.2	9.5	5.4
12	4	5.5	1.3	9.5	5.2
12	5	5.3	2.8	9.5	5.0
12	6	5.2	2.6	9.5	4.7
12	7	5.1	2.0	9.5	4.3
12	8	4.8	2.0	9.0	3.9
12	9	4.5	1.7	9.0	3.6
12	10	4.3	1.1	9.0	3.4
12	11	4.1	1.1	8.5	3.4
12	12	3.9	0.6	8.5	3.5
12	13	3.7	0.6	8.5	3.3
12	14	3.5	0.5	8.5	2.1
12	15	3.3	0.5	8.5	1.6
12	16	3.2	0.5	8.0	1.3
12	17	3.0	0.0	8.0	1.1
12	18	2.8	0.0	7.5	1.0
12	19	2.6	0.0	7.5	0.8
12	20	2.6	0.0	7.5	0.4
12	21	2.4	0.0	7.0	0.2
12	22	2.2	0.0	6.5	0.1
12	23	2.1	0.0	6.5	-0.1
12	24	2.0	0.0	6.5	-0.1
12	25	1.9	0.0	6.0	-0.1
12	26	1.7	0.0	6.1	-0.2
12	27	1.7	0.0	6.1	-0.1
12	28	1.7	0.0	6.1	-0.1
12	29	1.6	0.0	6.1	-0.1
12	30	1.6	0.0	6.1	-0.1
12	31	1.5	0.0	5.0	-0.1

Table B-6 Average Annual Water Temperature (°C), Hudson River near Poughkeepsie, 1951 to 2010¹

YEAR	TEMPERATURE	YEAR	TEMPERATURE
1951	11.66	1981	12.63
1952	12.25	1982	12.48
1953	12.87	1983	13.01
1954	11.92	1984	13.04
1955	12.40	1985	13.05
1956	11.92	1986	12.69
1957	13.03	1987	12.66
1958	12.18	1988	12.57
1959	12.90	1989	12.09
1960	11.29	1990	12.77
1961	12.17	1991	13.67
1962	11.63	1992	12.10
1963	11.82	1993	12.09
1964	12.99	1994	12.24
1965	12.51	1995	12.47
1966	12.75	1996	11.83
1967	12.05	1997	12.07
1968	13.10	1998	13.66
1969	12.59	1999	13.08
1970	12.79	2000	12.00
1971	12.31	2001	13.24
1972	11.35	2002	12.85
1973	12.73	2003	11.80
1974	11.61	2004	12.37
1975	12.37	2005	12.68
1976	11.43	2006	12.77
1977	11.97	2007	12.97
1978	12.27	2008	12.54
1979	12.49	2009	12.30
1980	12.72	2010	13.10

¹ Data from 1951 through 1992 from Poughkeepsie's Water Treatment Facility. Data from 1993 through 2010 from USGS gaging site 01372058 Hudson River below Poughkeepsie, NY.

Table B-7 Weighted Mean Temperature (°C) by Region and Week from 2010 Long River/Fall Juvenile Survey

WEEK BEGINNING MONDAY	REGIONS												
	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
15MAR10	4.9	5.0	5.2	5.4	5.6	5.3	4.9	.	.	.	.	.	.
22MAR10	6.7	7.0	6.9	6.8	6.9	7.1	6.9	.	.	.	.	.	.
29MAR10	6.8	6.8	7.0	6.7	6.4	6.2	5.9	.	.	.	.	.	.
05APR10	8.1	8.6	8.3	8.0	7.7	7.8	8.1	8.6	9.7	10.2	10.7	11.1	10.8
12APR10	9.2	10.1	11.1	11.5	11.4	10.8	12.0	12.5	13.0	12.5	12.2	11.8	11.4
19APR10	10.2	11.1	11.7	12.2	12.5	12.4	12.9	12.9	12.8	12.7	12.5	12.4	12.2
26APR10	11.0	11.9	12.6	14.0	13.5	13.2	13.0	13.0	13.0	13.2	13.2	13.0	13.2
03MAY10	13.2	14.5	15.5	16.0	16.0	14.8	15.2	15.0	15.1	16.0	16.0	15.6	16.4
10MAY10	10.9	12.4	14.1	15.0	15.0	14.7	14.6	14.8	15.3	15.4	14.9	15.1	14.2
17MAY10	13.3	14.6	15.7	16.2	16.6	15.7	16.0	16.2	16.6	17.0	16.8	16.9	16.9
24MAY10	16.3	17.7	18.7	19.6	19.9	18.5	18.7	18.7	19.3	19.1	19.8	20.3	20.7
31MAY10	19.2	20.4	21.4	21.7	21.6	20.4	20.5	20.3	20.9	21.8	22.7	23.0	23.9
07JUN10	18.3	19.8	20.7	21.1	22.1	21.2	21.1	21.4	22.2	22.9	23.1	23.6	23.1
14JUN10	20.6	21.7	22.4	23.1	22.8	21.8	21.9	22.3	22.5	22.5	22.4	21.8	21.2
21JUN10	21.2	22.1	23.5	24.3	24.7	23.1	23.6	23.9	24.2	23.7	23.6	23.1	23.1
28JUN10	22.8	24.2	24.7	25.2	24.9	24.6	24.7	24.6	24.8	24.6	24.5	24.6	24.8
05JUL10	21.4	23.2	25.1	26.4	27.0	25.9	26.0	26.3	26.3	25.8	26.0	26.1	25.7
12JUL10	24.8	25.8	26.7	27.5	27.8	26.4	27.7	27.3	.	.	.	.	.
19JUL10	25.1	26.4	27.3	28.3	28.3	27.4	27.4	27.6	27.3	27.5	27.6	27.9	27.8
26JUL10	25.3	26.7	26.4	28.0	28.8	27.7	27.5	27.6	.	.	.	.	.
02AUG10	23.2	25.2	26.9	28.0	27.8	27.1	27.0	27.3	26.9	26.3	26.0	25.9	26.0
09AUG10	24.3	25.2	26.7	27.7	28.4	27.8	27.6	27.4	.	.	.	.	.
16AUG10	24.4	25.2	26.1	27.3	27.1	26.5	26.3	26.8	26.1	25.7	25.5	25.7	25.8
23AUG10	24.1	24.1	24.6	25.5	25.9	25.3	25.0	24.8	.	.	.	.	.
30AUG10	24.4	25.3	26.2	26.8	26.3	25.3	25.4	25.5	24.4	24.3	23.5	23.1	23.1
06SEP10	23.9	24.1	24.3	24.9	24.6	24.7	24.2	24.1	.	.	.	.	.
13SEP10	20.5	21.4	21.7	22.6	23.4	22.9	22.7	23.1	22.9	21.9	21.6	21.7	21.4
20SEP10	20.4	20.5	20.9	21.7	22.8	22.4	22.2	22.4	.	.	.	.	.
27SEP10	19.3	19.7	20.1	21.9	23.3	22.3	22.1	22.2	21.4	20.5	20.3	20.2	19.9
04OCT10	19.9	19.6	19.8	20.4	20.0	19.0	18.4	17.7	.	.	.	.	.
11OCT10	18.3	18.3	18.3	18.5	17.9	16.6	16.3	15.8	15.2	14.7	14.3	14.2	14.2
25OCT10	15.1	15.5	15.4	16.2	15.6	14.5	14.5	13.2	12.5	12.5	12.3	11.9	12.2
08NOV10	10.7	10.6	10.6	10.6	10.8	10.1	9.9	9.8	8.8	8.0	7.8	7.6	7.4
29NOV10	9.3	8.5	7.9	8.1	7.3	6.7	6.8	6.7	5.6	5.3	5.1	4.9	4.9

Note: Dots (.) indicate no sampling.

Table B-8 Average Annual Temperature (°C) from Long River/Fall Juvenile Surveys,
1974 to 2010

YEAR	TEMPERATURE
1974	21.54
1975	22.10
1976	20.04
1977	20.79
1978	20.16
1979	21.53
1980	21.23
1981	20.96
1982	19.16
1983	19.14
1984	19.22
1985	21.69
1986	21.28
1987	21.41
1988	21.80
1989	20.65
1990	20.97
1991	23.59
1992	21.06
1993	21.01
1994	21.93
1995	21.78
1996	20.18
1997	20.96
1998	22.26
1999	23.17
2000	20.43
2001	21.43
2002	22.07
2003	21.09
2004	21.94
2005	22.14
2006	21.08
2007	21.69
2008	22.22
2009	21.01
2010	22.93

Table B-9 Mean Temperature (°C) by Region and Week from 2010 Beach Seine Survey

WEEK BEGINNING MONDAY	REGIONS											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
14JUN10	23.2	22.6	22.2	23.9	21.7	22.7	22.9	23.4	22.3	21.9	21.3	20.7
28JUN10	27.4	27.0	26.8	27.1	24.1	23.7	24.6	25.3	25.6	25.2	26.1	25.6
12JUL10	25.1	26.8	27.0	25.0	26.4	28.1	27.2	27.8	27.2	27.1	27.2	27.5
26JUL10	27.9	27.3	29.5	28.9	28.2	28.5	28.2	27.4	26.7	27.3	28.0	26.8
09AUG10	26.5	26.9	27.4	28.1	27.3	27.1	26.8	26.9	26.5	26.0	27.8	27.0
23AUG10	24.5	24.6	25.0	23.6	25.3	25.3	24.8	24.0	23.2	23.4	23.2	21.7
06SEP10	24.9	23.5	24.3	24.6	25.0	24.0	23.9	23.5	23.3	24.0	24.3	23.8
20SEP10	20.9	21.0	20.9	23.6	22.4	22.0	21.7	20.4	19.3	20.5	19.8	18.5
04OCT10	16.9	16.5	16.8	17.0	16.4	15.3	15.3	14.0	13.3	12.9	12.6	12.3
18OCT10	10.6	10.2	10.6	11.8	10.1	9.0	9.0	8.2	8.6	8.3	7.1	6.2

Table B-10 Average Annual Temperature (°C) from Beach Seine Surveys, 1974 to 2010

YEAR	TEMPERATURE
1974	21.34
1975	21.59
1976	22.21
1977	22.85
1978	23.71
1979	23.05
1980	24.29
1981	21.91
1982	22.73
1983	24.53
1984	23.17
1985	23.38
1986	22.02
1987	23.03
1988	23.16
1989	24.15
1990	24.34
1991	23.63
1992	22.07
1993	23.48
1994	22.39
1995	23.85
1996	24.42
1997	22.41
1998	24.20
1999	23.42
2000	22.32
2001	24.89
2002	24.52
2003	23.69
2004	22.60
2005	25.69
2006	23.27
2007	23.74
2008	23.85
2009	23.88
2010	23.06

Table B-11 Weighted Mean Salinity (ppt) by Region and Week from 2010 Long River/Fall Juvenile Survey

WEEK BEGINNING MONDAY	REGIONS												
	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
15MAR10	11.3	5.0	3.2	1.7	0.2	0.1	0.1	.	.	.	.	.	.
22MAR10	6.6	0.7	0.1	0.1	0.1	0.1	0.1	.	.	.	.	.	.
29MAR10	6.5	0.9	0.1	0.1	0.1	0.1	0.1	.	.	.	.	.	.
05APR10	6.8	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12APR10	16.7	12.2	4.9	2.1	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
19APR10	11.3	6.7	4.2	1.8	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26APR10	14.5	9.0	2.8	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
03MAY10	12.6	7.0	3.4	1.5	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10MAY10	17.8	12.2	7.7	5.1	2.9	1.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1
17MAY10	15.9	11.1	7.2	4.8	3.0	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24MAY10	19.2	12.5	9.1	5.6	3.7	0.9	0.3	0.1	0.1	0.1	0.1	0.1	0.1
31MAY10	17.8	11.3	6.7	4.2	3.0	1.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1
07JUN10	20.7	15.4	10.5	7.3	4.8	2.6	1.5	0.2	0.1	0.1	0.1	0.1	0.1
14JUN10	15.5	9.3	6.0	3.8	2.8	1.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
21JUN10	22.1	16.3	9.3	5.1	3.1	0.8	0.4	0.1	0.1	0.1	0.1	0.1	0.1
28JUN10	16.6	9.8	6.1	3.9	2.5	0.7	0.2	0.2	0.2	0.2	0.2	0.1	0.1
05JUL10	22.4	17.7	11.8	7.5	6.2	3.0	1.6	0.2	0.1	0.2	0.1	0.1	0.1
12JUL10	18.6	13.4	9.6	7.2	6.5	5.0	1.6	0.2	.	.	.	.	.
19JUL10	22.2	16.2	10.3	6.5	4.3	2.4	1.7	0.4	0.1	0.1	0.1	0.1	0.1
26JUL10	19.5	14.0	9.3	6.2	4.9	2.1	0.6	0.2	.	.	.	.	.
02AUG10	24.2	16.8	9.8	6.3	4.1	1.8	0.7	0.2	0.1	0.1	0.1	0.1	0.1
09AUG10	22.4	17.4	10.3	7.0	5.6	2.9	1.0	0.1	.	.	.	.	.
16AUG10	22.6	17.0	10.9	6.6	4.3	2.2	1.3	0.3	0.1	0.1	0.1	0.1	0.1
23AUG10	17.8	13.2	9.2	5.9	4.2	1.2	0.2	0.1	.	.	.	.	.
30AUG10	19.2	12.8	7.6	4.0	2.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
06SEP10	19.2	15.0	8.2	5.4	4.4	1.8	0.4	0.1	.	.	.	.	.
13SEP10	20.7	12.4	8.5	5.3	3.0	1.2	0.6	0.2	0.1	0.1	0.1	0.1	0.1
20SEP10	22.2	16.2	10.9	8.1	6.0	3.8	1.3	0.1	.	.	.	.	.
27SEP10	20.8	13.2	9.1	6.7	5.3	2.7	1.4	0.4	0.1	0.1	0.1	0.1	0.1
04OCT10	16.0	7.3	4.0	1.0	0.2	0.1	0.1	0.1	.	.	.	.	.
11OCT10	15.9	6.3	1.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
25OCT10	18.2	13.2	5.4	1.7	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
08NOV10	13.4	9.4	7.0	2.3	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
29NOV10	13.4	5.8	2.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Note: Dots (.) indicate no sampling.

WEEK BEGINNING MONDAY	REGIONS											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
14JUN10	8.0	7.0	5.4	2.2	0.8	0.3	0.1	0.1	0.1	0.1	0.1	0.1
28JUN10	7.5	5.9	4.2	3.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
12JUL10	14.4	9.5	7.3	6.3	3.7	1.7	0.2	0.1	0.1	0.1	0.1	0.1
26JUL10	10.6	7.1	5.2	4.2	1.4	0.4	0.2	0.1	0.1	0.1	0.1	0.2
09AUG10	13.5	8.8	6.8	5.0	2.3	1.0	0.1	0.1	0.1	0.1	0.1	0.1
23AUG10	9.0	6.4	4.8	2.0	0.8	0.2	0.1	0.1	0.1	0.1	0.1	0.1
06SEP10	10.7	6.5	5.0	3.8	1.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
20SEP10	11.3	8.5	6.2	5.7	2.1	1.0	0.1	0.1	0.1	0.1	0.1	0.1
04OCT10	5.7	2.6	1.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
18OCT10	3.4	2.7	1.3	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table B-13 Weighted Mean Dissolved Oxygen (mg/L) by Region and Week from 2010 Long River/Fall Juvenile Survey

WEEK BEGINNING MONDAY	REGIONS												
	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
15MAR10	10.8	12.7	12.3	11.6	11.9	12.2	12.5	.	.	.	.	.	.
22MAR10	11.0	11.3	11.6	11.2	10.5	10.7	11.3	.	.	.	.	.	.
29MAR10	10.3	11.7	11.6	11.3	12.9	13.3	13.3	.	.	.	.	.	.
05APR10	10.9	12.4	12.3	12.2	12.3	12.1	11.8	12.0	12.0	11.3	11.6	11.3	11.5
12APR10	9.0	9.2	9.5	9.4	10.0	10.4	9.7	9.7	10.5	10.7	10.7	10.9	11.4
19APR10	9.1	9.6	9.6	9.9	9.7	9.9	9.4	9.6	10.1	10.7	10.6	10.8	10.8
26APR10	8.0	8.4	9.8	9.6	9.5	9.4	9.5	9.7	10.4	10.8	10.9	10.4	10.2
03MAY10	8.0	8.5	8.8	8.9	8.8	9.7	10.1	10.4	11.3	12.3	11.5	10.9	9.2
10MAY10	8.0	8.1	8.5	8.3	9.1	8.8	9.2	9.6	9.1	11.2	11.6	10.5	10.2
17MAY10	6.9	7.2	7.8	8.3	8.4	9.5	9.9	9.2	9.0	9.5	10.3	10.4	8.5
24MAY10	6.1	7.0	7.7	7.7	7.1	8.3	9.0	8.6	9.0	9.1	8.8	9.1	9.0
31MAY10	6.8	7.9	8.4	7.7	7.5	8.6	9.2	8.6	8.6	8.6	9.0	9.7	8.4
07JUN10	6.0	6.1	6.4	6.6	6.7	6.5	7.2	7.1	6.5	6.8	6.9	7.4	7.0
14JUN10	5.0	5.8	6.7	6.6	6.5	6.6	6.9	6.3	6.3	6.9	7.6	8.5	8.1
21JUN10	5.9	5.3	5.7	6.7	6.5	6.7	6.7	6.4	7.2	7.3	7.7	9.5	7.7
28JUN10	5.4	5.6	6.2	5.9	5.9	6.0	6.1	6.0	5.8	5.8	6.2	6.7	6.1
05JUL10	6.7	6.9	7.1	7.2	5.9	6.0	6.5	6.6	6.4	6.4	6.6	7.4	7.4
12JUL10	4.0	4.1	4.8	4.7	6.1	5.4	5.7	6.7	.	.	.	.	.
19JUL10	5.5	7.2	7.6	7.3	6.7	8.0	8.1	8.8	8.4	6.1	6.3	6.3	6.4
26JUL10	5.4	6.4	8.1	9.5	7.5	5.9	6.2	6.2	.	.	.	.	.
02AUG10	4.7	5.1	6.2	5.7	5.6	6.0	6.9	6.6	6.4	7.2	7.2	7.5	7.7
09AUG10	3.8	4.0	6.3	6.8	6.6	5.6	6.2	5.9	.	.	.	.	.
16AUG10	4.0	5.1	5.6	5.2	5.0	5.6	6.2	6.1	6.0	6.4	6.5	6.1	7.3
23AUG10	4.6	5.1	5.3	5.2	5.3	6.1	6.5	6.7	.	.	.	.	.
30AUG10	6.5	6.4	6.2	6.3	5.7	6.8	7.6	7.7	7.0	8.0	7.9	8.2	8.5
06SEP10	4.4	4.4	5.9	6.3	6.5	6.7	7.7	7.2	.	.	.	.	.
13SEP10	5.9	6.2	6.8	6.4	5.6	6.0	6.3	6.3	6.0	6.6	6.6	6.4	6.9
20SEP10	5.1	5.4	6.2	6.3	6.0	6.2	7.0	7.1	.	.	.	.	.
27SEP10	4.9	5.4	5.9	6.0	5.8	6.1	6.7	6.6	7.2	7.7	7.8	8.1	8.0
04OCT10	6.3	6.8	7.3	7.5	7.5	7.8	8.0	7.9	.	.	.	.	.
11OCT10	6.0	6.9	7.7	8.3	8.2	8.6	8.6	8.7	8.7	8.9	9.6	9.9	10.4
25OCT10	6.1	6.5	7.7	7.8	8.2	8.8	8.9	8.7	9.3	9.4	9.9	10.1	10.1
08NOV10	8.6	9.3	9.7	10.1	10.4	10.6	10.6	10.5	10.9	11.2	11.4	11.8	12.3
29NOV10	8.3	9.9	10.8	11.0	11.5	11.8	11.9	12.1	12.3	12.3	12.6	12.3	12.3

Note: Dots (.) indicate no sampling.

Table B-14 Average Annual Dissolved Oxygen (mg/l) from Long River/Fall Juvenile Surveys, 1974 to 2010

YEAR	DISSOLVED OXYGEN
1974	7.26
1975	7.69
1976	8.37
1977	7.66
1978	7.86
1979	8.02
1980	7.77
1981	7.82
1982	7.99
1983	8.29
1984	8.64
1985	8.14
1986	8.19
1987	7.79
1988	7.58
1989	7.58
1990	7.77
1991	7.10
1992	7.67
1993	7.59
1994	7.95
1995	7.90
1996	7.95
1997	7.91
1998	7.61
1999	7.56
2000	7.97
2001	7.54
2002	7.51
2003	7.51
2004	7.12
2005	7.04
2006	7.13
2007	7.21
2008	6.81
2009	7.29
2010	6.99

Table B-15 Mean Dissolved Oxygen (mg/L) by Region and Week from 2010 Beach Seine Survey

WEEK BEGINNING MONDAY	REGIONS											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
14JUN10	7.2	6.9	6.6	7.0	6.0	7.1	6.1	7.1	7.1	7.0	8.1	7.0
28JUN10	6.3	6.7	6.6	5.7	5.9	5.9	6.0	5.7	6.1	6.3	7.4	6.7
12JUL10	5.1	5.5	5.1	5.0	5.1	5.0	8.9	9.6	8.2	8.8	9.7	8.5
26JUL10	6.7	7.4	7.1	7.3	6.3	7.2	6.9	7.5	7.1	6.4	7.9	6.1
09AUG10	4.9	6.3	6.2	5.3	5.5	6.3	5.9	6.1	5.5	5.9	6.4	6.0
23AUG10	5.2	5.8	5.4	6.0	6.0	6.3	6.1	6.0	5.7	6.2	7.0	6.4
06SEP10	4.4	6.5	6.5	6.0	6.3	6.8	5.8	5.7	6.0	6.6	7.3	6.5
20SEP10	5.0	6.0	5.7	6.2	6.8	6.9	6.4	6.8	6.7	8.2	8.5	7.9
04OCT10	7.0	7.2	7.1	7.1	7.0	7.6	7.8	8.1	7.9	7.8	8.4	8.3
18OCT10	8.7	8.4	8.4	7.1	7.5	8.1	7.7	8.2	8.6	8.9	9.8	9.4

Table B-16 Average Annual Dissolved Oxygen (mg/l) from Beach Seine Surveys, 1974 to 2010

YEAR	DISSOLVED OXYGEN
1974	8.71
1975	7.82
1976	7.89
1977	7.35
1978	7.29
1979	8.61
1980	8.08
1981	8.34
1982	7.85
1983	7.14
1984	8.42
1985	7.98
1986	8.28
1987	8.63
1988	7.95
1989	7.60
1990	7.90
1991	8.82
1992	8.56
1993	7.39
1994	8.33
1995	7.67
1996	6.93
1997	8.44
1998	7.42
1999	7.62
2000	7.38
2001	7.37
2002	6.76
2003	7.09
2004	7.20
2005	6.44
2006	7.26
2007	6.46
2008	6.86
2009	6.34
2010	6.29

Table B-17 Weighted Mean Percent Oxygen Saturation by Region and Week from 2010 Long River/Fall Juvenile Survey

WEEK BEGINNING MONDAY	REGIONS												
	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
15MAR10	91.1	103.3	99.0	93.4	94.6	95.9	97.4	.	.	.	.	.	.
22MAR10	93.9	94.0	95.9	92.1	86.5	88.6	92.8	.	.	.	.	.	.
29MAR10	88.0	96.8	95.7	92.4	105.2	107.7	106.6	.	.	.	.	.	.
05APR10	97.0	107.3	105.2	103.0	103.0	102.1	100.2	103.0	105.6	100.9	104.5	102.9	104.4
12APR10	88.6	89.5	89.5	87.3	92.2	93.6	90.3	91.4	99.7	100.2	99.3	100.6	104.2
19APR10	87.6	91.6	91.2	93.1	91.4	92.5	89.4	91.1	95.6	100.4	99.8	100.9	100.9
26APR10	80.7	83.1	94.0	93.1	91.3	89.2	90.1	91.8	99.1	103.0	103.4	98.9	97.7
03MAY10	83.6	87.7	89.8	90.9	89.8	95.9	100.7	102.8	112.6	124.6	117.0	109.6	94.4
10MAY10	81.6	82.9	86.8	85.3	92.1	87.4	90.4	94.7	90.8	111.9	114.9	104.2	99.8
17MAY10	73.6	76.8	82.7	87.3	87.9	96.3	100.9	94.0	92.5	98.6	106.1	107.0	88.1
24MAY10	70.6	79.8	87.1	87.4	79.6	88.6	96.2	92.4	97.5	98.4	96.3	100.9	99.8
31MAY10	83.2	94.4	99.1	90.6	86.3	96.3	102.6	95.0	95.8	97.8	103.8	113.2	99.0
07JUN10	73.9	73.5	76.7	77.5	79.5	74.2	81.1	79.8	74.7	79.0	81.0	86.9	82.1
14JUN10	62.0	69.9	80.7	78.6	76.4	75.4	79.3	72.9	72.9	79.5	87.9	97.1	91.7
21JUN10	76.6	67.0	71.7	82.6	80.3	79.0	79.5	76.2	85.3	85.8	90.4	110.7	90.1
28JUN10	70.3	70.9	77.1	72.9	72.2	72.5	73.9	71.9	70.5	69.3	74.8	80.5	73.3
05JUL10	87.5	90.6	92.8	93.3	76.7	74.8	80.7	81.6	79.4	78.4	81.9	91.0	91.3
12JUL10	54.7	54.7	63.6	62.4	80.7	68.9	73.2	84.8	.	.	.	.	.
19JUL10	76.8	99.1	102.0	97.3	88.1	102.6	103.7	112.3	105.4	77.0	79.6	79.8	80.9
26JUL10	74.0	87.3	106.5	126.0	100.1	75.5	78.2	79.1	.	.	.	.	.
02AUG10	64.7	69.1	81.8	75.6	72.8	76.6	87.5	83.5	80.5	89.1	88.1	92.7	95.3
09AUG10	53.0	53.7	83.2	90.0	87.3	72.1	79.2	74.9	.	.	.	.	.
16AUG10	55.8	68.3	74.2	68.5	64.9	70.6	77.5	76.8	74.6	78.9	78.8	74.6	89.5
23AUG10	61.1	66.3	67.9	65.9	66.4	74.6	78.9	80.5	.	.	.	.	.
30AUG10	88.3	83.7	80.7	81.2	71.1	83.4	92.7	93.5	84.2	96.0	92.6	95.6	99.4
06SEP10	59.1	58.3	74.6	78.4	79.7	81.8	92.0	85.7	.	.	.	.	.
13SEP10	75.2	76.0	81.1	76.7	66.7	70.2	73.6	73.0	69.3	74.9	75.1	72.8	78.2
20SEP10	65.7	66.6	74.5	75.2	71.8	73.4	81.1	81.6	.	.	.	.	.
27SEP10	60.4	64.6	69.1	71.1	70.0	71.6	77.2	75.3	81.1	85.8	86.4	89.4	87.7
04OCT10	76.2	78.0	82.3	84.1	83.1	84.1	85.0	83.0	.	.	.	.	.
11OCT10	70.4	76.0	82.2	88.4	86.6	88.4	88.1	87.6	86.6	87.6	93.4	96.8	102.0
25OCT10	69.1	71.2	80.0	80.5	82.5	85.9	87.7	82.6	87.1	88.5	92.6	93.9	94.4
08NOV10	85.3	89.0	91.0	92.6	94.0	94.1	94.0	92.4	93.5	95.0	96.1	98.7	102.9
29NOV10	78.9	88.3	92.8	93.9	95.5	96.7	97.9	98.7	98.1	97.2	99.0	96.4	96.4

Note: Dots (.) indicate no sampling.

Table B-18 Mean Percent Oxygen Saturation by Region and Week from 2010 Beach Seine Survey

WEEK BEGINNING MONDAY	REGIONS											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
14JUN10	88.1	83.1	78.2	84.1	68.5	83.0	71.1	83.5	81.2	80.0	91.4	78.5
28JUN10	83.6	87.4	85.1	72.9	70.1	69.9	71.9	69.5	75.0	76.2	91.1	81.9
12JUL10	67.2	72.4	66.3	62.7	64.9	64.8	112.4	122.3	103.1	110.1	122.5	107.8
26JUL10	90.8	98.1	95.6	96.9	81.1	93.1	88.4	95.1	89.1	80.3	100.7	75.8
09AUG10	66.7	83.6	81.9	68.9	69.9	79.9	73.2	75.8	68.9	72.8	80.8	75.2
23AUG10	65.5	72.6	66.8	71.9	73.8	77.1	73.4	71.1	67.0	72.7	82.0	72.7
06SEP10	57.4	80.1	80.6	73.3	76.8	80.7	69.2	67.5	70.2	78.4	87.2	76.8
20SEP10	60.1	71.4	66.8	75.9	79.2	79.4	73.1	75.2	72.4	90.8	93.3	84.7
04OCT10	75.4	75.1	73.8	73.4	71.5	75.9	78.3	78.3	75.9	74.2	79.2	77.2
18OCT10	79.8	76.0	76.2	66.7	66.9	70.5	66.8	69.8	74.0	75.7	80.8	75.9

Table B-19 Weighted Mean Conductivity (mS/cm @ 25°C) by Region and Week from 2010 Long River/Fall Juvenile Survey

WEEK BEGINNING MONDAY	REGIONS												
	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
15MAR10	18.8	8.8	5.7	3.0	0.3	0.2	0.2	.	.	.	.	.	.
22MAR10	11.0	1.3	0.2	0.2	0.2	0.2	0.2	.	.	.	.	.	.
29MAR10	11.1	1.6	0.2	0.2	0.2	0.2	0.2	.	.	.	.	.	.
05APR10	11.5	1.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
12APR10	27.3	20.4	8.5	3.6	1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
19APR10	18.9	11.5	7.4	3.2	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
26APR10	24.0	15.3	4.9	0.9	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
03MAY10	20.9	11.9	5.9	2.7	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10MAY10	29.0	20.4	13.2	8.9	5.2	2.2	0.7	0.2	0.2	0.2	0.2	0.2	0.2
17MAY10	26.2	18.7	12.4	8.4	5.2	1.1	0.3	0.2	0.2	0.2	0.3	0.2	0.3
24MAY10	31.2	21.0	15.5	9.6	6.4	1.5	0.5	0.2	0.2	0.3	0.2	0.2	0.2
31MAY10	29.0	19.0	11.5	7.4	5.2	1.8	0.3	0.2	0.2	0.2	0.3	0.3	0.2
07JUN10	33.3	25.4	17.8	12.6	8.3	4.5	2.6	0.3	0.2	0.2	0.2	0.2	0.3
14JUN10	25.5	15.9	10.3	6.6	5.0	2.2	0.4	0.2	0.2	0.3	0.3	0.3	0.3
21JUN10	35.3	26.7	15.8	8.9	5.4	1.4	0.6	0.3	0.3	0.3	0.3	0.3	0.2
28JUN10	27.1	16.7	10.5	6.9	4.4	1.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2
05JUL10	35.8	28.8	19.8	12.9	10.8	5.3	2.9	0.5	0.3	0.3	0.3	0.2	0.2
12JUL10	30.2	22.4	16.3	12.3	11.3	8.7	2.9	0.3	.	.	.	.	.
19JUL10	35.5	26.6	17.4	11.2	7.4	4.2	3.0	0.7	0.3	0.3	0.2	0.2	0.2
26JUL10	31.5	23.2	15.9	10.8	8.5	3.7	1.1	0.3	.	.	.	.	.
02AUG10	38.3	27.5	16.6	10.9	7.2	3.2	1.2	0.4	0.2	0.2	0.2	0.2	0.2
09AUG10	35.8	28.5	17.5	12.1	9.8	5.0	1.8	0.3	.	.	.	.	.
16AUG10	36.1	27.9	18.3	11.5	7.5	3.9	2.3	0.6	0.2	0.3	0.3	0.3	0.3
23AUG10	29.1	22.0	15.7	10.1	7.3	2.2	0.3	0.2	.	.	.	.	.
30AUG10	31.0	21.3	13.0	7.0	3.8	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2
06SEP10	31.1	24.9	14.1	9.3	7.7	3.1	0.7	0.3	.	.	.	.	.
13SEP10	33.3	20.8	14.4	9.2	5.3	2.1	1.1	0.4	0.3	0.2	0.2	0.2	0.2
20SEP10	35.5	26.5	18.4	13.9	10.4	6.7	2.3	0.3	.	.	.	.	.
27SEP10	33.5	22.0	15.5	11.6	9.2	4.8	2.4	0.7	0.2	0.2	0.2	0.2	0.2
04OCT10	26.2	12.4	7.0	1.7	0.3	0.2	0.2	0.2	.	.	.	.	.
11OCT10	25.9	10.7	2.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
25OCT10	29.6	22.0	9.4	3.0	1.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
08NOV10	22.1	15.8	11.9	4.1	1.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
29NOV10	22.2	10.0	3.9	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Note: Dots (.) indicate no sampling.

WEEK BEGINNING MONDAY	REGIONS											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
14JUN10	13.7	12.1	9.4	3.8	1.4	0.5	0.3	0.3	0.3	0.3	0.3	0.2
28JUN10	13.0	10.3	7.3	5.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2
12JUL10	23.9	16.1	12.6	10.9	6.5	3.0	0.4	0.3	0.3	0.2	0.2	0.2
26JUL10	18.0	12.3	9.0	7.3	2.5	0.8	0.3	0.2	0.2	0.2	0.2	0.3
09AUG10	22.6	15.0	11.7	8.8	4.0	1.7	0.3	0.2	0.2	0.3	0.3	0.2
23AUG10	15.3	11.0	8.4	3.5	1.4	0.3	0.2	0.2	0.2	0.2	0.3	0.2
06SEP10	18.1	11.3	8.7	6.7	2.0	0.4	0.2	0.2	0.2	0.2	0.2	0.2
20SEP10	19.0	14.5	10.8	9.9	3.7	1.7	0.3	0.3	0.2	0.2	0.2	0.2
04OCT10	9.9	4.6	2.0	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
18OCT10	6.0	4.8	2.4	2.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Appendix C

**Numbers of Fish Collected in the
Long River (1988-2010),
Fall Juvenile (1985-2001), and
Beach Seine (1985-2001) Surveys**

APPENDIX C
LIST OF TABLES

<u>Number</u>	<u>Title</u>
C-1	Total number of fish collected in the Long River Survey, 1988-2010
C-2	Total number of fish collected in the Fall Juvenile Survey, 1985-2010
C-3	Total number of fish collected in the Beach Seine Survey, 1985-2010

Table C-1 Total Number of Fish Collected in the Long River Survey, 1988-2010

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Anadromous																		
Alewife	8,200	624	60	2,727	555	1,275	1,679	293	1,787	171	235	10,231	320	5,284	183	537	641	5,479
Alosa spp.	258,802	423,742	714,369	250,755	465,613	191,558	206,819	122,644	460,957	58,794	128,111	124,710	391,708	180,190	145,643	141,877	126,035	103,618
American shad	51,162	62,755	49,242	25,128	30,345	15,867	31,213	12,120	23,378	6,744	8,887	12,185	11,567	14,048	6,732	15,676	4,711	7,126
Atlantic sturgeon	11	2	5	26	4	.	7	1	1	3	2	.	.	1	10	3	4	.
Atlantic tomcod	25,414	37,397	38,431	40,804	10,558	21,343	20,724	64,680	17,375	71,070	91,679	13,625	10,337	57,412	7,556	20,724	92,099	55,146
Blueback herring	4,992	2,568	1,230	28,397	30,496	3,290	9,315	1,412	18,354	2,358	246	4,367	1,907	1,100	578	8,760	801	1,977
Hickory shad	.	.	.	.	.	.	.	1	4	5	.	.	.	.	.	.	.	.
Rainbow smelt	24,693	767	6,838	2,494	23,035	12,002	59,829	2,354	.	.	4	.	1	1	.	.	.	.
Sea lamprey	.	.	.	.	.	.	.	.	.	1	4	.	.	.	.	.	.	.
Striped bass	61,072	225,498	264,907	359,994	462,382	459,384	674,881	383,781	962,335	272,329	443,766	790,358	1,376,173	1,192,084	151,199	732,410	416,917	387,265
Catadromous																		
American eel	789	917	848	1,372	827	1,505	921	1,388	1,230	527	519	294	468	708	262	476	365	513
Estuarine																		
Atlantic silverside	152	11	67	49	27	19	144	323	52	4	12	29	98	35	35	54	188	50
Banded killifish	5	2,274	1	.	5	3	4	24	2	.	2	2	.	1	.	.	.	13
Fat sleeper	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Fourspine stickleback	6	1	1	2	1	7	5	.	7	1	.	1	.	.	.	.	1	1
Hogchoker	301,192	589,469	13,591	908,378	44,337	87,673	159,013	130,281	51,986	22,814	36,279	23,050	24,894	13,417	28,225	17,313	36,061	24,267
Inland silverside	98	101	.	58	42	209	857	149	166	40	9	69	12	57	97	51	338	169
Lined sea horse	11	.	1	9	.	.	.	2	.	1	3	1	1	.	.	.	.	.
Mummichog	1	.	.	.	.	.	2	6	.	.	.	1	2	.	20	4	2	1
Northern pipefish	1,135	153	102	2,059	137	416	186	277	291	170	120	427	82	186	226	64	130	238
Shortnose sturgeon	3	.	2	3	3	14	8	7	38	2	5	1	4	13	1	4	4	1
Threespine stickleback	2	.	1	.	.	2	.	2	3	.	.	1	.	.	.	.	.	.
White catfish	77	100	87	76	52	25	214	196	205	96	70	172	70	80	56	78	38	79
White perch	138,753	198,953	157,348	147,232	265,656	221,021	172,995	115,842	287,690	69,844	130,785	136,518	267,801	134,744	142,260	140,645	138,513	107,406
Freshwater																		
Black bullhead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.
Black crappie	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Bluegill	.	.	.	5	.	.	1	1	.	.	.	.	3	.	.	1	1	.
Brown bullhead	1	12	33	30	4	7	18	25	31	11	8	3	8	22	1	48	36	10
Brown trout	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Carp	730	651	.	340	731	136	121	147	1,199	867	161	211	533	22	130	597	455	647
Catostomidae	.	.	.	1	1	.	.	.	.	.	.	.	.	4	.	.	.	.
Centrarchidae	30	66	46	40	132	40	125	11	152	26	100	16	137	552	155	50	136	67
Chain pickerel	.	.	.	.	.	.	.	.	2	1	.	1	.	.	1	.	.	.
Channel catfish	.	.	.	1	1	.	.	5	5	4	.	11	8	23	24	118	91	101
Common shiner	.	.	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Creek chub	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Cyprinidae	470	1,736	6,839	1,764	2,576	2,276	2,044	910	2,709	696	1,358	2,705	3,482	3,101	2,623	1,150	1,073	786
Emerald shiner	.	.	.	.	.	.	.	.	.	.	19	2	.	1	.	.	.	.
Fathead minnow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Freshwater drum	.	.	.	.	1	1	.	8	124	1	10	27	8	15	90	55	255	640
Gizzard shad	.	85	5	3	535	123	440	1,065	688	708	885	1,281	2,383	161	9,060	1,292	360	80
Golden shiner	.	1	7	.	.	1	2	11	1	.	1	.	2	1	.	.	.	2
Goldfish	113	217	.	97	22	7	18	.	5	2	2	.	.	.	.	.	.	.
Largemouth bass	.	1	.	2	.	1	1	.	.	.	1	.	.	.	.	.	2	.
Logperch	48	20	.	.	179	.	.	.	.	.	3	.	.	.	.	3	4	.

Table C-1 (Continued)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Freshwater (cont.)																		
Northern hog sucker	19	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Percidae	2	15	.	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pumpkinseed	132	1	.	2	.	4	1	.	.	1	.	1	.	.	.	2	.	.
Rock bass	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Satinfin shiner	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Silvery minnow	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Slimy sculpin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
Smallmouth bass	.	3	1	.	23	.	1	.	.	.	2	.	1	3	.	.	.	2
Spotfin shiner	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spottail shiner	60	98	55	83	45	33	62	94	156	89	53	45	62	87	9	42	23	29
Tesselated darter	2,898	2,805	2,290	1,566	2,836	1,936	1,714	2,205	1,550	1,493	2,834	2,726	2,822	1,884	1,455	1,990	2,642	718
Walleye	.	26	.	1	2	12	32	.	23	22	29	.	80	5	5	132	31	279
White crappie	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.
White sucker	.	10	44	.	1	.	.	1	13	5	24	6	11	3	3	2	3	2
Yellow bullhead	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.
Yellow perch	152	325	610	157	369	225	333	69	764	141	307	127	1,062	228	476	1,096	1,145	801
Marine																		
American sand lance	48	8	2	4	4	.	1	42	6	.	7	2	11	119	2	49	47	20
Atlantic cod	68	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	3
Atlantic croaker	.	.	.	.	157	1	5	409	3	.	3,405	3,781	6,512	1,371	2,574	1,260	11,094	544
Atlantic herring	522	178	76	1,177	842	1,151	37	3,986	5,485	2,614	3,809	4,585	27	1,984	18	887	325	279
Atlantic mackerel	4	.	.	1	2	.	.	.	1,968	1,076	9	141	6	1	603	32	4	.
Atlantic menhaden	6	12	671	1,301	404	268	13,009	2,678	3,036	35,979	18,041	68,998	4,887	29,431	9,644	10,873	7,420	78,741
Atlantic needlefish	.	.	3	.	.	1	.	1	.	.	.	.	.	.	.	.	.	20
Atlantic seasnail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Bay anchovy	2,852,331	444,854	900,354	3,831,982	1,341,076	1,849,143	3,051,491	1,271,339	1,337,747	795,707	698,247	339,031	215,316	146,897	671,428	363,737	1,749,221	790,847
Black sea bass	.	.	.	.	.	.	4	.	.	1	3	6	.	.	.	.	.	.
Blackcheek tonguefish	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.
Blenniidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
Bluefish	85	54	165	151	147	78	73	61	43	35	21	71	46	62	15	26	28	34
Bothidae	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Butterfish	143	18	18	27	46	38	108	11	12	29	22	273	6	120	7	13	240	24
Conger eel	132	72	54	29	124	195	175	45	117	14	10	1	71	22	29	42	3	13
Cottidae	128	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Creville jack	1	4	.	1	.	.	.	.	1	.	2	1	.	.	.	.	.	.
Cunner	11,129	1,429	.	1,955	4,221	996	2,176	3,790	4,932	3,106	1,884	4,733	1,739	6,210	3,658	3,325	5,293	6,416
Cusk	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Feather blenny	.	.	.	.	.	.	.	.	.	.	1	23	3	.	5	.	.	.
Fourbeard rockling	108	209	2	404	691	4	4,157	6,487	571	7,586	3,116	391	184	2,319	2,205	389	1,360	5,072
Fourspot flounder	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
Gadidae	6	.	.	.	.	10	.	.	1	.	.	.	.	.	.	.	.	2
Gobiidae	9,007	5,593	22,569	78,349	26,599	3,794	3,411	2,683	1,108	936	3,411	28,420	16,276	15,046	22,722	7,756	20,143	23,597
Goosefish	.	.	.	8	12	.	.	.	1	.	.	.	.	.	.	.	.	.
Grubby	605	387	167	521	248	66	99	2,516	317	1,768	1,525	575	161	898	702	122	1,207	904
Gulf stream flounder	.	.	.	.	.	.	.	.	.	3	1	1	.	.	2	.	1	.
Harvestfish	.	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	.
Inshore lizardfish	8	8	.	3	14	1	2	1	.	4	36	4	2	8	.	.	.	.
King mackerel	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Labridae	.	.	.	48	.	.	.	.	1	.	.	.	.	.	.	1	.	.
Longhorn sculpin	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
Lookdown	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Moonfish	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Myoxocephalus spp.	.	.	.	.	.	.	.	.	.	1	.	.	.	2	.	.	.	.
Naked goby	279	44	1,619	8	73	9	1	3	6	.	5	369	107	6	169	72	8	19

Table C-1 (Continued)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marine (cont.)																		
Northern kingfish	.	118	.	10	10	1	39	1	.	.	2	16	.	.	1	.	.	.
Northern puffer	1	5	32	279	.	2	.	4	14	2	.	11	1	3	.	.	4	2
Northern searobin	40	2	17	19	1	4	27	5	48	1	14	37	.	23	1	4	.	1
Northern stargazer	129	.	.	.	.	.	53	.	.	.	1	4	.	2	1	.	.	.
Oyster toadfish	.	1	.	.	.	.	.	.	.	.	1	1	1	.	.	1	.	7
Phycidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	35
Pinfish	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Pleuronectidae	.	.	.	144	.	.	.	.	.	16	2	3	.	.	.	.	.	.
Pleuronectiformes	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Pollack	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Radiated shanny	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Red hake	3	1	1	.	1	1	.	.	9	13	19	15	2	1	.	.	.	1
Rock gunnel	9	2	1	5	6	.	.	35	32	54	28	17	13	49	7	44	72	71
Rough silverside	110	19	.	41	44	30	447	218	37	33	4	26	66	12	22	7	4	50
Sciaenidae	.	3	.	.	.	2	65	.	.	.	.	.	.	.	.	.	.	1
Scup	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Seaboard goby	1	.	.	4	19	1	.	1	.	19	4	14	77	10	234	116	2	19
Searobin	8	.	312	26	.	16	.	.	.	8	1	399	.	4	65	70	33	697
Sharptail goby	.	.	1	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
Silver anchovy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Silver hake	1	3	.	.	.	.	.	.	2	.	.	1	.	2	.	.	1	.
Silver perch	.	.	.	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.
Smallmouth flounder	38	.	1	91	71	32	175	22	7	18	40	37	47	6	6	20	61	4
Spanish mackerel	.	.	.	20	.	2	1	.	.	.	.	.	.	.	.	.	.	.
Speckled worm eel	1	.	.	.	.	.	.	.	1	.	.	.	1	.	2	.	.	.
Spot	.	.	2	.	.	20	9	.	8	.	.	.	11	.	3	.	.	.
Spotted hake	62	1	1	19	40	13	6	146	186	76	49	52	38	90	35	193	111	40
Striped anchovy	.	.	.	.	.	.	.	5	35	6	3	5	.	.	.	.	65	.
Striped burrfish	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped cuskeel	2	1	.	4	3	1	.	1	3	18	8	9	19	8	.	3	3	4
Striped killifish	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped searobin	43	4	.	234	5	41	671	3	4	112	45	85	15	1	39	21	27	5
Summer flounder	.	24	1	39	18	.	7	23	11	5	8	8	26	26	10	8	22	4
Tautog	1,205	3,432	.	969	488	241	439	3,171	3,396	3,009	490	2,908	2,028	6,129	4,192	4,483	8,668	9,966
Tetraodontidae	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Weakfish	1,586	2,602	122,082	6,821	1,206	1,621	2,804	623	59,707	13,345	145,785	224,618	50,800	83,380	51,266	57,429	94,647	108,943
Windowpane	8,866	5,162	49	1,500	14,953	166,221	6,917	17,602	7,074	13,902	1,635	3,210	1,816	13,095	1,563	4,134	2,192	2,557
Winter flounder	900	178	64	340	794	188	362	4,754	774	4,109	2,325	3,996	9,831	1,905	4,353	10,306	9,580	1,921
Witch flounder	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Yellowtail flounder	.	.	.	.	2	.	1	162	2	6	13	7	1	5	2	.	.	6
Unidentified																		
Acipenseridae	4	6	18	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Atherinidae	.	1	.	259	.	16	45	19	26	44	1	4	1	.	.	1	.	.
Cyprinodontidae	.	8	.	.	.	5	.	.	.	5	.	.	.	.	1	.	.	.
Fundulus spp.	.	2	4	3	1	111	4	3	2	.	1	62	.	1	.	1	1	1
Gasterosteidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Menidia spp.	12	7	193	.	2	.	1	1	.	52	11	1	.	.	1	.	.	.
Morone unidentified	2,180	13,473	955	17,620	7,246	12,406	8,350	5,416	29,225	3,094	31,732	54,420	58,042	37,644	5,768	16,709	9,721	2,233
Petromyzontidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Unidentifiable	49,244	7,031	36,103	113,576	18,496	9,938	32,546	1,131	7,378	480	1,125	1,240	1,146	2,979	448	1,914	4,528	1,320

Table C-1 (Continued)

	2006	2007	2008	2009	2010
Anadromous					
Alewife	153	2,474	5,054	183	3,108
Alosa spp.	75,365	155,009	73,937	77,940	84,981
American shad	800	995	1,115	987	593
Atlantic sturgeon	1	4	3	3	3
Atlantic tomcod	9,049	9,176	27,107	23,395	32,819
Blueback herring	177	2,366	2,881	195	4,471
Hickory shad	.	.	.	.	.
Rainbow smelt	1	3	.	1	.
Sea lamprey	1	1	2	.	.
Striped bass	109,061	532,870	176,428	511,009	497,462
Catadromous					
American eel	276	449	301	533	480
Estuarine					
Atlantic silverside	157	454	239	292	228
Banded killifish	.	.	2	7	6
Fat sleeper	.	.	.	.	.
Fourspine stickleback	.	.	.	.	1
Hogchoker	44,711	96,691	86,813	19,204	62,847
Inland silverside	162	195	168	171	218
Lined sea horse	.	.	2	.	1
Mummichog	1	.	3	2	3
Northern pipefish	36	246	135	130	194
Shortnose sturgeon	5	11	2	.	2
Threespine stickleback	.	.	.	.	.
White catfish	147	72	43	98	92
White perch	95,979	92,203	95,325	88,826	124,046
Freshwater					
Black bullhead	.	.	.	.	.
Black crappie	.	.	.	.	2
Bluegill	.	.	3	.	.
Brown bullhead	32	4	28	36	42
Brown trout	.	.	.	.	.
Carp	1,219	735	629	359	847
Catostomidae	.	.	.	.	.
Centrarchidae	151	40	183	56	93
Chain pickerel	.	.	.	.	.
Channel catfish	137	.	148	185	184
Common shiner	.	.	.	.	.
Creek chub	.	.	.	.	.
Cyprinidae	1,622	979	1,644	1,102	1,431
Emerald shiner	.	.	.	.	.
Fathead minnow	.	.	.	.	.
Freshwater drum	590	675	760	362	1,878
Gizzard shad	1,230	417	138	307	175
Golden shiner	7	.	1	.	.
Goldfish	.	.	.	.	.
Largemouth bass	.	16	1	.	1
Logperch	1	1	.	.	.
Northern hog sucker	.	.	.	.	.
Percidae	.	.	.	.	.

Table C-1 (Continued)

	2006	2007	2008	2009	2010
Freshwater (cont.)					
Pumpkinseed	1	1	.	1	1
Rock bass	.	.	.	.	.
Satinfin shiner	.	.	.	.	.
Silvery minnow	.	.	.	.	.
Slimy sculpin	.	.	.	.	.
Smallmouth bass	3	.	.	2	.
Spotfin shiner	7	.	.	.	.
Spottail shiner	33	89	58	62	34
Tesselated darter	1,484	1,109	1,730	3,029	842
Walleye	105	54	12	5	20
White crappie	.	.	.	.	.
White sucker	12	2	3	6	2
Yellow bullhead	.	.	.	.	.
Yellow perch	538	243	487	218	484
Marine					
American sand lance	8	12	8	2	68
Atlantic cod	.	.	1	10	.
Atlantic croaker	2,000	378	273	1,075	556
Atlantic herring	48	2	148	88	706
Atlantic mackerel	.	21	.	464	.
Atlantic menhaden	10,562	22,125	13,606	13,108	15,631
Atlantic needlefish	.	.	2	1	.
Atlantic seasnail	.	.	.	.	.
Bay anchovy	374,336	1,036,876	1,955,290	856,886	1,148,252
Black sea bass	.	.	.	.	.
Blackcheek tonguefish	.	.	.	.	.
Blenniidae	.	.	.	1	.
Bluefish	18	28	23	18	22
Bothidae	.	.	.	.	.
Butterfish	37	20	165	133	10
Conger eel	13	55	36	15	27
Cottidae	.	.	.	.	.
Crevalle jack	.	1	1	.	.
Cunner	1,363	8,882	14,716	7,173	5,601
Cusk	.	1	.	.	.
Feather blenny	.	.	17	.	.
Fourbeard rockling	2,189	2,222	2,191	2,063	867
Fourspot flounder	.	.	2	.	.
Gadidae	.	.	.	.	.
Gobiidae	14,995	32,595	10,882	22,108	21,434
Goosefish	.	.	.	.	.
Grubby	620	638	788	3,647	520
Gulf stream flounder	.	.	.	.	.
Harvestfish	.	.	.	1	.
Inshore lizardfish	.	.	1	.	2
King mackerel	.	.	.	.	.
Labridae	.	192	2	.	.
Longhorn sculpin	.	.	.	.	.
Lookdown	.	.	.	.	.
Moonfish	.	.	1	1	.
Myoxocephalus spp.	.	.	.	.	.
Naked goby	94	41	5	34	99
Northern kingfish	.	.	.	32	.
Northern puffer	.	4	16	2	.

Table C-1 (Continued)

	2006	2007	2008	2009	2010
Marine (cont.)					
Northern searobin	1	33	5	1	.
Northern stargazer	1	.	.	.	.
Oyster toadfish	.	.	3	3	.
Phycidae	2	.	16	1	.
Pinfish	.	.	.	.	.
Pleuronectidae	.	.	.	.	.
Pleuronectiformes	.	.	.	.	.
Pollack	.	.	.	.	.
Radiated shanny	.	.	.	.	.
Red hake	1	.	.	1	1
Rock gunnel	19	40	37	181	26
Rough silverside	55	144	14	123	72
Sciaenidae	.	.	.	.	.
Scup	.	.	.	.	.
Seaboard goby	235	68	35	27	45
Searobin	20	1,028	971	280	17,988
Sharptail goby	.	.	.	.	.
Silver anchovy	.	.	.	.	1
Silver hake	.	.	.	.	.
Silver perch	.	.	.	1	.
Smallmouth flounder	29	3	13	16	1
Spanish mackerel	.	.	.	.	.
Speckled worm eel	.	.	.	.	.
Spot	5	.	3	.	.
Spotted hake	144	18	63	99	185
Striped anchovy	.	4	12	.	19
Striped burrfish	1	.	.	.	.
Striped cuskeel	.	3	1	1	6
Striped killifish	.	.	.	.	.
Striped searobin	16	9	24	72	2
Summer flounder	18	12	30	154	39
Tautog	1,177	5,281	10,313	12,889	5,560
Tetraodontidae	.	.	.	.	.
Weakfish	17,960	52,305	59,310	33,795	23,342
Windowpane	978	2,825	2,389	2,883	1,625
Winter flounder	1,312	4,015	1,155	4,744	406
Witch flounder	.	.	.	1	.
Yellowtail flounder	.	.	2	1	5
Unidentified					
Acipenseridae	.	.	.	.	.
Atherinidae	.	.	9	.	.
Cyprinodontidae	.	1	.	3	.
Fundulus spp.	.	.	6	1	.
Gasterosteidae	.	.	.	.	.
Menidia spp.	3	2	2	1	.
Morone unidentified	3,677	3,299	1,671	1,461	5,450
Petromyzontidae	1	.	1	.	.
Unidentifiable	101	550	381	34	1,013

Sampling Statistics for Long River Survey, 1988-2010

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Start Date	18-Apr	17-Apr	19-Apr	15-Apr	13-Apr	12-Apr	11-Apr	6-Mar	12-Mar	11-Mar
End Date	25-Aug	23-Aug	16-Aug	17-Oct	14-Oct	5-Oct	5-Oct	12-Oct	9-Oct	9-Oct
Volume Sampled (m3)	524,777	519,252	419,294	537,825	632,978	596,043	579,959	649,908	675,698	671,661
Sample Size	1,663	1,641	1,561	1,991	1,986	1,987	1,986	2,431	2,362	2,365
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Start Date	2-Mar	23-Mar	7-Mar	15-Mar	4-Mar	19-Mar	2-Mar	16-Mar	8-Mar	14-Mar
End Date	7-Oct	6-Oct	5-Oct	9-Oct	9-Oct	9-Oct	7-Oct	6-Oct	5-Oct	3-Oct
Volume Sampled (m3)	810,440	774,435	857,373	711,723	716,977	704,211	706,106	654,297	689,180	691,098
Sample Size	2,435	2,329	2,435	2,300	2,438	2,433	2,439	2,433	2,436	2,437
	2008	2009	2010							
Start Date	4-Mar	16-Mar	16-Mar							
End Date	9-Oct	7-Oct	7-Oct							
Volume Sampled (m3)	645,337	628,594	626,562							
Sample Size	2,439	2,442	2,440							

Table C-2 Total Number of Fish Collected in the Fall Juvenile Survey, 1985-2010

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Anadromous																					
Alewife	1,142	554	702	379	327	459	994	790	730	719	519	830	868	97	3,925	746	2,118	379	1,077	307	1,980
Alosa spp.	3,341	282	2,591	4,193	4,331	3,543	1,276	10,650	1,905	1,725	2,895	18,007	6,547	82	7,681	2,688	2,562	2,356	4,262	1,688	3,500
American shad	1,717	2,166	776	1,483	3,646	1,323	1,291	3,406	961	2,095	831	2,964	1,105	310	1,407	808	1,369	598	433	400	294
Atlantic sturgeon	96	184	149	117	63	6	10	11	7	15	15	8	40	30	18	5	23	37	39	22	12
Atlantic tomcod	5,083	10,046	7,908	8,210	14,060	1,105	4,914	7,299	3,664	1,679	3,649	4,632	10,645	1,928	1,798	6,528	5,910	581	1,456	4,802	2,536
Blueback herring	41,919	6,525	18,596	37,957	22,112	15,982	55,299	38,090	22,442	18,790	14,006	20,863	13,999	566	20,315	6,412	13,731	6,205	10,727	3,223	15,677
Hickory shad	.	3	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
Rainbow smelt	126	389	429	576	34	216	256	2,549	757	363	136	.	.	1	.	.	.	.	.	.	.
Sea lamprey	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped bass	888	2,348	11,633	18,679	8,472	3,624	4,672	3,773	8,333	8,719	10,327	6,293	4,461	1,367	8,989	3,683	3,654	2,516	8,553	1,893	5,107
Catadromous																					
American eel	1,872	2,906	2,254	2,076	1,444	342	984	1,392	1,406	1,647	1,627	1,434	722	763	738	792	566	244	310	360	376
Estuarine																					
Atlantic silverside	.	2	.	3	1	2	18	2	29	25	33	42	19	20	19	82	13	33	10	62	22
Banded killifish	78	12	3	3	3	.	2	.	6	21	24	.	.	1	1	.	1	2	.	.	3
Fat sleeper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.
Fourspine stickleback	1	9	.	1	1	.	.	.	2	.	1	1	.	1	.	.	.	.	2	1	.
Hogchoker	89,948	108,036	89,042	74,672	73,613	22,760	42,916	62,358	43,064	15,581	23,823	18,422	4,861	3,964	5,696	7,452	7,243	11,320	19,446	20,370	16,413
Inland silverside	.	.	.	1	.	2	.	.	2	.	4	.	.	.	1	.	.	.	.	.	.
Lined sea horse	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.
Mummichog	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Northern pipefish	40	13	22	25	12	4	16	14	65	15	24	3	27	10	9	9	12	15	3	17	17
Shortnose sturgeon	16	8	11	20	12	2	18	76	82	50	36	48	26	30	52	50	47	27	29	29	30
White catfish	721	677	775	806	740	352	547	172	939	1,363	1,077	967	235	840	494	337	371	155	228	147	522
White mullet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
White perch	19,721	31,771	27,008	25,760	20,106	5,381	11,019	13,832	8,341	9,007	10,272	8,569	3,655	3,474	8,955	6,225	5,775	4,715	11,131	5,426	8,631
Freshwater																					
Black bullhead	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Black crappie	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Bluegill	.	.	1	.	1	.	.	3	2	.	1	1	2	.	.	.	.	1	1	.	.
Brook trout	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Brown bullhead	37	127	109	171	172	17	125	177	92	278	211	251	97	167	524	549	460	501	600	476	611
Carp	4	13	5	4	10	1	6	7	7	3	6	2	5	.	11	2	6	5	2	1	6
Central mudminnow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Centrarchidae	1	4	1	5	3	.	.	.	.	4	.	.	4	2	1	1	.	8	7	2	2
Channel catfish	.	5	10	9	12	1	4	7	38	187	95	127	66	149	331	378	507	674	1,497	995	2,974
Cyprinidae	48	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Emerald shiner	.	.	.	.	1	.	.	.	.	.	.	.	.	11	2	1	.	.	.	.	.
Fall fish	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Fathead minnow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Freshwater drum	.	.	.	.	3	.	.	1	2	1	3	1	.	2	1	5	3	4	25	.	37

Table C-2 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Freshwater																					
(cont.)																					
Gizzard shad	4	6	8	2	8	1	.	.	3	1	5	.	15	3	25	4	35	33	4	26	11
Golden shiner	.	1	.	.	.	.	.	29	.	.	.	2	3	.	.	4	.	5	1	1	.
Goldfish	.	.	.	.	1	.	.	1	.	1	.	.	.	.	1	1	3	2	.	1	11
Largemouth bass	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	1
Logperch	.	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	18	.	.
Margined madtom	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Pumpkinseed	57	2	13	5	1	6	12	2	16	12	49	20	9	1	10	2	1	5	4	7	6
Redbreast sunfish	1	.	.	1	2	.	.	.	.	1	3	.	.	.	.	43	.	.	.	.	.
Rock bass	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Satinfin shiner	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Silvery minnow	.	1	.	.	.	.	.	.	.	.	.	56	.	.	.	.	.	.	.	.	.
Smallmouth bass	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spottail shiner	244	685	333	369	102	43	404	259	351	248	204	382	83	105	175	110	114	48	85	382	156
Tessellated darter	89	747	197	370	120	10	187	225	306	684	228	148	100	96	131	25	26	20	153	81	41
Walleye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
White sucker	1	8	4	2	1	.	.	.	.	1	.	1	2	1	6	1	.	4	1	9	2
Yellow bullhead	.	.	.	.	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow perch	.	.	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	8	2	.	6
Marine																					
Atlantic croaker	1	4	7	.	1	4	.	4	18	97	336	10	183	5,028	4,015	2,280	3,894	1,479	20	8,838	8,697
Atlantic cutlassfish	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
Atlantic herring	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
Atlantic menhaden	51	139	67	9	38	129	478	122	13	78	26	260	19	101	12,685	2,535	337	746	445	566	139
Atlantic needlefish	.	.	.	1	.	1	1	.	.	.	3	.	1	3	2	.	.	.	1	.	3
Bay anchovy	27,902	20,988	39,348	59,244	41,475	16,465	44,815	37,264	53,437	54,615	93,826	26,168	71,630	51,368	58,298	15,533	27,794	47,096	37,511	43,166	38,534
Black sea bass	1	.	.	1	.	.	.	.	.	2	.	.	9	.	.	.	.	.	.	.	.
Bluefish	60	51	107	116	62	82	58	82	53	37	42	39	55	27	165	53	60	56	30	31	18
Butterfish	61	106	48	110	81	43	35	141	121	109	21	18	90	177	74	9	25	26	16	106	66
Cobia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Conger eel	.	.	.	14	.	.	.	.	.	.	2	2	.	1	1	1	.	.	.	.	.
Crevalle jack	2	1	1	10	8	7	3	1	10	1	4	1	.	9	.	.	2	.	1	1	1
Cunner	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	1
Feather blenny	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Fourspot flounder	2	2	.	1	.	1	.	.	.	25	.	.	4	.	.	.	1	.	.	.	.
Gobiidae	.	.	.	4	.	.	.	38	.	2	.	.	3	4	12	2	2	8	4	3	1
Goosefish	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Gray snapper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Grubby	.	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.
Inshore lizardfish	1	.	.	1	4	.	1	4	8	1	.	.	.	.	.	71	1	.	.	.	.
Longhorn sculpin	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
Lookdown	1	.	1	1	1	.	.	.	.	1	.	.	1	1	3	2	.	.	1	.	1
Moonfish	.	1	2	.	5	.	.	1	.	.	.	.	.	4	1	3	9	5	3	9	.
Naked goby	3	6	47	9	21	1	7	30	3	1	26	.	8	4	7	7	33	5	46	8	26
Northern kingfish	9	6	.	20	3	3	10	2	4	16	7	.	2	.	3	.	.	.	.	1	1
Northern puffer	9	1	5	3	2	.	36	3	1	.	3	.	.	1	.	.	.	3	.	2	2
Northern searobin	.	2	7	21	3	16	7	12	53	305	6	5	16	.	.	.	6	.	.	1	24
Northern stargazer	1	.	.	20	.	4	3	10	2	7	.	.	6	.	2	1	3	5	1	1	2

Table C-2 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marine (cont.)																					
Oyster toadfish	.	.	.	.	.	.	.	1	.	.	.	4	.	2	3	2	1	1	1	11	13
Red hake	1	.	.	.	.	1	.	.	.	.	.	.	2	.	.	1	.	.	.	.	38
Rock gunnel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
Rough silverside	1	.	3	1	.	.	.	3	2	.	4	.	4	1	1	2	.	.	.	.	1
Scup	1	.	.	.	.	.	3	.	.	.	8	.	.	.	.	2	5	1	8	2	2
Seaboard goby	.	.	.	12	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Searobin	.	.	.	.	.	.	.	.	.	.	.	.	339	.	69	8	2	.	12	7	.
Silver hake	.	3	.	.	.	1	1	.	.	.	.	.	5	.	1	3	.	1	.	1	1
Silver perch	.	.	.	13	.	.	1	.	7	11	36	1	1	.	.	.	.	.	.	.	1
Smallmouth flounder	.	.	.	8	.	.	.	1	1	9	3	.	.	1	1	.	.	2	.	.	.
Spanish mackerel	.	.	.	.	.	1	17	.	7	.	.	.	.	.	.	.	.	.	.	1	.
Spot	5	14	1	1,257	.	.	2	1.	4	.	.	30	.	.	.	1	1	.	.	.	.
Spotfin butterflyfish	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Spotted hake	2	1	.	.	.	.	3	32	7	3	3	224	54	9	7	15	106	12	34	20	9
Striped anchovy	.	.	.	.	.	.	.	1	.	.	2	.	.	.	.	.	.	1	1	.	.
Striped burrfish	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped cuskeel	3	.	.	1	.	.	1	1	.	.	.	.	.	1	.	1	.	.	.	.	12
Striped searobin	321	148	10	101	25	26	310	54	96	648	15	.	416	294	1,498	8	123	189	236	121	37
Summer flounder	232	447	58	7	42	35	102	56	39	32	108	41	4	2	23	4	6	2	3	9	8
Tautog	.	.	.	2	.	3	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.
Tetraodontidae	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Weakfish	2,214	1,482	749	3,777	2,842	770	5,878	756	2,332	2,416	3,773	2,202	2,713	2,039	7,412	7,147	3,567	3,806	1,952	686	4,083
Windowpane	1	1	5	17	.	5	9	32	1	5	19	2	12	5	46	4	7	3	4	1	2
Winter flounder	226	196	92	39	23	13	28	36	51	21	62	32	56	12	10	8	3	2	4	3	20
Unidentified																					
Morone unidentified	1	.	.	.	3	2	.	.	.	.	.	.	2	3	.	1	.	.	35	.	.
Unidentifiable	.	.	.	.	.	.	.	.	6	.	18	1	68	.	1	.	.	.	.	.	.

Table C-2 (Continued)

	2006	2007	2008	2009	2010
Anadromous					
Alewife	236	587	1,031	144	1,719
Alosa spp.	755	3,030	1,529	220	266
American shad	77	44	69	70	85
Atlantic sturgeon	14	35	24	30	19
Atlantic tomcod	1,007	1,121	1,290	2,495	430
Blueback herring	943	5,682	11,803	437	14,025
Hickory shad	.	.	1	.	.
Rainbow smelt	.	.	.	.	.
Sea lamprey	.	.	.	.	.
Striped bass	1,795	2,001	1,456	1,068	3,272
Catadromous					
American eel	448	163	241	350	716
Estuarine					
Atlantic silverside	29	50	14	3	41
Banded killifish	12	1	1	.	2
Fat sleeper	.	.	.	.	.
Fourspine stickleback	.	.	.	1	1
Hogchoker	15,079	12,945	36,104	42,149	40,758
Inland silverside	.	.	.	.	.
Lined sea horse	.	.	.	.	.
Mummichog	.	.	.	.	2
Northern pipefish	16	19	17	59	19
Shortnose sturgeon	28	20	17	12	30
White catfish	412	198	170	174	175
White mullet	5	.	.	.	.
White perch	7,151	3,904	8,551	9,631	15,039
Freshwater					
Black bullhead	.	.	.	.	.
Black crappie	.	.	.	.	.
Bluegill	1	.	2	.	4
Brook trout	.	.	.	.	.
Brown bullhead	505	191	278	742	835
Carp	2	2	3	6	7
Central mudminnow	.	.	.	.	.
Centrarchidae	.	.	2	2	.
Channel catfish	2,279	979	1,868	1,550	2,072
Cyprinidae	.	.	.	.	.
Emerald shiner	.	.	1	.	.
Fall fish	.	.	1	.	.
Fathead minnow	18	.	.	.	.
Freshwater drum	37	2	.	3	2
Gizzard shad	3	5	24	1	74
Golden shiner	2	.	.	.	1

Table C-2 (Continued)

	2006	2007	2008	2009	2010
Freshwater					
(cont.)					
Goldfish	.	1	.	3	.
Grass carp	.	.	.	1	.
Largemouth bass	1	.	1	.	.
Logperch	.	187	.	.	.
Longear sunfish	.	1	.	.	.
Margined madtom	.	.	.	.	.
Northern hog sucker	.	.	1	.	.
Pumpkinseed	5	.	21	1	12
Redbreast sunfish	.	1	.	.	.
Rock bass	.	.	6	1	.
Satinfin shiner	.	.	.	.	.
Silvery minnow	.	.	.	.	.
Smallmouth bass	.	.	.	.	.
Spottail shiner	212	14	157	310	330
Tesselated darter	41	18	137	105	82
Walleye	.	.	.	.	.
White sucker	2	1	4	6	7
Yellow bullhead	.	.	.	.	.
Yellow perch	.	.	1	2	5
Marine					
Atlantic croaker	5,127	256	372	1,029	1,642
Atlantic cutlassfish	2	.	.	.	.
Atlantic herring	.	.	.	.	.
Atlantic menhaden	1,288	363	39	113	19
Atlantic needlefish	.	5	.	.	1
Bay anchovy	28,864	61,499	42,665	15,740	39,410
Black sea bass	.	.	.	.	.
Bluefish	30	13	32	18	27
Butterfish	58	12	157	31	39
Cobia	.	.	.	.	.
Conger eel	.	.	.	.	2
Crevale jack	3	4	8	2	4
Cunner	.	.	.	.	.
Feather blenny	.	.	.	.	.
Fourspot flounder	.	.	2	2	.
Gobiidae	10	56	.	1	.
Goosefish	.	.	.	.	.
Gray snapper	.	.	.	.	.
Grubby	.	.	.	.	1
Inshore lizardfish	.	.	.	.	.
Longhorn sculpin	.	.	.	.	.
Lookdown	1	.	1	.	.
Moonfish	6	21	71	10	22
Naked goby	13	.	10	11	19
Northern kingfish	2	7	11	2	25
Northern puffer	.	1	.	.	2
Northern searobin	.	.	.	.	.

Table C-2 (Continued)

	2006	2007	2008	2009	2010
Marine (cont.)					
Northern stargazer	.	.	.	3	.
Oyster toadfish	4	.	4	13	41
Red hake	1	.	3	25	1
Rock gunnel	.	.	.	.	.
Rough silverside	.	1	20	2	45
Scup	.	2	.	.	.
Seaboard goby	1	.	.	.	.
Searobin	.	12	1	.	.
Sciaenidae	.	4	.	.	.
Silver hake	3	1	20	12	56
Silver perch	.	.	.	17	1
Smallmouth flounder	.	.	.	.	.
Spanish mackerel	.	.	.	.	.
Spot	.	.	1	.	.
Spotfin butterflyfish	.	.	.	1	.
Spotted hake	71	15	228	127	110
Striped anchovy	.	2	.	.	.
Striped burrfish	.	.	.	.	.
Striped cuskeel	1	.	1	.	5
Striped searobin	78	225	111	108	29
Summer flounder	13	9	20	55	54
Tautog	.	.	.	.	.
Tetraodontidae	.	.	.	.	.
Weakfish	452	1,410	1,126	371	98
Windowpane	2	4	1	2	1
Winter flounder	4	4	25	3	22
Unidentified					
Morone unidentified	37	1	.	.	.
Unidentifiable	.	.	.	.	.

1. *Journal of Management Studies*, 1997, 34, 1, 1-14.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Start Date	22-Jul	21-Jul	13-Jul	18-Jul	17-Jul	9-Jul	15-Jul	13-Jul	19-Jul	18-Jul	10-Jul	10-Jul
End Date	14-Nov	2-Dec	5-Nov	28-Oct	26-Oct	17-Oct	25-Oct	23-Oct	29-Oct	27-Oct	20-Oct	17-Oct
Volume Sampled (m3)	1,886,745	2,298,278	2,035,357	1,826,628	1,590,047	1,252,910	1,707,237	1,865,365	2,010,162	2,018,414	1,782,105	1,824,729
Sample Size	1,802	2,098	1,958	1,680	1,679	1,680	1,678	1,680	1,680	1,681	1,680	1,669

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Start Date	7-Jul	6-Jul	6-Jul	5-Jul	10-Jul	8-Jul	7-Jul	6-Jul	5-Jul	5-Jul	1-Jul	7-Jul
End Date	23-Nov	4-Dec	3-Dec	30-Nov	30-Nov	6-Dec	5-Dec	3-Dec	2-Dec	1-Dec	30-Nov	5-Dec
Volume Sampled (m3)	1,995,403	2,214,609	2,159,879	2,174,794	2,097,800	2,105,181	1,891,049	2,106,764	2,063,565	2,014,940	1,968,928	2,073,021
Sample Size	2,015	2,130	2,085	2,113	2,084	2,128	2,131	2,128	2,128	2,129	2,130	2,130

	2009	2010
Start Date	6-Jul	6-Jul
End Date	4-Dec	3-Dec
Volume Sampled (m3)	1,928,891	2,027,924
Sample Size	2,130	2,130

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Anadromous																					
Alewife	1,272	818	515	675	439	925	2,323	870	638	1,738	1,051	437	1,664	423	3,636	574	1,868	379	2,129	1,087	4,143
Alosa spp.	8,272	2,529	5,685	21,022	8,346	10,853	38,966	3,490	5,237	14,468	10,653	47,511	7,889	1,773	35,377	3,993	14,296	2,141	13,250	4,151	13,707
American shad	9,171	14,716	7,641	10,780	13,026	12,261	15,771	15,366	5,122	13,007	4,049	21,339	8,618	5,931	13,755	5,968	18,402	4,252	6,231	3,028	4,287
Atlantic sturgeon	1	.	.	.	3	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Atlantic tomcod	243	148	209	230	81	115	46	328	13	9	22	51	27	163	15	54	12	7	65	78	5
Blueback herring	25,362	12,522	31,373	36,245	19,037	43,555	40,731	29,105	29,722	46,040	21,506	28,591	59,867	1,337	28,384	9,272	21,907	6,018	48,011	23,285	34,233
Hickory shad	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rainbow smelt	.	1	.	.	.	2	5	.	5	.	.	1	3	.	.	.	.	.	.	.	.
Striped bass	1,413	1,854	11,987	6,151	5,585	6,906	10,813	6,156	10,765	7,273	6,463	2,847	10,438	8,225	16,897	3,693	11,709	5,783	16,077	4,987	16,012
Catadromous																					
American eel	315	163	125	151	107	81	208	127	97	86	121	90	136	137	131	84	114	130	257	205	167
Estuarine																					
Atlantic silverside	1,197	4,406	1,459	6,760	686	8,383	17,291	6,668	14,493	21,101	28,061	9,014	11,757	17,160	25,690	9,587	8,064	11,994	4,382	17,936	17,217
Banded killifish	5,959	3,514	4,369	4,917	1,948	1,513	3,232	1,243	2,708	6,402	8,659	1,544	4,080	1,541	3,269	1,223	902	4,503	7,374	2,354	2,717
Fat sleeper	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fourspine stickleback	359	525	296	194	12	11	24	15	32	29	20	13	7	16	13	4	16	10	288	77	153
Hogchoker	1,033	276	312	305	261	150	652	329	143	230	392	54	53	29	20	20	115	391	322	183	62
Inland silverside	464	653	146	406	234	190	160	1,129	9	4	12	1	6	4	3	4	.	22	59	20	9
Mummichog	455	38	496	414	68	109	183	128	208	448	613	86	294	85	235	80	31	379	589	124	335
Northern pipefish	844	166	348	297	156	86	689	51	124	16	248	9	335	79	123	12	244	243	86	126	508
Shortnose sturgeon	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.
Threespine stickleback	2	17	10	3	4	2	4	1	.	.	.	1	.	.	1	.	.	1	.	.	1
White catfish	52	83	86	101	66	23	25	18	16	7	10	28	10	15	4	8	3	19	31	8	21
White mullet	4	3	.	.	3																

Table C-3 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Freshwater																					
(cont.)																					
Common shiner	.	.	.	1	.	.	.	1	1	.	.	.	.	.	.	.	2	.	.	.	.
Creek chub	1	.	.	.	.	.	4	.	1	.	2	.	1	.	2	.	.	.	1	.	.
Cyprinidae	1	6	6	.	.	.	134	.	5	2	18	.	1	1	5	.	1	.	4	.	.
Emerald shiner	4	4	5	22	.	11	8	4	2	1	.	76	18	1,271	209	296	73	32	6	9	6
Fall fish	.	2	.	.	.	.	9	3	2	11	2	3	1	6	1	.	.	.	18	1	1
Fathead minnow	1	10	.	.	1	.	.	.	.	2	.	7	.	.	3	3	.	.	.	1	.
Freshwater drum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	5	5	5
Gizzard shad	3	13	100	10	7	28	22	158	38	49	61	50	139	67	140	75	45	99	51	231	108
Golden shiner	460	1,223	647	676	640	817	672	787	659	760	404	460	193	472	278	296	425	489	1,031	428	349
Goldfish	14	25	16	97	1	3	33	1	29	3	16	3	1	1	4	.	3	4	9	4	2
Grass carp	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Grass pickerel	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Green sunfish	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Largemouth bass	44	71	44	57	51	34	85	55	55	74	169	29	53	120	221	46	39	67	270	78	162
Logperch	.	.	.	.	.	.	.	1	1	.	.	1	.	1	4	.	4	4	11	1	9
Longear sunfish	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Longnose dace	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mimic shiner	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Northern hog sucker	.	.	1	3	.	1	4	2	.	.	.	1	.	.	.	1	.	.	2	3	9
Northern pike	.	2	4	2	4	2	2	.	3	2	.	2	.	.	1	2	.	.	28	12	.
Pugnose shiner	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pumpkinseed	740	496	609	1,070	633	724	1,195	602	774	1,535	1,648	284	619	555	771	281	647	1,084	2,039	1,271	1,576
Rainbow trout	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Redbreast sunfish	115	158	185	160	111	76	200	259	251	382	454	116	141	188	323	137	64	189	408	336	292
Redfin pickerel	.	.	.	2	.	.	1	.	.	.	.	3	.	2	1	1	.	.	4	2	.
Rock bass	6	8	1	12	3	.	22	1	1	.	10	2	2	7	8	8	1	7	18	15	6
Rudd	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
Satinfin shiner	1	2	.	1	.	2	.	.	1	.	6	5	12	10	10	.	1	40	36	4	1
Silvery minnow	3	13	23	119	2	9	387	68	568	1,027	8	2,131	31	40	428	18	48	6	145	64	31
Smallmouth bass	7	25	8	28	25	21	25	28	30	73	81	50	26	86	176	80	45	78	157	107	121
Spotfin shiner	5	8	17	5	.	.	.	.	12	8	8	49	4	27	127	15	34	4	49	40	46
Spottail shiner	5,316	5,177	4,452	5,407	5,129	5,500	12,385	7,727	7,169	12,452	7,529	3,887	7,189	4,996	16,512	3,927	11,969	9,313	19,830	9,296	10,147
Swallowtail shiner	.	.	.	.	.	.	.	3	.	.	.	.	.	2	1	.	2	.	10	.	.
Tesselated darter	1,198	1,372	820	1,697	415	479	2,385	929	1,251	1,669	700	663	1,767	1,359	3,858	760	2,140	948	4,657	2,969	1,087
Tiger muskellunge	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Trout perch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.
Walleye	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	2	.	.	.	3	.
White crappie	.	4	1	3	.	1	2	1	.	.	.	.	.	1	.	.	.	.	.	.	.
White sucker	7	16	17	32	9	15	12	21	11	12	14	24	11	48	16	18	47	19	32	43	45
Yellow perch	22	67	44	49	34	12	27	23	22	29	16	53	20	49	65	60	78	40	160	194	115
Marine																					
Atlantic croaker	.	1	.	.	.	26	.	1	.	.	7	.	.	35	5	19	3	21	.	7	1
Atlantic herring	.	.	.	.	.	.	.	.	.	.	.	.	1	.	4	.	.	.	.	.	.
Atlantic menhaden	118	834	30	99	159	1,063	678	415	16	1,637	56	1,526	117	331	50,419	16,025	130	2,481	3,586	8,465	1,128
Atlantic needlefish	92	77	54	48	41	96	476	9	11	12	22	28	50	21	181	12	6	8	28	33	28
Bay anchovy	4,081	4,155	3,746	3,989	9,507	4,134	4,669	8,729	8,106	10,447	17,615	3,544	16,980	11,333	6,662	2,617	3,275	13,862	6,431	2,330	4,830
Bluefish	567	400	533	280	224	348	314	375	223	80	252	98	320	141	2,180	218	474	815	336	246	308

Table C-3 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marine (cont.)																					
Butterfish	.	.	.	4	.	1	.	1	9	.	.	.	.	2	.	.	.	.	.	.	.
Crevalle jack	71	10	3	22	40	32	58	53	30	2	2	1	.	45	3	24	4	9	10	.	3
Cunner	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Fourbeard rockling	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Goosefish	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Gray snapper	7	1	3	.	.	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.	1
Grubby	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Inshore lizardfish	.	.	.	1	1	.	14	8	11	5	1	.	3	4	7	.	.	3	.	.	.
Lookdown	18	1	.	.	10	1	.	.	.	.	.	.	2	.	.	2	.	.	.	.	.
Moonfish	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Naked goby	20	9	11	4	4	7	14	22	2	.	9	.	8	5	15	2	12	20	13	24	12
Northern kingfish	20	8	.	9	1	4	42	2	17	13	8	1	15	31	21	1	13	35	.	45	6
Northern puffer	2	1	.	1	.	.	10	.	4	.	2	.	2	.	6	.	.	4	.	.	4
Northern searobin	.	2	.	.	.	.	8	.	.	1	.	.	.	.	.	.	2	.	.	.	3
Northern stargazer	1	.	.	.	.	.	1	.	1	1	1	1	8	.	1	.	1	9	.	1	2
Orangespotted filefish	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Permit	.	.	.	.	.	.	.	1	2	.	.	.	.	2	.	7	5	.	.	.	.
Red hake	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	26	.	.
Rough silverside	35	4	23	258	9	4	.	2	.	1	.	.	36	.	.	.	.	.	.	.	.
Seaboard goby	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.
Searobin	.	.	.	.	.	.	5	.	.	.	.	.	1	.	.	.	3	.	3	.	.
Silver hake	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Silver perch	13	1	.	19	.	.	29	8	61	25	5	5	25	4	1	1	.	.	.	60	.
Smallmouth flounder	1	.	.	.	.	.	.	.	.	.	1	.	12	.	.	.	.	.	.	.	.
Spanish mackerel	.	.	.	.	.	.	12	.	4	1	.	.	.	.	.	.	.	.	.	.	.
Spot	35	106	4	32	.	1	8	2	39	24	.	59	.	3	6	15	.	11	1	.	2
Spotfin mojarra	.	.	.	.	.	.	.	.	.	2	.	.	.	1	.	.	.	.	.	.	.
Spotted goatfish	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	.	.	.	.	.
Spotted hake	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped anchovy	1	.	.	.	.	.	.	.	1	15	25	6	4	.	.	1	.	57	8	2	.
Striped mullet	2	6	1	1	.	.	5	.	.	.	2	.	.	.	.	1	.	1	.	.	.
Striped searobin	5	16	.	3	.	.	34	1	11	.	.	.	35	21	8	1	4	7	1	14	1
Summer flounder	48	45	4	1	2	2	46	26	20	18	10	2	.	7	4	5	5	11	5	10	5
Tautog	2	5	2	20	.	6	31	1	.	1	.	.	22	1	.	.	5	2	.	1	2
Weakfish	72	5	.	2	.	27	111	1	4	4	1	25	27	4	30	18	2	33	8	5	3
Windowpane	.	.	3	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	1
Winter flounder	282	80	29	41	9	23	154	35	74	45	110	6	124	28	46	68	44	55	52	105	41
Unidentified																					
Morone unidentified	.	.	1	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	1	.
Unidentifiable	.	.	.	.	.	.	.	.	.	.	150	.	.	.	.	.	.	.	.	.	.

Table C-3 (Continued)

	2006	2007	2008	2009	2010
Anadromous					
Alewife	601	3,579	4,127	1,315	8,090
Alosa spp.	1,297	24,989	33,233	11,793	20,174
American shad	697	2,681	781	2,135	1,869
Atlantic sturgeon	.	.	.	.	.
Atlantic tomcod	27	2	3	38	.
Blueback herring	3,911	55,828	29,603	2,529	28,057
Hickory shad	.	.	.	.	.
Rainbow smelt	.	.	.	.	.
Striped bass	4,348	12,882	5,459	4,052	11,324
Catadromous					
American eel	154	75	349	300	246
Estuarine					
Atlantic silverside	2,116	16,989	6,545	5,602	17,390
Banded killifish	1,283	2,252	5,021	3,757	4,885
Fat sleeper	.	.	.	.	.
Fourspine stickleback	27	3	9	276	499
Hogchoker	130	464	240	31	209
Inland silverside	5	3	26	70	98
Mummichog	25	93	278	95	334
Northern pipefish	56	452	426	154	728
Shortnose sturgeon	.	.	.	.	.
Threespine stickleback	.	1	.	42	3
White catfish	16	6	6	6	8
White mullet	.	2	2	.	.
White perch	7,707	4,596	7,400	6,446	9,025
Freshwater					
Black crappie	21	3	25	27	19
Blacknose dace	.	.	.	1	.
Bluegill	224	39	384	466	125
Bluntnose minnow	.	2	.	3	.
Bridle shiner	.	.	.	.	.
Brook silverside	4	1	16	.	5
Brook stickleback	.	.	.	.	.
Brown bullhead	141	35	276	206	89
Brown trout	.	.	.	.	.
Carp	69	34	56	86	62
Catostomidae	.	.	.	.	.
Centrarchidae	213	31	1,163	556	509
Chain pickerel	.	.	1	1	1
Channel catfish	100	15	32	70	47
Comely shiner	.	.	.	.	.
Common shiner	.	.	.	1	1

Table C-3 (Continued)

	2006	2007	2008	2009	2010
Freshwater (cont.)					
Creek chub	.	.	.	.	.
Cutlips minnow	.	.	1	.	.
Cyprinidae	.	.	4	125	3
Emerald shiner	52	9	8	21	5
Fall fish	2	.	9	1	1
Fathead minnow	1	.	.	1	1
Freshwater drum	14	7	9	5	10
Gizzard shad	58	116	230	113	142
Golden shiner	231	91	488	703	294
Goldfish	2	7	3	2	7
Grass carp	.	.	.	.	.
Grass pickerel	.	.	.	.	.
Green sunfish	.	.	.	.	.
Largemouth bass	48	75	168	248	134
Logperch	3	7	3	4	3
Longear sunfish	.	.	.	.	.
Longnose dace	.	.	.	.	.
Mimic shiner	.	.	.	.	.
Northern hog sucker	.	1	1	.	.
Northern pike	9	1	7	.	.
Pugnose shiner	.	.	.	.	.
Pumpkinseed	569	439	3,113	1,274	1,897
Rainbow trout	.	.	.	1	.
Redbreast sunfish	87	55	337	171	130
Redfin pickerel	.	.	5	2	1
Rock bass	1	.	11	3	5
Rudd	.	.	7	4	10
Satfin shiner	3	164	46	23	11
Shield darter	.	.	1	.	.
Silvery minnow	13	66	66	8	.
Smallmouth bass	81	97	57	52	107
Spotfin shiner	2	96	33	80	81
Spottail shiner	4,417	13,284	15,442	9,829	14,817
Swallowtail shiner	.	.	.	.	.
Tesselated darter	1,229	1,045	2,614	3,283	2,657
Tiger muskellunge	.	.	.	.	.
Trout perch	.	.	23	.	.
Walleye	.	.	.	.	.
White crappie	.	.	.	.	.
White sucker	36	81	43	27	34
Yellow perch	107	142	131	49	68
Marine					
Atlantic croaker	292	.	.	.	1
Atlantic herring	.	.	.	.	.
Atlantic menhaden	4,885	6,105	1,418	4,077	91
Atlantic needlefish	58	96	67	48	28
Bay anchovy	5,376	1,314	24,902	23,457	49,286

Table C-3 (Continued)

	2006	2007	2008	2009	2010
Marine (cont.)					
Bluefish	169	719	414	244	434
Butterfish	.	.	.	.	.
Crevale jack	21	.	6	6	2
Cunner	.	.	.	.	.
Fourbeard rockling	.	.	.	.	.
Fourspot flounder	.	.	2	.	.
Goosefish	.	.	.	.	.
Gray snapper	.	1	.	.	.
Grubby	.	.	.	.	.
Inshore lizardfish	1	.	6	.	8
Lookdown	.	.	.	2	.
Moonfish	.	.	1	.	.
Naked goby	5	19	34	15	25
Northern kingfish	6	59	32	8	5
Northern puffer	.	1	1	.	.
Northern searobin	.	.	.	.	.
Northern stargazer	.	2	1	.	.
Orangespotted filefish	.	.	.	.	.
Permit	.	1	.	.	.
Red hake	.	.	.	.	.
Rough silverside	9	.	19	.	.
Seaboard goby	.	.	.	1	.
Searobin	.	.	2	.	.
Silver hake	.	.	.	.	.
Silver perch	.	2	.	2	.
Smallmouth flounder	.	.	.	.	.
Spanish mackerel	.	.	.	.	.
Spot	22	.	.	1	.
Spotfin mojarra	.	.	.	.	.
Spotted goatfish	.	.	.	.	.
Spotted hake	2	.	.	.	.
Striped anchovy	4	1	3	.	4
Striped mullet	24	.	7	11	27
Striped searobin	1	12	11	.	.
Summer flounder	12	3	11	21	14
Tautog	.	11	.	.	.
Weakfish	.	9	2	2	1
Windowpane	.	.	.	.	.
Winter flounder	28	85	51	22	17
Unidentified					
Morone unidentified	.	2	.	5	.
Unidentifiable	.	.	.	.	.

Table C-3 (Continued)

Sampling Statistics for Beach Seine Survey, 1985-2010

[illegible]

Appendix D

Annual Abundance Indices

APPENDIX D

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- D.2 METHODS
- D.3 LITERATURE CITED

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D.1 INTRODUCTION

Annual indices of abundance for 13 species of finfish are based on data from the Longitudinal River Survey (LRS), Fall Juvenile Survey (FJS) and Beach Seine Survey (BSS). This appendix documents the methods used to calculate these indices of abundance and presents the indices from 1974 through 2010.

For each of the 13 species, one or more sampling programs were selected to be the basis for the index of abundance. The selections considered when and where each species was expected to be present in the Hudson River based on life-history characteristics of each species in relation to the times and places that sampling gear is deployed by each program. The selections were also based on observed catch rates from each of the three sampling programs. The sampling programs on which the indices of abundance are based as well as the life stages and weeks selected for analysis are summarized in [Table D-1](#).

The statistical methods used to estimate the annual indices of abundance are described in the following section. Summaries of the indices of annual abundance for the 13 species are presented in [Figures D-1 through D-13](#) and [Tables D-2 through D-14](#).

D.2 METHODS

D.2.1 Beach Seine Survey

Indices of abundance using data from the BSS were calculated for juvenile striped bass, white perch, American shad, alewife, blueback herring, bluefish, and spottail shiner; for yearling white perch; and for yearling and older white catfish. Weeks 33 to 40 were selected as the only period consistently sampled in the BSS. The Beach Seine Survey Index of abundance (B) for each year and species is a measure of catch per haul and is calculated according to the following formula:

$$B = \frac{1}{n} \sum_{w=33}^{40} \left[\frac{\sum_{i=1}^{12} W_i \left(\frac{\sum_j C_{t_{jiw}}}{h_{iw}} \right)}{\sum_{i=1}^{12} W_i} \right] X_w,$$

where

- B = the BSS index for a species in a year;
- $C_{t_{jiw}}$ = the count of a species in sample j , region i , and week w ;
- X_w = 1 if week w was sampled during the year, 0 otherwise;
- n = the number of weeks sampled in the year,
= $\sum_{w=33}^{40} X_w$;
- h_{iw} = the number of seine hauls in region i and week w ; and
- W_i = the number of beaches in the sampling design in river region i .

The above equation can be expressed in terms of a weighted average catch per haul (CPH) as follows:

$$B = \frac{1}{n} \sum_{w=33}^{40} \bar{Y}_w X_w = \frac{1}{n} \sum_{w=33}^{40} \left[\frac{\sum_{i=1}^{12} W_i \bar{Y}_{wi}}{\sum_{i=1}^{12} W_i} \right] X_w ,$$

where

$$\begin{aligned} \bar{Y}_{wi} &= \text{the average CPH in week } w \text{ and region } i \text{ and} \\ \bar{Y}_w &= \text{the weighted average CPH in week } w. \end{aligned}$$

Because not all weeks within the period of week 33 to 40 were sampled by the BSS in each year, the variance of the BSS index in any year is calculated as a two-stage variance. The primary sampling unit in the first stage is weeks, and the design is assumed to be simple random sampling (i.e., weeks of sampling are construed to be a random sample of weeks within the period from week 33 through week 40). The sampling units in the second stage are regions, and the design is stratified random where regions are the statistical strata. The variance is calculated using a two-stage estimator based on equation 11.24 in Cochran (1977, p. 303):

$$\text{var}(B) = \frac{\left(1 - \frac{n}{N}\right)}{n} S_1^2 + \frac{1}{Nn} \sum_w S_{2,w}^2 ,$$

where

$$\begin{aligned} S_1^2 &= \text{the first stage variance (temporal, among weeks),} \\ S_{2,w}^2 &= \text{the second stage variance (spatial) in week } w, \text{ and} \\ N &= \text{the number of weeks (8) within the selected period, i.e., weeks 33 through 40.} \end{aligned}$$

The first stage variance component is estimated as:

$$S_1^2 = \frac{1}{n-1} \sum_{w=33}^{40} (\bar{Y}_w - B)^2 .$$

The second stage variance component is estimated as:

$$S_{2,w}^2 = \frac{\sum_{i=1}^{12} W_i^2 \left[\frac{\sum_j \left(Ct_{jiw} - \frac{1}{h_{iw}} \sum_j Ct_{jiw} \right)^2}{(h_{iw})(h_{iw} - 1)} \right]}{\left(\sum_{i=1}^{12} W_i \right)^2}.$$

Then:

$$\text{std. err.}(B) = (\text{var}(B))^{1/2}.$$

D.2.2 Fall Juvenile Survey

Indices of abundance using data from channel sampling by the FJS were calculated for juvenile blueback herring, alewife, bay anchovy, weakfish, and rainbow smelt for the years 1979 through 2010, the years that the channel was sampled. In addition, indices of abundance based on bottom sampling by the FJS were calculated for juvenile hogchoker. Weeks 33 to 40 were selected as the only period consistently sampled in the FJS for channel sampling and weeks 40 to 43 for bottom sampling. The Fall Juvenile Survey Index of abundance (F) for each year and species sampled in gear specific for either the channel or the bottom is a measure of average density and is calculated according to the following formula:

$$F_g = \frac{1}{n} \sum_{w=33}^{40} \left[\frac{\sum_{i=1}^{12} \sum_{s=1}^3 V_{is} \left(\frac{\sum_j Ct_{jiswg}}{\sum_j v_{jiswg}} \right)}{\sum_{i=1}^{12} \sum_{s=1}^3 V_{is}} \right] X_w,$$

where

- F_g = the FJS index (for gear g) for a species in a year;
- Ct_{jiswg} = the count of a species in sample j from gear g , region i , stratum s , and week w ;
- X_w = 1 if week w was sampled during the year, 0 otherwise;
- n = the number of weeks sampled in the year,
 $= \sum_{w=33}^{40} X_w$;
- v_{jiswg} = the volume of sample j from gear g in region i , stratum s , and week w ; and
- V_{isg} = the volume of stratum s , sampled by gear g , in river region i .

The above equation can be expressed in terms of weighted average sample densities as follows:

$$F_g = \frac{1}{n} \sum_{w=33}^{40} \bar{Y}_{wg} X_w = \frac{1}{n} \sum_{w=33}^{40} \left[\frac{\sum_{i=1}^{12} \sum_{s=1}^3 V_{si} \bar{Y}_{iswg}}{\sum_{i=1}^{12} \sum_{s=1}^3 V_{si}} \right] X_w,$$

where

$$\begin{aligned} \bar{Y}_{iswg} &= \text{the average density of a species in samples from region } i, \text{ stratum } s, \\ &\quad \text{week } w, \text{ and gear } g \text{ and} \\ \bar{Y}_{wg} &= \text{the weighted average density of a species in samples from week } w, \\ &\quad \text{and gear } g. \end{aligned}$$

Because not all weeks within the period of week 33 to 40 (or 40 to 43 for bottom sampling) were sampled by the FSS in each year, the variance of the FSS index of abundance in any year is calculated as the sum of two components. The primary unit in the first stage is weeks, and the design is assumed to be simple random sampling (i.e., weeks of sampling are construed to be a random sample of weeks within the period from week 33 through week 40 or from week 40 through week 43). The sampling units in the second stage are region-(habitat) strata, and the design is stratified random where region-(habitat) strata are the statistical strata. The variance is calculated using a two-stage estimator based on equation 11.24 in Cochran (1977, p. 303):

$$\text{var}(F_g) = \frac{\left(1 - \frac{n}{N}\right)}{n} S_{1,g}^2 + \frac{1}{Nn} \sum_w S_{2,gw}^2,$$

where

$$\begin{aligned} S_{1,g}^2 &= \text{the first stage variance (temporal, among weeks),} \\ S_{2,gw}^2 &= \text{the second stage variance (spatial) in week } w, \text{ and} \\ N &= \text{the number of weeks (8 or 4) within the selected period, i.e., weeks} \\ &\quad \text{33 through 40 or weeks 40 through 43.} \end{aligned}$$

The first stage variance component is calculated as:

$$S_{1,g}^2 = \frac{1}{n-1} \sum_{w=33}^{40} (\bar{Y}_{wg} - F_g)^2.$$

The second stage variance is calculated as:

$$S_{2, gw}^2 = \frac{\sum_{i=1}^{12} \sum_{s=1}^3 V_{isg}^2 \left[\frac{\left(h_{iswg} \sum_j (Ct_{jiswg} - \bar{C}t_{iswg})^2 \right)}{h_{iswg} - 1} \right]}{\left(\sum_{i=1}^{12} \sum_{s=1}^3 V_{isg} \right)^2},$$

where

V_{isg} = the total volume of (habitat) stratum, s , and region, i , sampled by gear g .

Then:

$$\text{std. err. } (F_g) = (\text{var}(F_g))^{1/2}.$$

D.2.3 Long River Survey

Indices of abundance using data from the LRS were calculated for striped bass, white perch, American shad, Atlantic tomcod and rainbow smelt. For striped bass, white perch and American shad, the indices are based on the egg, yolk-sac larvae (YSL), and post yolk-sac larvae (PYSL) life stages and the weeks selected depend on the period of abundance. For Atlantic tomcod the index was based on PYSL and juveniles combined over weeks 19 through 22 and for rainbow smelt the index was based on the juvenile life stage in weeks 20 through 27. The Long River Survey Index of abundance (L) for each year and species is a measure of average density and is calculated according to the following formula:

$$L = \sum_{w=firstwk}^{lastwk} \left[\frac{\sum_{i=1}^{12} \sum_{s=1}^5 V_{is} \left(\frac{\sum_j Ct_{jisw}}{\sum_j v_{jisw}} \right)}{\sum_{i=1}^{12} \sum_{s=1}^5 V_{is}} \right],$$

where

L = the LRS index for any species in any year;
 Ct_{jisw} = the count of a species in sample j , region i , stratum s , and week w ;
 v_{jisw} = the volume of sample j from in region i , stratum s , and week w ;
 V_{is} = the volume of stratum s in river region i ;
 $firstwk$ = the first week included in the annual index of abundance:
 striped bass, American shad, and white perch egg, YSL, and
 PYSL -- the first week of the year in which the sum of weekly

density estimates (from the initial week of sampling in the year through the current week) exceeds 5% of the sum of densities over all weeks of sampling,

Atlantic tomcod PYSL and juveniles combined -- week 19, and rainbow smelt juveniles -- week 20; and

$lastwk$ = the last week included in the annual index of abundance:

striped bass, American shad, and white perch egg, YSL, and PYSL -- $firstwk + 7$;

Atlantic tomcod PYSL and juveniles combined -- week 22; and rainbow smelt juveniles -- week 27.

The above equation can be expressed in terms of average sample density as follows:

$$L = \sum_{w=firstwk}^{lastwk} \bar{Y}_w = \sum_{w=firstwk}^{lastwk} \left[\frac{\sum_{i=1}^{12} \sum_{s=1}^5 V_{si} \bar{Y}_{isw}}{\sum_{i=1}^{12} \sum_{s=1}^5 V_{si}} \right],$$

where

\bar{Y}_{isw} = the average density of a species in samples from region i , stratum s , and week w [Note: for strata and regions that were not sampled, predicted densities (based on regression predictors and densities in adjacent strata) were used] and

\bar{Y}_w = the weighted average density of a species in samples collected during week w .

Variance of the index was estimated using the following equation:

$$\text{var}(L) = \sum_{w=firstwk}^{lastwk} \left[\frac{\sum_s \sum_i V_{is}^2 \left(\frac{n_{si} \left(\sum_j (Ct_{jisw} - \bar{Ct}_{isw})^2 \right)}{n_{si} - 1} \right)}{\left(\sum_j v_{jisw} \right)^2} \right] \frac{1}{\left(\sum_s \sum_i V_{is} \right)^2},$$

where

V_{is} = the total volume in region i and stratum s .

Then:

$$\text{std. err.}(L) = (\text{var}(L))^{1/2}.$$

As indicated in Heimbuch et al. (1992), for indices based on LRS sampling, the volume of water between the beach and 10 ft deep was divided into two substrata: beach and shore. The beach stratum, defined from the beach to water five ft deep, corresponds with the shallow waters sampled in the BSS. The shore stratum, defined as water greater than five ft deep and less than 10 ft deep, is an unsampleable region. Densities in these substrata were estimated based on fixed ratios to the densities in adjacent strata.

D.3 LITERATURE CITED

Cochran, W.G. 1977. Sampling techniques, 3rd edition. Wiley, New York.

Heimbuch, D.G., D.J. Dunning, and J.R. Young. 1992. Post-Yolk-Sac Larvae Abundance as an Index of Year Class Strength of Striped Bass in the Hudson River, pages 376-391 *in* C. L. Smith (ed.) Estuarine Research in the 1980s. State University of New York Press. Albany.

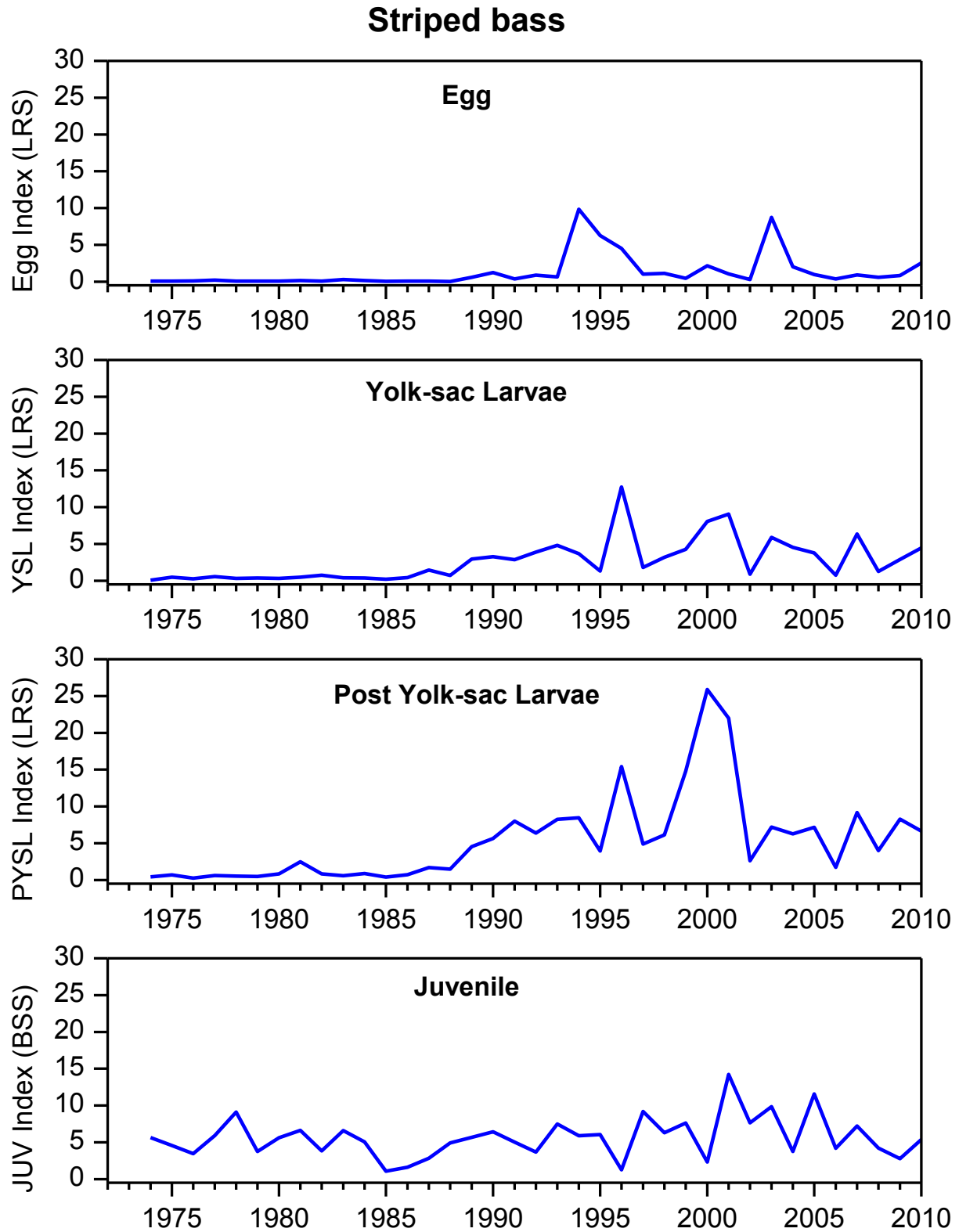


Figure D-1. Striped bass indices of annual abundance based on Long River Survey and Beach Seine Survey, 1974-2010

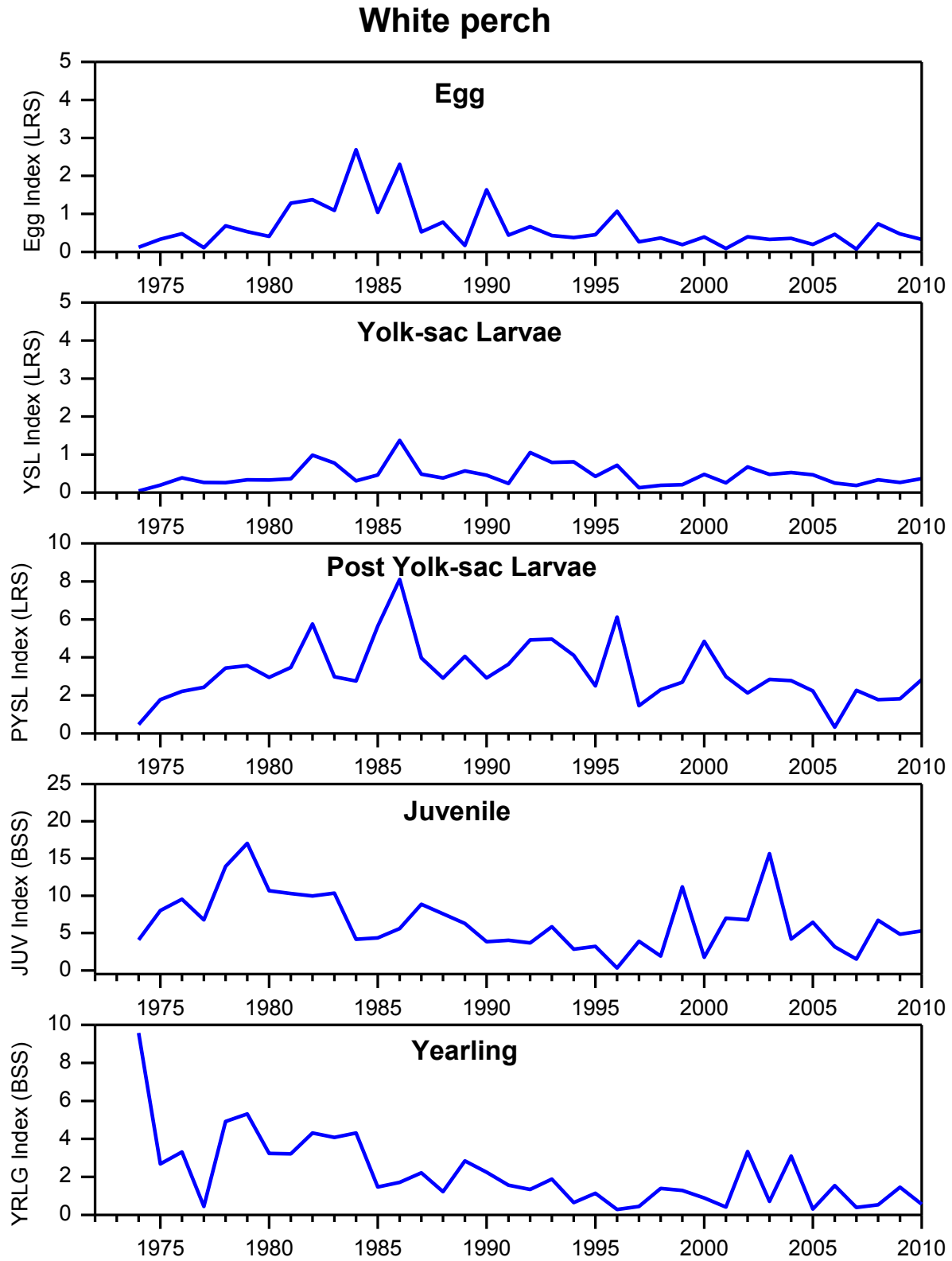


Figure D-2. White perch indices of annual abundance based on Long River Survey and Beach Seine Survey, 1974-2010

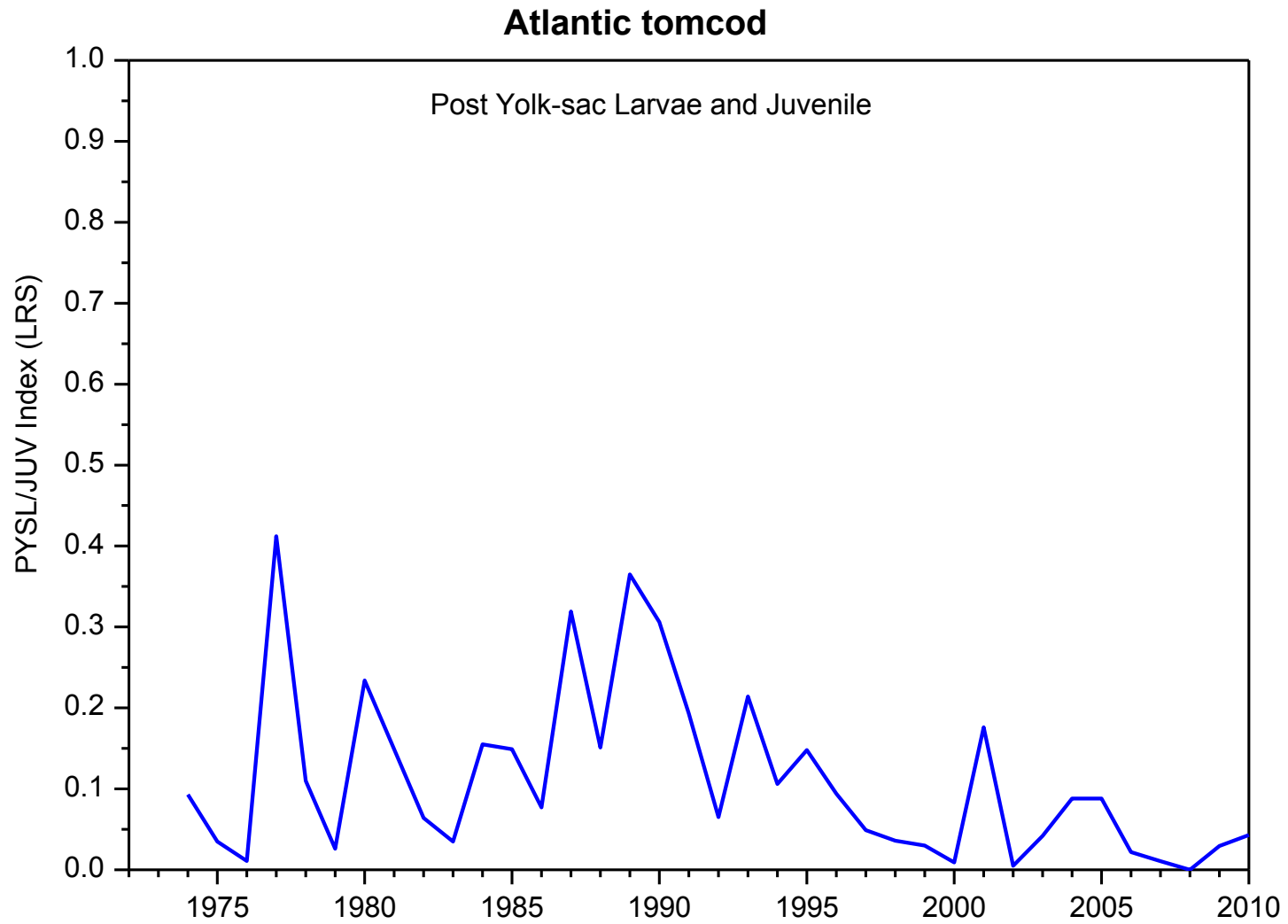


Figure D-3. Atlantic tomcod indices of annual abundance based on Long River Survey, 1974-2010

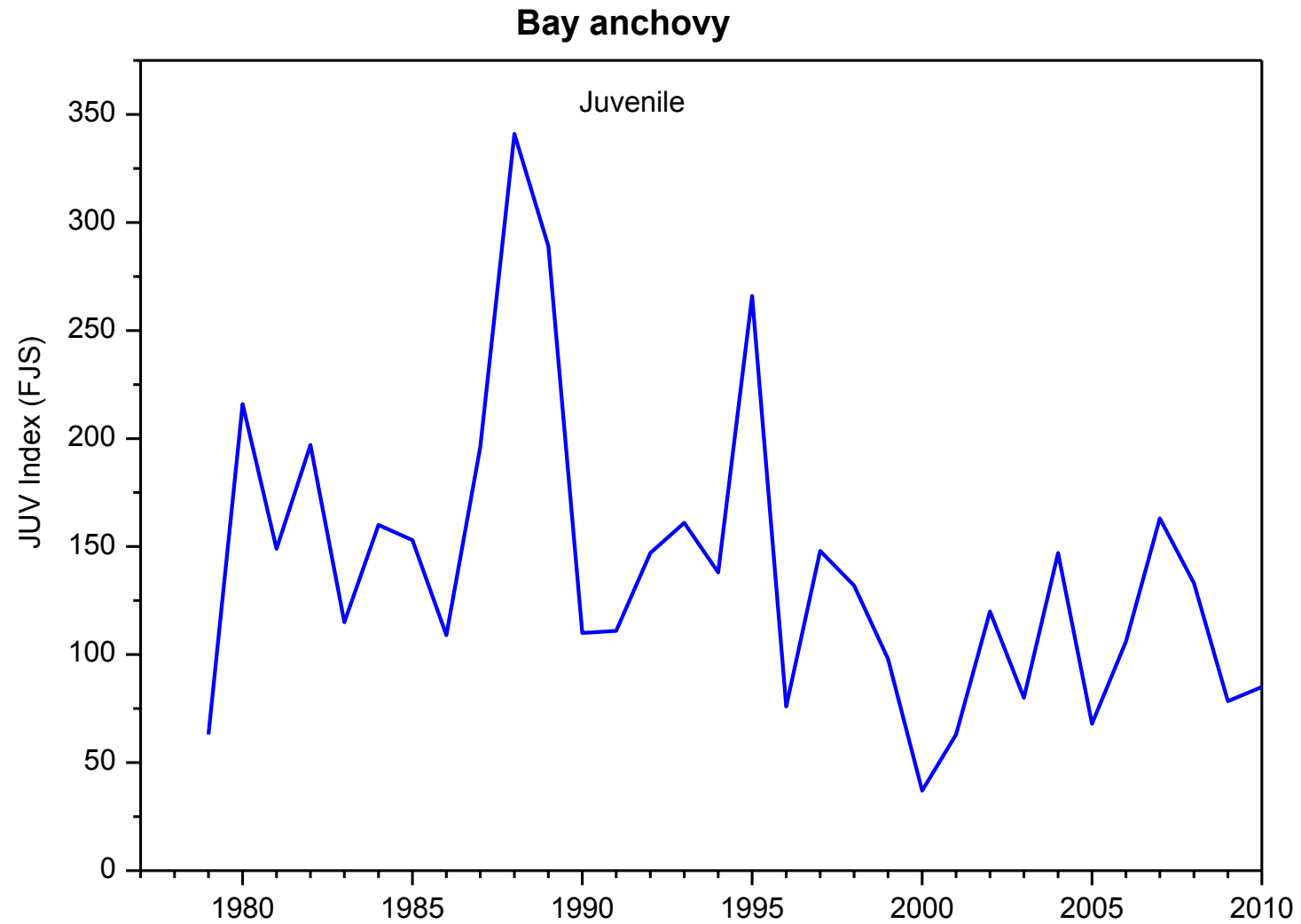


Figure D-4. Bay anchovy indices of annual abundance based on Fall Juvenile Survey, 1979-2010

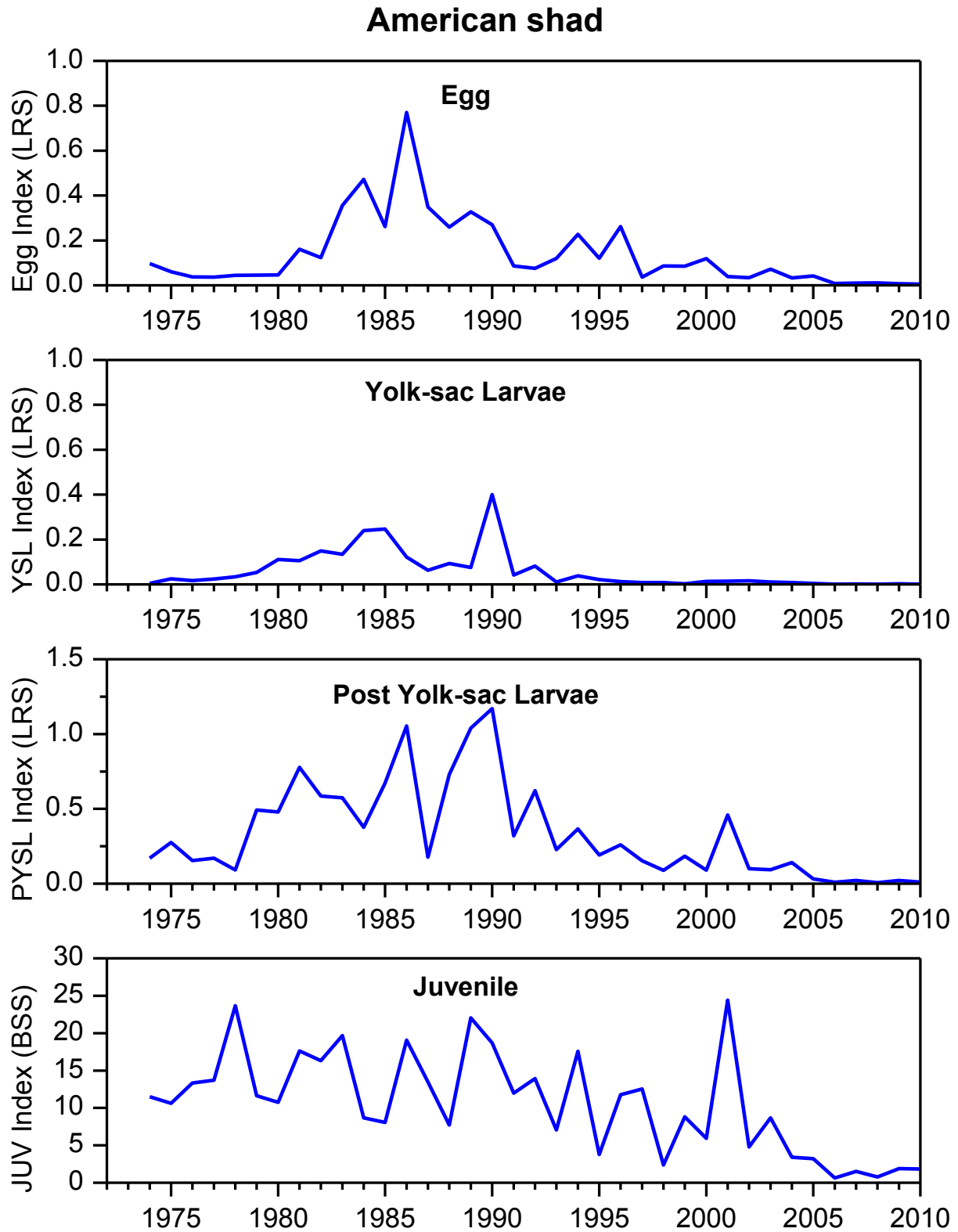


Figure D-5. American shad indices of annual abundance based on Long River Survey and Beach Seine Survey, 1974-2010

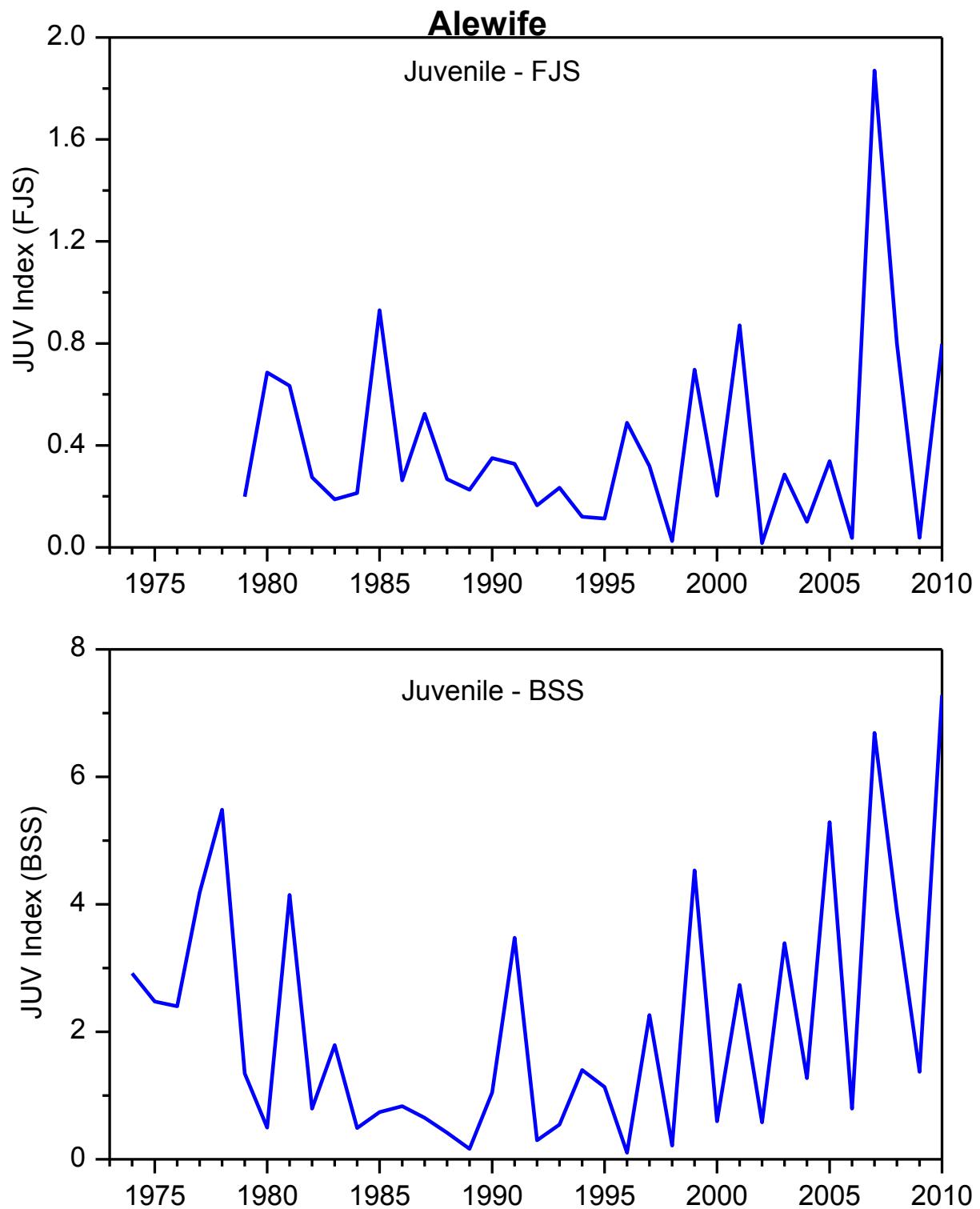


Figure D-6. Alewife indices of annual abundance based on Fall Juvenile Survey, 1979-2010, and Beach Seine Survey, 1974-2010

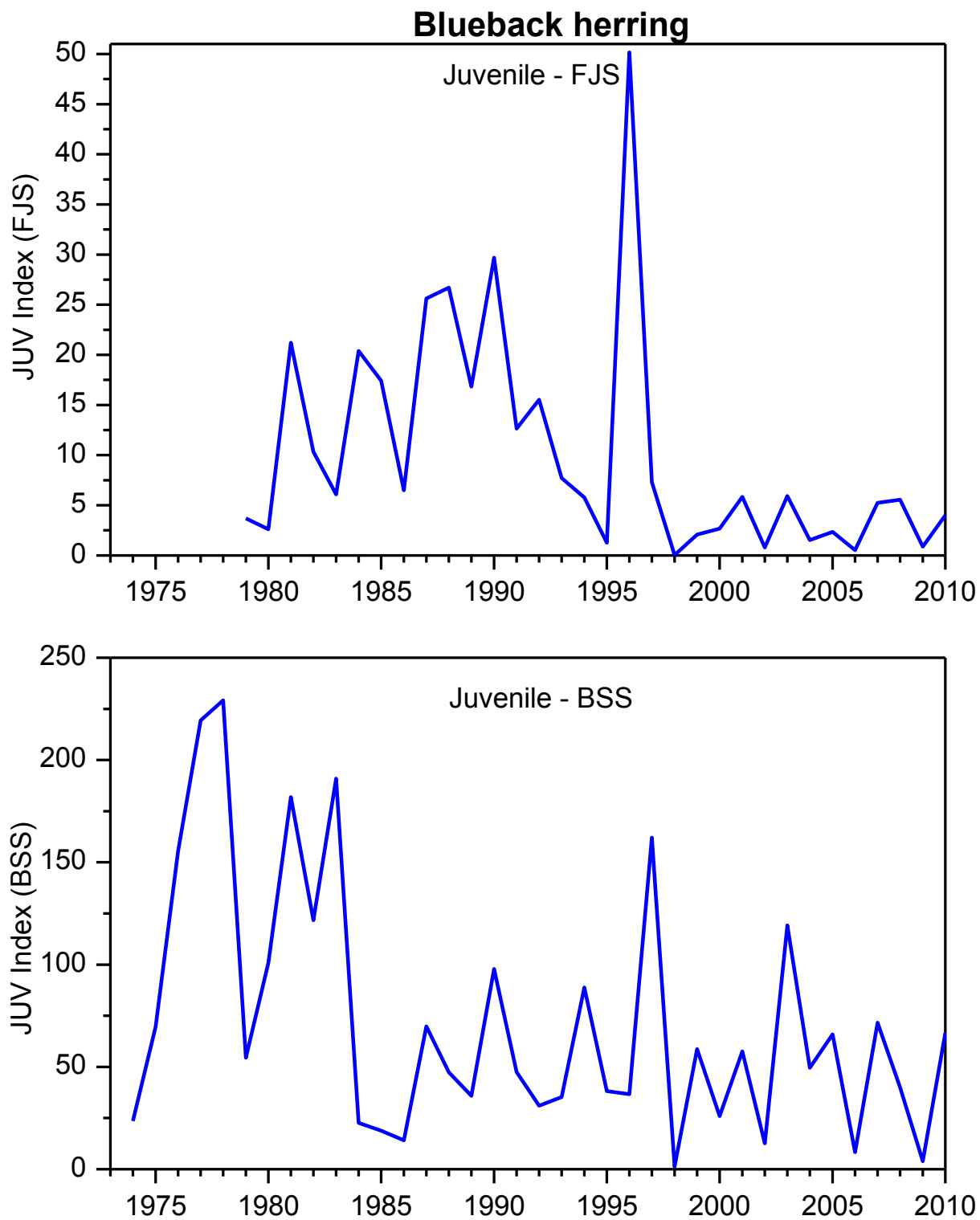


Figure D-7. Blueback herring indices of annual abundance based on Fall Juvenile Survey, 1979-2010, and Beach Seine Survey, 1974-2010

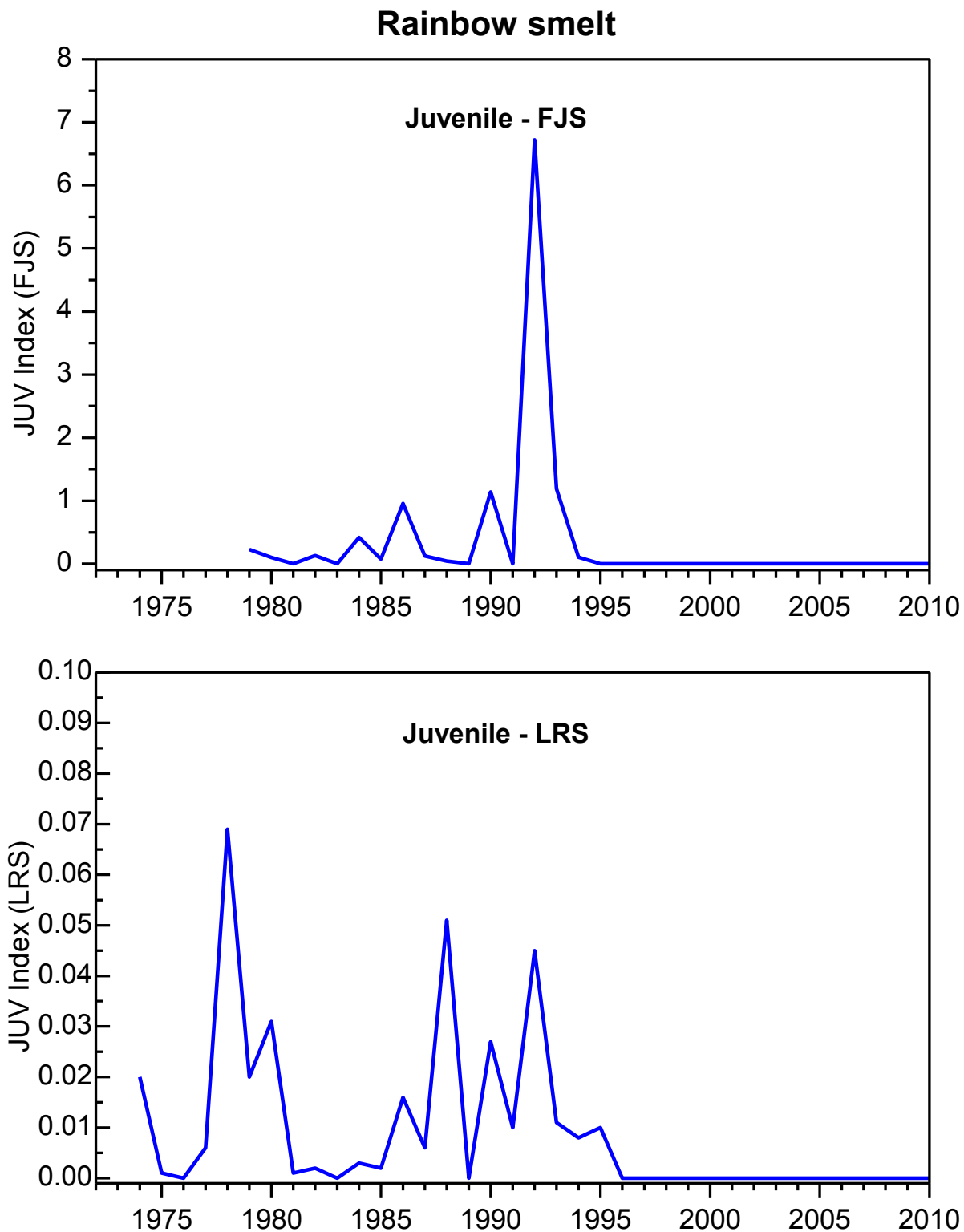


Figure D-8. Rainbow smelt indices of annual abundance based on Fall Juvenile Survey, 1979-2010, and Long River Survey, 1974-2010

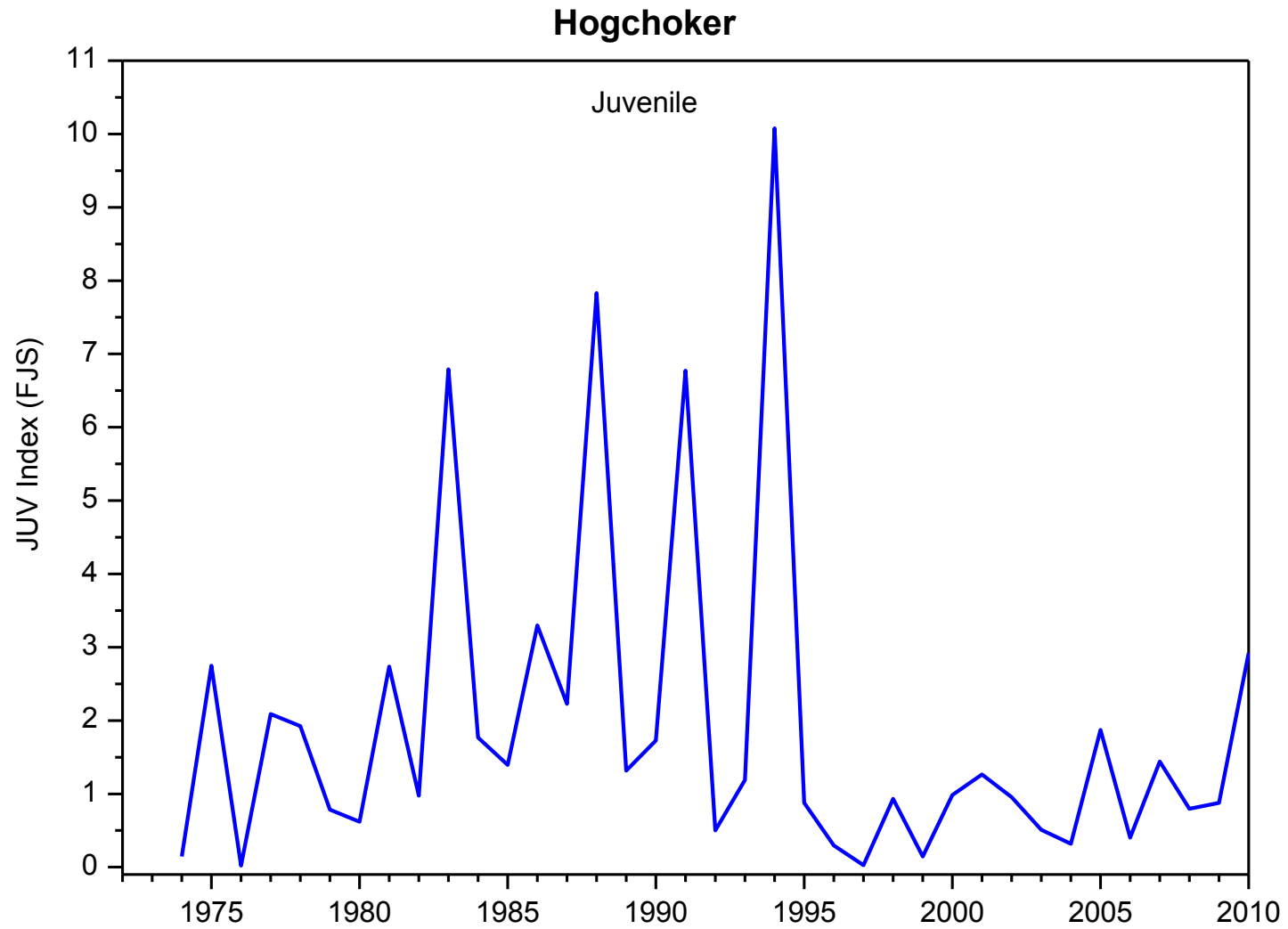


Figure D-9. Hogchoker indices of annual abundance based on Fall Juvenile Survey, 1974-2010

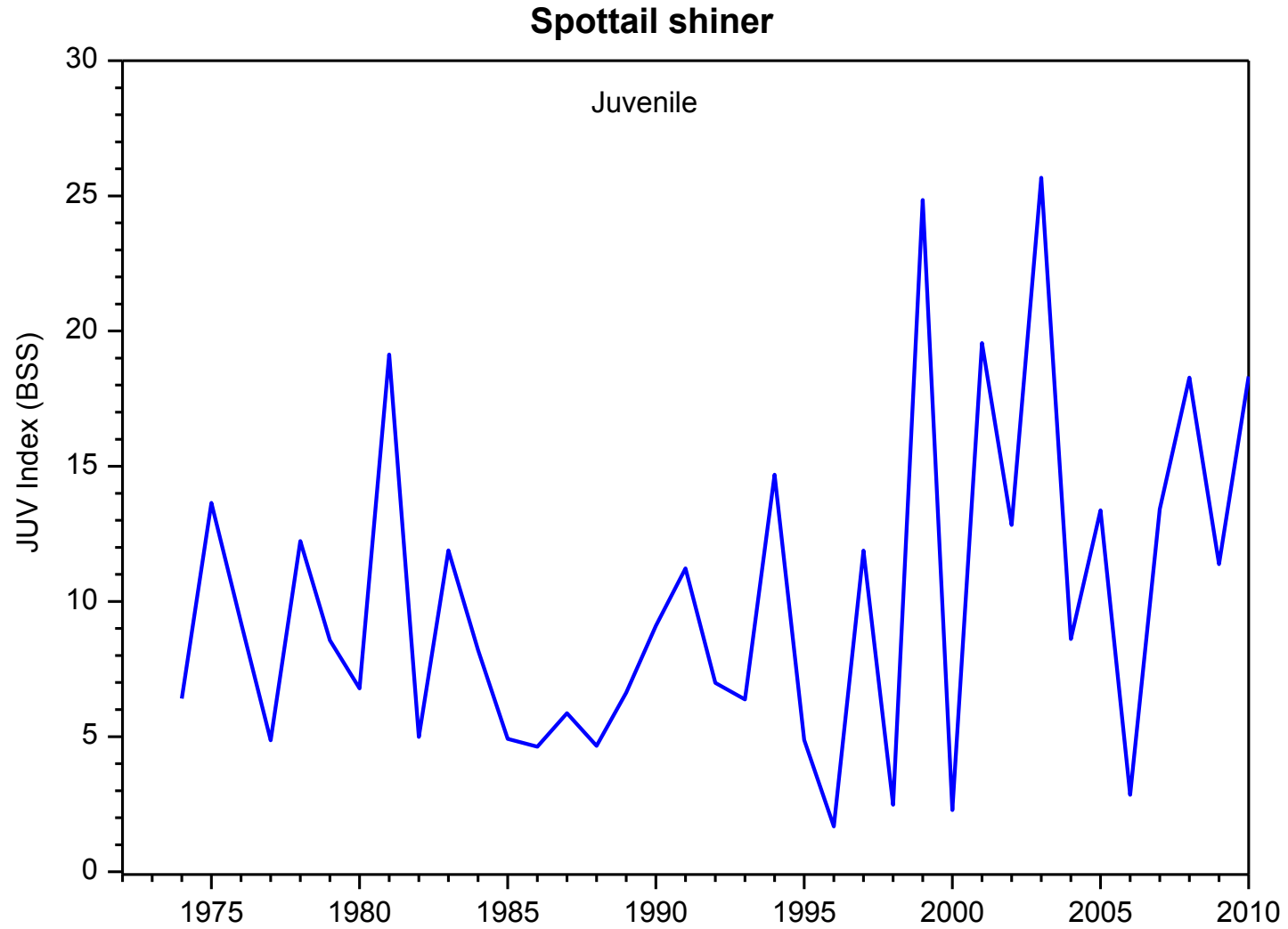


Figure D-10. Spottail shiner indices of annual abundance based on Beach Seine Survey, 1974-2010

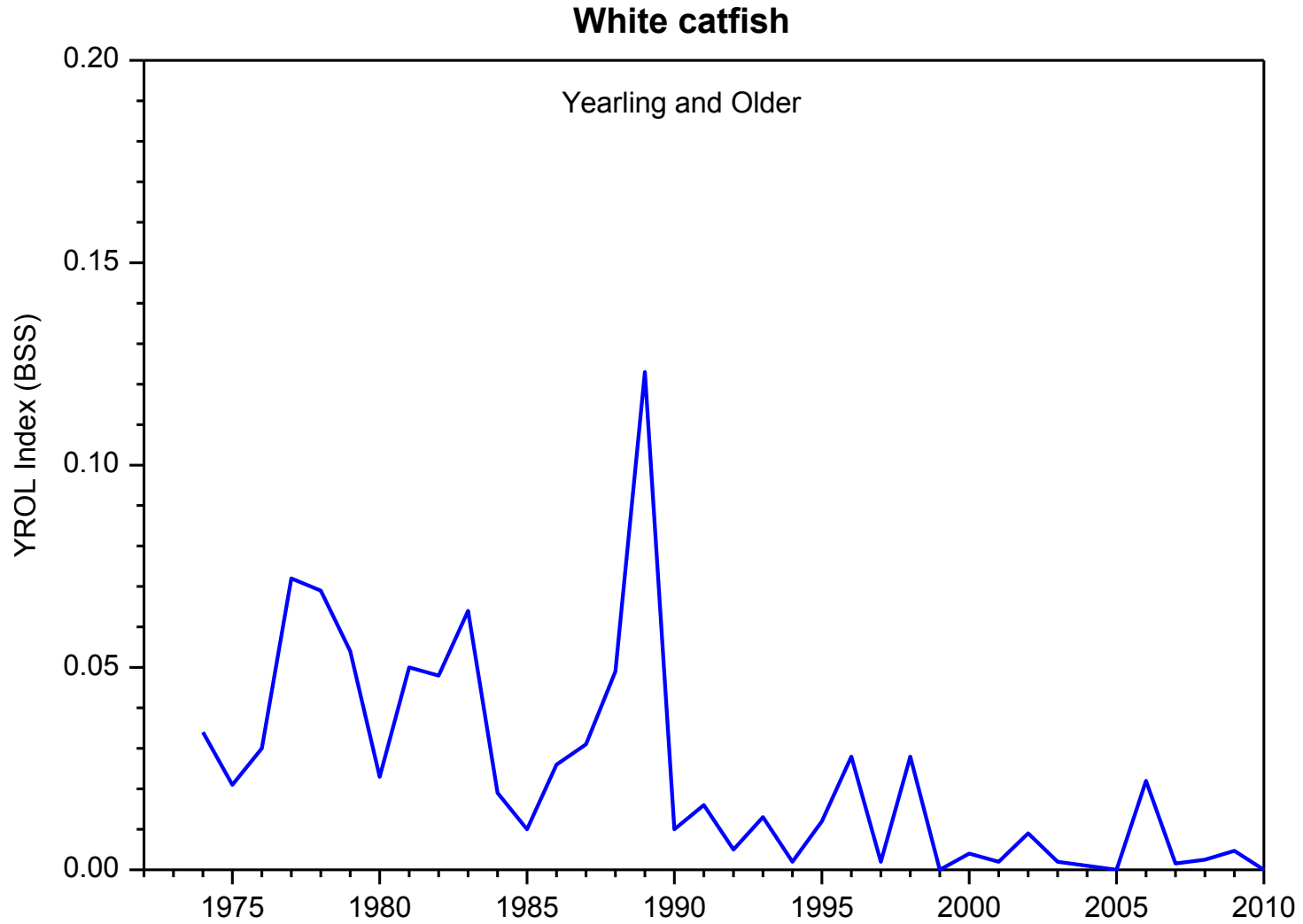


Figure D-11. White catfish indices of annual abundance based on Beach Seine Survey, 1974-2010

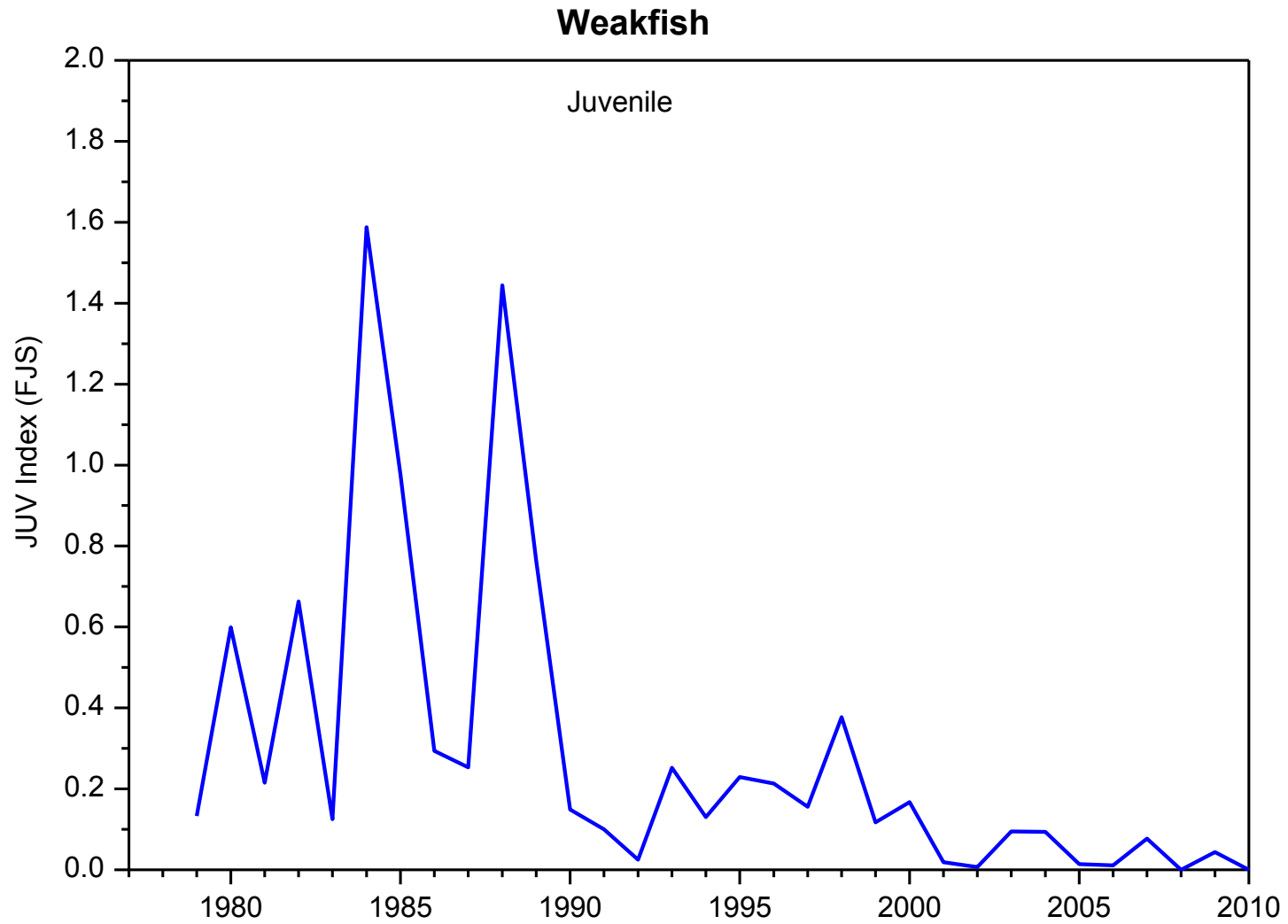


Figure D-12. Weakfish indices of annual abundance based on Fall Juvenile Survey, 1979-2010

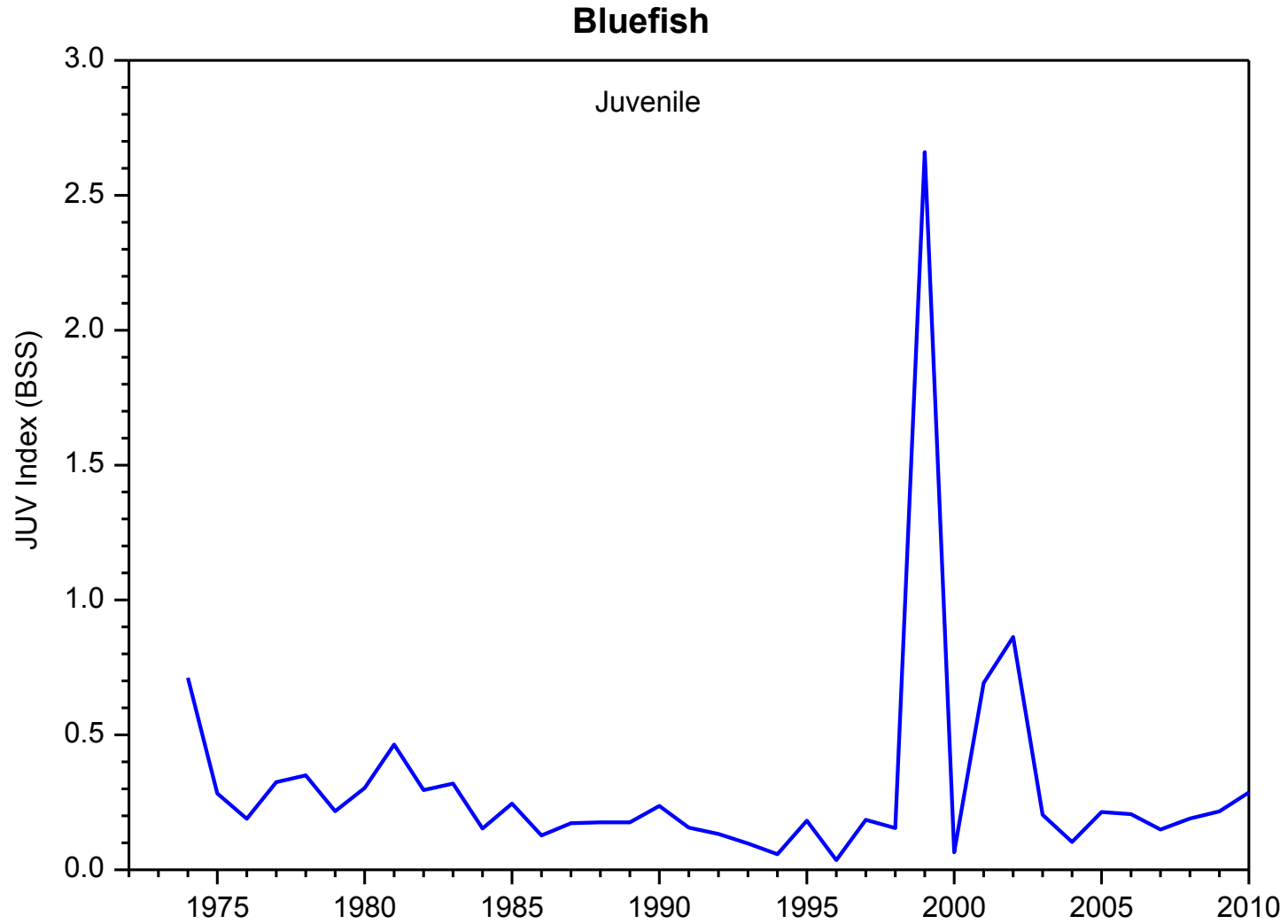


Figure D-13. Bluefish indices of annual abundance based on Beach Seine Survey, 1974-2010

Table D-1 Parameters for Indices of Annual Abundance Based on Data from the Beach Seine Survey (BSS), Fall Juvenile Survey (FJS), and Longitudinal River Survey (LRS)

Species	Life Stage	Weeks Used in Sampling Program		
		BSS	FJS	LRS
Striped bass	Egg, YSL, and PYSL			Variable ¹
Striped bass	Juvenile	33-40		
White perch	Egg, YSL, and PYSL			Variable ¹
White perch	Juvenile and Yearling	33-40		
Atlantic tomcod	PYSL and Juvenile combined			19-22
Bay anchovy	Juvenile		33-40 (Channel)	
American shad	Egg, YSL, and PYSL			Variable ¹
American shad	Juvenile	33-40		
Alewife	Juvenile	33-40	33-40 (Channel)	
Blueback herring	Juvenile	33-40	33-40 (Channel)	
Rainbow smelt	Juvenile		33-40 (Channel)	20-27
Hogchoker	Juvenile		40-43 (Bottom)	
Spottail shiner	Juvenile	33-40		
White catfish	Yearling and older	33-40		
Weakfish	Juvenile		33-40 (Channel)	
Bluefish	Juvenile	33-40		

¹ 7 weeks beginning with the first week in which 5% of annual total is achieved

Table D-2 Striped Bass Indices of Annual Abundance Based on Long River Survey and Beach Seine Survey, 1974-2010

	Long River Survey						Beach Seine Survey	
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
1974	0.062	0.044	0.080	0.018	0.424	0.033	5.652	0.869
1975	0.076	0.012	0.487	0.031	0.694	0.044	4.557	0.301
1976	0.097	0.011	0.253	0.014	0.265	0.017	3.445	0.392
1977	0.195	0.022	0.566	0.029	0.605	0.036	5.919	0.411
1978	0.077	0.010	0.306	0.019	0.538	0.038	9.115	1.884
1979	0.075	0.008	0.359	0.022	0.468	0.032	3.760	0.756
1980	0.072	0.009	0.319	0.024	0.833	0.062	5.605	0.829
1981	0.137	0.015	0.486	0.055	2.482	0.116	6.611	0.912
1982	0.073	0.007	0.745	0.078	0.825	0.061	3.826	0.539
1983	0.276	0.189	0.391	0.026	0.589	0.033	6.580	1.249
1984	0.152	0.019	0.358	0.030	0.867	0.096	5.059	1.008
1985	0.050	0.005	0.202	0.017	0.405	0.033	1.069	0.237
1986	0.060	0.008	0.421	0.032	0.721	0.036	1.618	0.388
1987	0.059	0.007	1.449	0.085	1.697	0.066	12.823	2.245
1988	0.024	0.008	0.706	0.068	1.481	0.139	4.912	0.607
1989	0.588	0.269	2.941	0.277	4.540	0.344	5.665	0.897
1990	1.219	0.182	3.271	0.295	5.642	0.535	6.415	0.703
1991	0.363	0.064	2.855	0.257	8.005	0.770	5.032	1.070
1992	0.874	0.154	3.884	0.219	6.380	0.426	3.678	0.581
1993	0.633	0.122	4.812	0.969	8.247	0.727	7.496	1.626
1994	9.825	1.869	3.678	0.526	8.454	0.795	5.880	1.056
1995	6.266	1.010	1.305	0.199	3.942	0.389	6.043	0.903
1996	4.497	0.649	12.743	1.796	15.404	1.465	1.252	0.330
1997	1.029	0.185	1.795	0.296	4.887	0.745	9.185	0.829
1998	1.131	0.343	3.173	0.548	6.133	0.490	6.287	0.709
1999	0.460	0.087	4.265	0.393	14.788	1.343	7.621	1.486
2000	2.144	0.194	8.061	0.817	25.886	2.823	2.320	0.691
2001	1.030	0.235	9.057	0.748	21.999	1.364	14.215	1.551
2002	0.291	0.042	0.879	0.054	2.625	0.151	7.649	0.860

Continued

	Long River Survey						Beach Seine Survey	
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
2003	8.721	4.871	5.889	0.634	7.185	0.718	9.834	1.554
2004	2.018	0.402	4.534	0.372	6.254	0.352	3.752	0.822
2005	0.960	0.158	3.786	0.874	7.169	0.621	11.582	1.469
2006	0.361	0.051	0.752	0.080	1.727	0.102	4.171	0.722
2007	0.920	0.196	6.353	1.267	9.157	0.600	7.201	0.961
2008	0.580	0.106	1.268	0.169	3.995	0.476	4.203	0.548
2009	0.827	0.107	2.871	0.259	8.256	1.150	2.768	0.252
2010	2.534	0.437	4.448	0.494	6.636	0.656	5.380	0.799

Table D-3 White Perch Indices of Annual Abundance Based on Long River Survey and Beach Seine Survey, 1974-2010

	Long River Survey						Beach Seine Survey			
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile		Yearling	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
1974	0.122	0.049	0.040	0.010	0.464	0.037	4.091	0.556	9.57	2.24
1975	0.335	0.095	0.198	0.016	1.783	0.147	8.040	1.954	2.68	1.41
1976	0.480	0.092	0.388	0.015	2.214	0.239	9.537	1.341	3.31	0.43
1977	0.112	0.019	0.264	0.014	2.431	0.128	6.782	1.114	0.45	0.07
1978	0.687	0.083	0.261	0.021	3.438	0.195	13.934	2.838	4.92	2.37
1979	0.533	0.070	0.336	0.017	3.571	0.103	17.033	2.747	5.31	1.63
1980	0.411	0.038	0.328	0.015	2.954	0.110	10.682	2.306	3.24	0.94
1981	1.282	0.080	0.360	0.032	3.467	0.174	10.297	1.291	3.22	0.62
1982	1.374	0.158	0.986	0.050	5.757	0.221	9.995	1.139	4.31	0.80
1983	1.089	0.084	0.776	0.040	2.977	0.101	10.363	2.016	4.08	1.60
1984	2.691	0.659	0.310	0.015	2.754	0.119	4.175	0.684	4.31	1.11
1985	1.036	0.117	0.463	0.040	5.640	0.214	4.353	1.076	1.47	0.53
1986	2.306	0.338	1.375	0.080	8.106	0.378	5.597	1.129	1.71	0.43
1987	0.528	0.063	0.483	0.022	3.974	0.119	8.880	1.678	2.21	0.26
1988	0.781	0.104	0.381	0.037	2.905	0.147	7.606	1.296	1.23	0.25
1989	0.171	0.014	0.568	0.051	4.057	0.374	6.281	1.715	2.84	0.51
1990	1.633	0.350	0.460	0.034	2.919	0.261	3.844	0.416	2.25	0.59
1991	0.443	0.059	0.241	0.017	3.637	0.236	4.033	0.754	1.57	0.43
1992	0.665	0.062	1.052	0.062	4.921	0.202	3.677	0.645	1.34	0.18
1993	0.431	0.060	0.792	0.044	4.958	0.185	5.842	0.949	1.89	0.55
1994	0.378	0.035	0.812	0.043	4.106	0.173	2.837	0.581	0.65	0.19
1995	0.454	0.070	0.427	0.020	2.506	0.108	3.209	0.484	1.14	0.34
1996	1.071	0.134	0.721	0.051	6.123	0.269	0.309	0.125	0.29	0.10
1997	0.265	0.047	0.127	0.005	1.461	0.075	3.912	0.558	0.45	0.07
1998	0.370	0.056	0.192	0.014	2.300	0.142	1.930	0.486	1.39	0.29
1999	0.192	0.026	0.210	0.017	2.696	0.152	11.218	2.992	1.29	0.43
2000	0.396	0.030	0.480	0.027	4.841	0.504	1.766	0.391	0.89	0.29
2001	0.091	0.010	0.253	0.017	2.997	0.237	6.997	0.817	0.42	0.13
2002	0.397	0.037	0.677	0.027	2.125	0.147	6.766	1.038	3.33	0.87

Continued

	Long River Survey						Beach Seine Survey			
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile		Yearling	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
2003	0.329	0.034	0.478	0.023	2.845	0.171	15.671	3.697	0.71	0.13
2004	0.355	0.036	0.526	0.036	2.782	0.127	4.203	0.985	3.10	1.03
2005	0.198	0.013	0.470	0.029	2.233	0.133	6.441	0.998	0.313	0.085
2006	0.465	0.040	0.249	0.014	0.335	0.074	3.162	0.521	1.545	0.201
2007	0.075	0.012	0.186	0.018	2.264	0.180	1.519	0.260	0.391	0.127
2008	0.739	0.070	0.338	0.030	1.777	0.114	6.729	1.362	0.533	0.533
2009	0.473	0.034	0.265	0.017	1.823	0.116	4.852	0.947	1.462	0.322
2010	0.329	0.050	0.367	0.025	2.837	0.149	5.280	0.686	0.561	0.103

Table D-4 Atlantic Tomcod Indices of Annual Abundance Based on Long River Survey, 1974-2010

	Long River Survey	
	Post Yolk-Sac Larvae and Juvenile	
	Index	Std. Err.
1974	0.093	0.016
1975	0.035	0.009
1976	0.011	0.003
1977	0.412	0.267
1978	0.110	0.031
1979	0.026	0.006
1980	0.234	0.078
1981	0.149	0.037
1982	0.064	0.024
1983	0.035	0.012
1984	0.155	0.070
1985	0.149	0.027
1986	0.077	0.010
1987	0.319	0.049
1988	0.151	0.034
1989	0.365	0.089
1990	0.306	0.135
1991	0.193	0.029
1992	0.065	0.021
1993	0.214	0.061
1994	0.106	0.022
1995	0.148	0.024
1996	0.094	0.014
1997	0.049	0.011
1998	0.036	0.008
1999	0.030	0.007
2000	0.009	0.002
2001	0.176	0.029
2002	0.005	0.001
2003	0.042	0.006
2004	0.088	0.012
2005	0.088	0.014
2006	0.022	0.005
2007	0.011	0.001
2008	<0.001	0.010
2009	0.029	0.005
2010	0.043	0.006

Table D-5 Bay Anchovy Indices of Annual Abundance Based on Fall Juvenile Survey, 1979-2010

	Fall Juvenile Survey	
	Juvenile	
	Index	Std. Err.
1979	63	10
1980	216	53
1981	149	24
1982	197	25
1983	115	32
1984	160	33
1985	153	16
1986	109	16
1987	196	42
1988	341	51
1989	289	40
1990	110	12
1991	111	8
1992	147	35
1993	161	20
1994	138	33
1995	266	44
1996	76	20
1997	148	27
1998	132	20
1999	98	25
2000	37	4
2001	63	10
2002	120	16
2003	80	7
2004	147	48
2005	68	7
2006	106	32
2007	163	19
2008	133	14
2009	78	12
2010	85	20

Table D-6 American Shad Indices of Annual Abundance Based on Long River Survey and Beach Seine Survey, 1974-2010

	Long River Survey						Beach Seine Survey	
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
1974	0.097	0.031	0.004	0.001	0.171	0.065	11.499	0.825
1975	0.060	0.016	0.025	0.004	0.276	0.176	10.630	1.431
1976	0.037	0.009	0.017	0.002	0.155	0.049	13.325	0.869
1977	0.036	0.004	0.024	0.002	0.170	0.033	13.702	1.388
1978	0.044	0.008	0.034	0.003	0.092	0.031	23.671	2.658
1979	0.045	0.007	0.053	0.006	0.492	0.069	11.645	1.741
1980	0.046	0.009	0.111	0.012	0.479	0.216	10.747	2.464
1981	0.161	0.075	0.106	0.012	0.777	0.309	17.615	2.167
1982	0.123	0.041	0.149	0.016	0.586	0.120	16.312	1.919
1983	0.356	0.114	0.134	0.015	0.573	0.092	19.679	3.887
1984	0.472	0.112	0.240	0.019	0.376	0.168	8.686	1.839
1985	0.262	0.039	0.247	0.041	0.672	0.165	8.078	1.297
1986	0.770	0.325	0.122	0.015	1.054	0.150	19.060	3.735
1987	0.349	0.077	0.063	0.007	0.177	0.077	13.473	2.275
1988	0.259	0.051	0.093	0.030	0.729	0.344	7.717	1.010
1989	0.327	0.063	0.075	0.010	1.040	0.794	22.052	2.414
1990	0.270	0.062	0.400	0.053	1.170	0.733	18.674	1.742
1991	0.086	0.016	0.042	0.008	0.319	0.115	11.966	3.155
1992	0.075	0.021	0.082	0.011	0.622	0.213	13.923	1.051
1993	0.120	0.031	0.011	0.002	0.228	0.116	7.065	0.869
1994	0.227	0.036	0.038	0.005	0.366	0.126	17.557	3.276
1995	0.121	0.030	0.021	0.003	0.191	0.060	3.786	0.433
1996	0.262	0.042	0.012	0.003	0.260	0.061	11.773	1.928
1997	0.036	0.005	0.008	0.001	0.153	0.033	12.537	2.036
1998	0.086	0.012	0.008	0.001	0.089	0.028	2.361	0.415
1999	0.085	0.018	0.003	0.001	0.184	0.066	8.813	2.441
2000	0.119	0.015	0.013	0.002	0.090	0.026	5.925	0.930
2001	0.039	0.012	0.014	0.004	0.459	0.182	24.402	1.827
2002	0.034	0.004	0.016	0.003	0.100	0.037	4.792	0.468

Continued

	Long River Survey						Beach Seine Survey	
	Egg		Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juvenile	
	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.	Index	Std. Err.
2003	0.072	0.019	0.011	0.001	0.093	0.025	8.686	1.204
2004	0.033	0.008	0.008	0.001	0.141	0.062	3.397	0.613
2005	0.042	0.005	0.004	0.001	0.032	0.015	3.208	0.601
2006	0.008	0.001	0.001	0.000	0.009	0.004	0.631	0.116
2007	0.010	0.007	0.002	0.001	0.021	0.022	1.522	0.370
2008	0.011	0.003	0.001	0.000	0.006	0.003	0.774	0.143
2009	0.007	0.002	0.003	<0.001	0.021	0.010	1.880	0.389
2010	0.005	0.001	0.001	<0.001	0.010	0.012	1.826	0.395

Table D-7 Alewife Indices of Annual Abundance Based on Fall Juvenile Survey, 1979-2010,
and Beach Seine Survey, 1974-2010

	Fall Juvenile Survey		Beach Seine Survey	
	Juvenile		Juvenile	
	Index	Std. Err.	Index	Std. Err.
1974			2.917	0.439
1975			2.473	0.404
1976			2.400	0.632
1977			4.182	0.605
1978			5.485	0.971
1979	0.199	0.077	1.347	0.232
1980	0.686	0.353	0.498	0.161
1981	0.634	0.214	4.148	0.936
1982	0.275	0.084	0.794	0.237
1983	0.188	0.067	1.791	0.273
1984	0.213	0.125	0.490	0.136
1985	0.930	0.407	0.741	0.173
1986	0.263	0.079	0.834	0.505
1987	0.524	0.268	0.651	0.121
1988	0.268	0.129	0.417	0.089
1989	0.226	0.068	0.163	0.040
1990	0.350	0.137	1.047	0.167
1991	0.328	0.115	3.473	0.569
1992	0.165	0.084	0.299	0.118
1993	0.234	0.083	0.544	0.159
1994	0.120	0.062	1.402	0.343
1995	0.113	0.034	1.136	0.346
1996	0.489	0.146	0.103	0.040
1997	0.319	0.101	2.262	0.439
1998	0.025	0.015	0.214	0.154
1999	0.697	0.173	4.533	1.073
2000	0.203	0.077	0.597	0.315
2001	0.871	0.720	2.733	0.783
2002	0.017	0.014	0.580	0.102
2003	0.286	0.117	3.392	0.895
2004	0.100	0.039	1.274	0.355
2005	0.338	0.092	5.289	1.232
2006	0.037	0.017	0.795	0.435
2007	1.870	1.144	6.688	2.003
2008	0.800	0.542	3.888	0.999
2009	0.038	0.031	1.371	0.467
2010	0.798	0.337	7.282	2.028

Table D-8 Blueback Herring Indices of Annual Abundance Based on Fall Juvenile Survey, 1979-2010, and Beach Seine Survey, 1974-2010

	Fall Juvenile Survey		Beach Seine Survey	
	Juvenile		Juvenile	
	Index	Std. Err.	Index	Std. Err.
1974			23.509	3.394
1975			69.660	9.490
1976			155.551	23.842
1977			219.365	26.383
1978			229.189	44.491
1979	3.695	0.746	54.451	8.318
1980	2.606	0.753	100.836	53.797
1981	21.197	5.861	181.931	72.898
1982	10.331	2.061	121.724	31.431
1983	6.082	1.073	190.860	41.849
1984	20.385	3.673	22.662	5.412
1985	17.424	4.584	18.816	3.904
1986	6.482	1.383	14.102	4.410
1987	25.608	12.357	69.798	15.687
1988	26.693	4.297	47.408	14.021
1989	16.825	5.408	35.877	8.094
1990	29.688	10.639	97.854	13.970
1991	12.648	4.469	47.440	11.057
1992	15.523	3.874	31.096	6.530
1993	7.717	1.594	35.277	5.517
1994	5.765	1.899	88.839	13.782
1995	1.266	0.417	38.176	23.296
1996	50.160	15.888	36.708	17.548
1997	7.301	1.428	162.109	35.436
1998	0.032	0.029	1.282	0.314
1999	2.073	0.783	58.668	17.791
2000	2.677	1.163	25.980	14.975
2001	5.845	4.998	57.605	11.398
2002	0.797	0.546	12.630	5.767
2003	5.920	1.891	119.197	27.386
2004	1.523	0.347	49.563	11.708
2005	2.332	1.049	65.857	20.089
2006	0.525	0.146	8.278	3.437
2007	5.236	0.907	71.601	9.047
2008	5.557	1.353	39.985	8.850
2009	0.866	0.247	3.881	1.136
2010	4.001	2.107	66.642	20.062

Table D-9 Rainbow Smelt Indices of Annual Abundance Based on Fall Juvenile Survey, 1979-2010, and Long River Survey, 1974-2010

	Fall Juvenile Survey		Long River Survey	
	Juvenile		Juvenile	
	Index	Std. Err.	Index	Std. Err.
1974			0.020	0.004
1975			0.001	0.000
1976			0.000	0.000
1977			0.006	0.002
1978			0.069	0.006
1979	0.226	0.092	0.020	0.003
1980	0.099	0.088	0.031	0.002
1981	0.000	0.000	0.001	0.000
1982	0.129	0.055	0.002	0.000
1983	0.000	0.000	0.000	0.000
1984	0.419	0.165	0.003	0.000
1985	0.074	0.057	0.002	0.000
1986	0.959	0.165	0.016	0.001
1987	0.122	0.065	0.006	0.001
1988	0.041	0.027	0.051	0.008
1989	0.000	0.000	0.000	0.000
1990	1.140	0.340	0.027	0.002
1991	0.000	0.000	0.010	0.003
1992	6.721	2.340	0.045	0.005
1993	1.190	0.563	0.011	0.003
1994	0.104	0.104	0.008	0.002
1995	0.000	0.000	0.010	0.002
1996	0.000	0.000	0.000	0.000
1997	0.000	0.000	0.000	0.000
1998	0.000	0.000	0.000	0.000
1999	0.000	0.000	0.000	0.000
2000	0.000	0.000	0.000	0.000
2001	0.000	0.000	0.000	0.000
2002	0.000	0.000	0.000	0.000
2003	0.000	0.000	0.000	0.000
2004	0.000	0.000	0.000	0.000
2005	0.000	0.000	0.000	0.000
2006	0.000	0.000	0.000	0.000
2007	0.000	0.000	0.000	0.000
2008	0.000	0.000	0.000	0.000
2009	0.000	0.000	0.000	0.000
2010	0.000	0.000	0.000	0.000

Table D-10 Hogchoker Indices of Annual Abundance Based on Fall Juvenile Survey, 1974-2010

	Fall Juvenile Survey	
	Juvenile	
	Index	Std. Err.
1974	0.147	0.033
1975	2.748	1.910
1976	0.021	0.017
1977	2.089	1.393
1978	1.925	0.806
1979	0.786	0.172
1980	0.620	0.183
1981	2.735	0.775
1982	0.975	--
1983	6.789	4.522
1984	1.767	0.428
1985	1.396	0.257
1986	3.298	1.587
1987	2.227	0.568
1988	7.832	0.914
1989	1.318	0.406
1990	1.728	1.024
1991	6.772	4.728
1992	0.502	0.234
1993	1.189	0.308
1994	10.079	1.418
1995	0.878	0.333
1996	0.295	0.066
1997	0.026	0.026
1998	0.932	0.129
1999	0.145	0.136
2000	0.983	0.363
2001	1.264	0.426
2002	0.956	0.346
2003	0.511	0.508
2004	0.319	0.079
2005	1.873	0.785
2006	0.402	0.168
2007	1.442	0.774
2008	0.796	0.206
2009	0.878	0.462
2010	2.922	1.435

Table D-11 Spottail Shiner Indices of Annual Abundance Based on Beach Seine Survey, 1974-2010

	Beach Seine Survey	
	Juvenile	
	Index	Std. Err.
1974	6.406	1.419
1975	13.648	3.194
1976	9.211	1.452
1977	4.860	1.112
1978	12.232	1.725
1979	8.562	1.357
1980	6.785	1.281
1981	19.134	3.977
1982	4.991	0.815
1983	11.890	3.007
1984	8.202	1.942
1985	4.916	0.780
1986	4.629	1.165
1987	5.868	1.403
1988	4.663	0.722
1989	6.626	1.472
1990	9.098	1.505
1991	11.223	1.880
1992	6.987	1.066
1993	6.379	0.797
1994	14.684	2.022
1995	4.875	0.696
1996	1.681	0.632
1997	11.880	1.742
1998	2.478	0.568
1999	24.848	5.432
2000	2.287	0.634
2001	19.556	4.314
2002	12.833	1.847
2003	25.669	4.877
2004	8.613	1.323
2005	13.370	4.976
2006	2.849	0.461
2007	13.419	3.931
2008	18.279	2.781
2009	11.380	5.983
2010	18.328	2.305

Table D-12 White Catfish Indices of Annual Abundance Based on Beach Seine Survey, 1974-2010

	Beach Seine Survey	
	Yearling and Older	
	Index	Std. Err.
1974	0.034	0.020
1975	0.021	0.011
1976	0.030	0.010
1977	0.072	0.022
1978	0.069	0.030
1979	0.054	0.028
1980	0.023	0.008
1981	0.050	0.029
1982	0.048	0.026
1983	0.064	0.044
1984	0.019	0.006
1985	0.010	0.005
1986	0.026	0.012
1987	0.031	0.015
1988	0.049	0.018
1989	0.123	0.056
1990	0.010	0.005
1991	0.016	0.008
1992	0.005	0.003
1993	0.013	0.009
1994	0.002	0.002
1995	0.012	0.008
1996	0.028	0.016
1997	0.002	0.001
1998	0.028	0.022
1999	0.000	0.000
2000	0.004	0.003
2001	0.002	0.002
2002	0.009	0.008
2003	0.002	0.001
2004	0.001	0.001
2005	0.000	0.000
2006	0.022	0.013
2007	0.002	0.002
2008	0.002	0.002
2009	0.005	0.003
2010	0.000	0.000

Table D-13 Weakfish Indices of Annual Abundance Based on Fall Juvenile Survey, 1979-2010

	Fall Juvenile Survey	
	Juvenile	
	Index	Std. Err.
1979	0.133	0.070
1980	0.599	0.284
1981	0.215	0.125
1982	0.663	0.306
1983	0.125	0.088
1984	1.588	0.633
1985	0.977	0.481
1986	0.294	0.105
1987	0.253	0.180
1988	1.444	0.599
1989	0.763	0.248
1990	0.149	0.090
1991	0.100	0.061
1992	0.025	0.017
1993	0.252	0.149
1994	0.130	0.058
1995	0.229	0.128
1996	0.213	0.160
1997	0.156	0.053
1998	0.377	0.277
1999	0.117	0.047
2000	0.167	0.115
2001	0.019	0.009
2002	0.007	0.007
2003	0.095	0.049
2004	0.094	0.062
2005	0.014	0.014
2006	0.011	0.011
2007	0.077	0.054
2008	0.000	0.000
2009	0.044	0.021
2010	0.000	0.000

Table D-14 Bluefish Indices of Annual Abundance Based on Beach Seine Survey, 1974-2010

	Beach Seine Survey	
	Juvenile	
	Index	Std. Err.
1974	0.712	0.210
1975	0.283	0.074
1976	0.189	0.028
1977	0.325	0.097
1978	0.350	0.075
1979	0.217	0.054
1980	0.303	0.053
1981	0.464	0.119
1982	0.295	0.059
1983	0.320	0.101
1984	0.153	0.034
1985	0.245	0.068
1986	0.127	0.054
1987	0.173	0.049
1988	0.176	0.027
1989	0.176	0.043
1990	0.237	0.053
1991	0.156	0.043
1992	0.133	0.050
1993	0.098	0.033
1994	0.058	0.017
1995	0.182	0.043
1996	0.036	0.012
1997	0.185	0.028
1998	0.155	0.026
1999	2.660	1.116
2000	0.065	0.027
2001	0.692	0.242
2002	0.863	0.300
2003	0.204	0.073
2004	0.103	0.037
2005	0.214	0.071
2006	0.206	0.069
2007	0.149	0.026
2008	0.190	0.046
2009	0.217	0.030
2010	0.287	0.072

Appendix E

Density and Standing Crop Estimates

APPENDIX E

LIST OF TABLES

<u>Number</u>	<u>Title</u>
E-1	Regional density (no./1,000 m ³) of striped bass eggs in Hudson River estuary determined from Long River Survey, 2010
E-2	Regional standing crop (in thousands) of striped bass eggs in Hudson River estuary determined from Long River Survey, 2010
E-3	Regional density (no./1,000 m ³) of striped bass yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-4	Regional standing crop (in thousands) of striped bass yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-5	Regional density (no./1,000 m ³) of striped bass post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-6	Regional standing crop (in thousands) of striped bass post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-7	Regional density (no./1,000 m ³) of striped bass young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-8	Regional standing crop (in thousands) of striped bass young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-9	Regional density (no./1,000 m ³) of striped bass young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-10	Regional standing crop (in thousands) of striped bass young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-11	Regional catch-per-unit-effort of striped bass young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-12	Regional standing crop (in thousands) of striped bass young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-13	Regional density (no./1,000 m ³) of striped bass yearling in Hudson River estuary determined from Long River Survey, 2010
E-14	Regional standing crop (in thousands) of striped bass yearling in Hudson River estuary determined from Long River Survey, 2010

APPENDIX E

LIST OF TABLES (CONTINUED)

<u>Number</u>	<u>Title</u>
E-15	Regional density (no./1,000 m ³) of striped bass yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-16	Regional standing crop (in thousands) of striped bass yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-17	Regional catch-per-unit-effort of striped bass yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-18	Regional standing crop (in thousands) of striped bass yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-19	Regional density (no./1,000 m ³) of striped bass older-than-yearling in Hudson River estuary determined from Long River Survey, 2010
E-20	Regional standing crop (in thousands) of striped bass older-than-yearling in Hudson River estuary determined from Long River Survey, 2010
E-21	Regional density (no./1,000 m ³) of striped bass older-than-yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-22	Regional standing crop (in thousands) of striped bass older-than-yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-23	Regional catch-per-unit-effort of striped bass older-than-yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-24	Regional standing crop (in thousands) of striped bass older-than-yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-25	Regional density (no./1,000 m ³) of white perch eggs in Hudson River estuary determined from Long River Survey, 2010
E-26	Regional standing crop (in thousands) of white perch eggs in Hudson River estuary determined from Long River Survey, 2010
E-27	Regional density (no./1,000 m ³) of white perch yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-28	Regional standing crop (in thousands) of white perch yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-29	Regional density (no./1,000 m ³) of white perch post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-30	Regional standing crop (in thousands) of white perch post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010

APPENDIX E

LIST OF TABLES (CONTINUED)

<u>Number</u>	<u>Title</u>
E-31	Regional density (no./1,000 m ³) of white perch young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-32	Regional standing crop (in thousands) of white perch young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-33	Regional density (no./1,000 m ³) of white perch young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-34	Regional standing crop (in thousands) of white perch young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-35	Regional catch-per-unit-effort of white perch young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-36	Regional standing crop (in thousands) of white perch young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-37	Regional density (no./1,000 m ³) of white perch yearling in Hudson River estuary determined from Long River Survey, 2010
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E-39	Regional density (no./1,000 m ³) of white perch yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-40	Regional standing crop (in thousands) of white perch yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-41	Regional catch-per-unit-effort of white perch yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-42	Regional standing crop (in thousands) of white perch yearling in Hudson River estuary determined from Beach Seine Survey, 2010
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E-44	Regional standing crop (in thousands) of white perch older-than-yearling in Hudson River estuary determined from Long River Survey, 2010
E-45	Regional density (no./1,000 m ³) of white perch older-than-yearling in Hudson River estuary determined from Fall Juvenile Survey, 2010

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E-48	Regional standing crop (in thousands) of white perch older-than-yearling in Hudson River estuary determined from Beach Seine Survey, 2010
E-49	Regional density (no./1,000 m ³) of Atlantic tomcod eggs in Hudson River estuary determined from Long River Survey, 2010
E-50	Regional standing crop (in thousands) of Atlantic tomcod eggs in Hudson River estuary determined from Long River Survey, 2010
E-51	Regional density (no./1,000 m ³) of Atlantic tomcod yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-52	Regional standing crop (in thousands) of Atlantic tomcod yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-53	Regional density (no./1,000 m ³) of Atlantic tomcod post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-54	Regional standing crop (in thousands) of Atlantic tomcod post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-55	Regional density (no./1,000 m ³) of Atlantic tomcod young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-56	Regional standing crop (in thousands) of Atlantic tomcod young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-57	Regional density (no./1,000 m ³) of Atlantic tomcod young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-58	Regional standing crop (in thousands) of Atlantic tomcod young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-59	Regional catch-per-unit-effort of Atlantic tomcod young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-60	Regional standing crop (in thousands) of Atlantic tomcod young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-61	Regional density (no./1,000 m ³) of Atlantic tomcod yearling and older in Hudson River estuary determined from Long River Survey, 2010

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E-68	Regional standing crop (in thousands) of bay anchovy eggs in Hudson River estuary determined from Long River Survey, 2010
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E-71	Regional density (no./1,000 m ³) of bay anchovy post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
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E-88	Regional standing crop (in thousands) of American shad yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-89	Regional density (no./1,000 m ³) of American shad post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-90	Regional standing crop (in thousands) of American shad post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-91	Regional density (no./1,000 m ³) of American shad young-of-year in Hudson River estuary determined from Long River Survey, 2010
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E-94	Regional standing crop (in thousands) of American shad young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
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E-96	Regional standing crop (in thousands) of American shad young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
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E-99	Regional density (no./1,000 m ³) of American shad yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-100	Regional standing crop (in thousands) of American shad yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-101	Regional catch-per-unit-effort of American shad yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-102	Regional standing crop (in thousands) of American shad yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-103	Regional density (no./1,000 m ³) of <i>Alosa</i> spp. eggs in Hudson River estuary determined from Long River Survey, 2010
E-104	Regional standing crop (in thousands) of <i>Alosa</i> spp. eggs in Hudson River estuary determined from Long River Survey, 2010
E-105	Regional density (no./1,000 m ³) of <i>Alosa</i> spp. yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-106	Regional standing crop (in thousands) of <i>Alosa</i> spp. yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-107	Regional density (no./1,000 m ³) of <i>Alosa</i> spp. post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010

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E-110	Regional standing crop (in thousands) of <i>Alosa</i> spp. young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-111	Regional density (no./1,000 m ³) of <i>Alosa</i> spp. young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-112	Regional standing crop (in thousands) of <i>Alosa</i> spp. young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-113	Regional catch-per-unit-effort of <i>Alosa</i> spp. young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-114	Regional standing crop (in thousands) of <i>Alosa</i> spp. young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-115	Regional density (no./1,000 m ³) of alewife young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-116	Regional standing crop (in thousands) of alewife young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-117	Regional density (no./1,000 m ³) of alewife young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-118	Regional standing crop (in thousands) of alewife young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-119	Regional catch-per-unit-effort of alewife young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-120	Regional standing crop (in thousands) of alewife young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-121	Regional density (no./1,000 m ³) of alewife yearling and older in Hudson River estuary determined from Long River Survey, 2010
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E-123	Regional density (no./1,000 m ³) of alewife yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010

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E-124	Regional standing crop (in thousands) of alewife yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-125	Regional catch-per-unit-effort of alewife yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-126	Regional standing crop (in thousands) of alewife yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-127	Regional density (no./1,000 m ³) of blueback herring young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-128	Regional standing crop (in thousands) of blueback herring young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-129	Regional density (no./1,000 m ³) of blueback herring young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-130	Regional standing crop (in thousands) of blueback herring young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-131	Regional catch-per-unit-effort of blueback herring young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-132	Regional standing crop (in thousands) of blueback herring young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-133	Regional density (no./1,000 m ³) of blueback herring yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-134	Regional standing crop (in thousands) of blueback herring yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-135	Regional density (no./1,000 m ³) of blueback herring yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-136	Regional standing crop (in thousands) of blueback herring yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-137	Regional catch-per-unit-effort of blueback herring yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-138	Regional standing crop (in thousands) of blueback herring yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010

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E-139	Regional density (no./1,000 m ³) of gizzard shad young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-140	Regional standing crop (in thousands) of gizzard shad young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-141	Regional catch-per-unit-effort of gizzard shad young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-142	Regional standing crop (in thousands) of gizzard shad young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-143	Regional density (no./1,000 m ³) of gizzard shad yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-144	Regional standing crop (in thousands) of gizzard shad yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-145	Regional catch-per-unit-effort of gizzard shad yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-146	Regional standing crop (in thousands) of gizzard shad yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-147	Regional density (no./1,000 m ³) of rainbow smelt yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-148	Regional standing crop (in thousands) of rainbow smelt yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-149	Regional density (no./1,000 m ³) of rainbow smelt yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-150	Regional standing crop (in thousands) of rainbow smelt yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-151	Regional catch-per-unit-effort of rainbow smelt yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-152	Regional standing crop (in thousands) of rainbow smelt yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-153	Regional density (no./1,000 m ³) of hogchoker eggs in Hudson River estuary determined from Long River Survey, 2010
E-154	Regional standing crop (in thousands) of hogchoker eggs in Hudson River estuary determined from Long River Survey, 2010

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E-155	Regional density (no./1,000 m ³) of hogchoker yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-156	Regional standing crop (in thousands) of hogchoker yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-157	Regional density (no./1,000 m ³) of hogchoker post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-158	Regional standing crop (in thousands) of hogchoker post yolk-sac larvae in Hudson River estuary determined from Long River Survey, 2010
E-159	Regional density (no./1,000 m ³) of hogchoker young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-160	Regional standing crop (in thousands) of hogchoker young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-161	Regional density (no./1,000 m ³) of hogchoker young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-162	Regional standing crop (in thousands) of hogchoker young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-163	Regional catch-per-unit-effort of hogchoker young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-164	Regional standing crop (in thousands) of hogchoker young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-165	Regional density (no./1,000 m ³) of hogchoker yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-166	Regional standing crop (in thousands) of hogchoker yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-167	Regional density (no./1,000 m ³) of hogchoker yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-168	Regional standing crop (in thousands) of hogchoker yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-169	Regional catch-per-unit-effort of hogchoker yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010

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E-170	Regional standing crop (in thousands) of hogchoker yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-171	Regional density (no./1,000 m ³) of spottail shiner young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-172	Regional standing crop (in thousands) of spottail shiner young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-173	Regional density (no./1,000 m ³) of spottail shiner young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-174	Regional standing crop (in thousands) of spottail shiner young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-175	Regional catch-per-unit-effort of spottail shiner young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-176	Regional standing crop (in thousands) of spottail shiner young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-177	Regional density (no./1,000 m ³) of spottail shiner yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-178	Regional standing crop (in thousands) of spottail shiner yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-179	Regional density (no./1,000 m ³) of spottail shiner yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-180	Regional standing crop (in thousands) of spottail shiner yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-181	Regional catch-per-unit-effort of spottail shiner yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-182	Regional standing crop (in thousands) of spottail shiner yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-183	Regional density (no./1,000 m ³) of Atlantic sturgeon yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-184	Regional standing crop (in thousands) of Atlantic sturgeon yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-185	Regional density (no./1,000 m ³) of Atlantic sturgeon yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010

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E-186	Regional standing crop (in thousands) of Atlantic sturgeon yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-187	Regional catch-per-unit-effort of Atlantic sturgeon yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-188	Regional standing crop (in thousands) of Atlantic sturgeon yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-189	Regional density (no./1,000 m ³) of shortnose sturgeon yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-190	Regional standing crop (in thousands) of shortnose sturgeon yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-191	Regional density (no./1,000 m ³) of shortnose sturgeon yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-192	Regional standing crop (in thousands) of shortnose sturgeon yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-193	Regional catch-per-unit-effort of shortnose sturgeon yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-194	Regional standing crop (in thousands) of shortnose sturgeon yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-195	Regional density (no./1,000 m ³) of white catfish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-196	Regional standing crop (in thousands) of white catfish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-197	Regional density (no./1,000 m ³) of white catfish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-198	Regional standing crop (in thousands) of white catfish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-199	Regional catch-per-unit-effort of white catfish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-200	Regional standing crop (in thousands) of white catfish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010

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E-201	Regional density (no./1,000 m ³) of white catfish yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-202	Regional standing crop (in thousands) of white catfish yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-203	Regional density (no./1,000 m ³) of white catfish yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-204	Regional standing crop (in thousands) of white catfish yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-205	Regional catch-per-unit-effort of white catfish yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-206	Regional standing crop (in thousands) of white catfish yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-207	Regional density (no./1,000 m ³) of weakfish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-208	Regional standing crop (in thousands) of weakfish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-209	Regional density (no./1,000 m ³) of weakfish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-210	Regional standing crop (in thousands) of weakfish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-211	Regional catch-per-unit-effort of weakfish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-212	Regional standing crop (in thousands) of weakfish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-213	Regional density (no./1,000 m ³) of weakfish yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-214	Regional standing crop (in thousands) of weakfish yearling and older in Hudson River estuary determined from Long River Survey, 2010
E-215	Regional density (no./1,000 m ³) of weakfish yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-216	Regional standing crop (in thousands) of weakfish yearling and older in Hudson River estuary determined from Fall Juvenile Survey, 2010

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E-217	Regional catch-per-unit-effort of weakfish yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-218	Regional standing crop (in thousands) of weakfish yearling and older in Hudson River estuary determined from Beach Seine Survey, 2010
E-219	Regional density (no./1,000 m ³) of bluefish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-220	Regional standing crop (in thousands) of bluefish young-of-year in Hudson River estuary determined from Long River Survey, 2010
E-221	Regional density (no./1,000 m ³) of bluefish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-222	Regional standing crop (in thousands) of bluefish young-of-year in Hudson River estuary determined from Fall Juvenile Survey, 2010
E-223	Regional catch-per-unit-effort of bluefish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010
E-224	Regional standing crop (in thousands) of bluefish young-of-year in Hudson River estuary determined from Beach Seine Survey, 2010

TABLE E-1 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.04
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.47
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	2.09	4.23	20.08	25.34	0.00	0.31	1.75	2.09	4.30
	SE	0.00	0.00	0.00	0.00	0.00	1.61	2.43	9.69	24.67	0.00	0.31	1.75	1.21	26.75
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.47	0.36	0.00	5.74	127.09	99.81	217.55	50.98	272.10	165.15	9.91	0.00	73.01
	SE	0.00	0.47	0.36	0.00	1.89	84.73	76.52	159.09	14.48	73.40	72.38	5.38	0.00	221.84
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	1.33	1591.13	944.16	46.70	481.36	92.36	30.02	21.02	0.00	246.77
	SE	0.00	0.00	0.00	0.00	1.33	743.17	497.46	23.17	154.91	36.19	11.27	7.99	0.00	908.73
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.37	0.48	101.14	1069.08	763.60	184.53	45.58	11.28	0.00	0.30	167.41
	SE	0.00	0.00	0.00	0.21	0.39	97.50	592.62	232.28	57.90	9.80	5.06	0.00	0.30	646.63
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	1.20	0.82	6.72	10.14	5599.62	2872.13	5530.13	425.89	16.25	52.64	128.70	0.00	1126.48
	SE	0.00	0.60	0.65	3.17	3.58	1650.08	1314.70	4049.15	255.12	9.57	20.75	81.52	0.00	4573.74
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	6.34	0.56	4.28	19.05	723.87	673.41	665.16	284.81	1403.19	368.66	115.28	176.95	341.66
	SE	0.00	6.34	0.41	2.62	5.58	235.25	254.65	323.59	265.11	400.96	264.84	62.94	57.50	730.37
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	229.81	0.00	5.84	7.69	219.60	49.76	59.63	68.25	5.81	16.82	3.27	187.59	65.70
	SE	0.00	229.81	0.00	1.82	3.32	152.64	28.26	36.08	64.09	3.49	6.09	2.76	98.22	303.38
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-1 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.04	2.63	8.82	3.53	1.57	5.76	0.00	1.10	0.00	1.80
11JUN	SE	0.00	0.00	0.00	0.00	0.04	1.64	3.20	2.49	0.90	2.07	0.00	1.10	0.00	5.05
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	2.17	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.18
18JUN	SE	0.00	0.00	0.00	0.00	0.00	1.23	0.00	0.20	0.00	0.00	0.00	0.00	0.00	1.25
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.07
25JUN	SE	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.79
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.62	0.07
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.62	0.66
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-2 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
16MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	33	33
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	33	33
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST.CROP	0	0	0	0	0	433	591	5986	4193	0	55	282	148	11689
23APR	SE	0	0	0	0	0	335	340	2889	4083	0	55	282	86	5033
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST.CROP	0	108	117	0	1195	26366	13952	64859	8436	38494	29116	1594	0	184236
30APR	SE	0	108	117	0	395	17577	10696	47431	2397	10384	12760	864	0	54318
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST.CROP	0	0	0	0	278	330089	131985	13923	79658	13066	5292	3378	0	577667
07MAY	SE	0	0	0	0	278	154174	69540	6907	25635	5120	1987	1285	0	171296
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST.CROP	0	0	0	54	101	20983	149448	227654	30536	6448	1989	0	21	437234
14MAY	SE	0	0	0	31	81	20228	82843	69249	9581	1387	893	0	21	110282
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST.CROP	0	276	264	992	2112	1161673	401498	1648715	70478	2299	9281	20686	0	3318274
21MAY	SE	0	139	210	468	746	342318	183784	1207186	42218	1354	3658	13103	0	1268947
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST.CROP	0	1454	179	632	3968	150172	94136	198305	47131	198509	64994	18528	12590	790598
28MAY	SE	0	1454	133	388	1163	48805	35598	96474	43871	56724	46690	10116	4091	142833
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST.CROP	0	52723	0	862	1603	45557	6956	17778	11294	823	2964	525	13347	154432
04JUN	SE	0	52723	0	269	692	31667	3950	10757	10606	494	1074	443	6988	63853
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-2 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
08JUN- ST.CROP	0	0	0	0	9	547	1233	1053	259	815	0	177	0	4092
11JUN SE	0	0	0	0	9	340	447	744	149	293	0	177	0	1004
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN- ST.CROP	0	0	0	0	0	450	0	58	0	0	0	0	0	509
18JUN SE	0	0	0	0	0	256	0	58	0	0	0	0	0	263
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN- ST.CROP	0	0	0	0	158	0	0	65	0	0	0	0	0	223
25JUN SE	0	0	0	0	158	0	0	65	0	0	0	0	0	170
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN- ST.CROP	0	0	0	0	0	0	0	0	0	35	0	0	44	79
02JUL SE	0	0	0	0	0	0	0	0	0	35	0	0	44	56
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-3 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.72	0.70	0.00	0.00	0.16
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.72	0.70	0.00	0.00	1.19
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.35	6.64	23.11	18.78	45.53	129.19	11.85	17.35	5.28	0.31	0.00	19.88
30APR	SE	0.00	0.00	0.35	2.73	5.83	9.04	15.36	48.31	2.72	2.37	2.36	0.31	0.00	52.08
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	1.09	2.65	26.74	287.26	233.84	329.84	345.28	106.76	46.79	15.51	0.00	107.37
07MAY	SE	0.00	0.00	0.66	1.46	11.05	143.22	57.67	158.83	88.43	27.03	22.29	9.23	0.00	241.49
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.87	1.17	13.61	200.49	685.16	1676.41	283.14	148.48	16.82	0.32	0.39	232.84
14MAY	SE	0.00	0.00	0.69	0.62	6.26	104.53	202.02	359.35	105.74	70.59	4.79	0.32	0.39	443.95
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.18	0.00	64.83	8683.72	7205.45	5833.72	606.12	496.35	144.22	21.94	0.00	1773.58
21MAY	SE	0.00	0.00	0.18	0.00	35.54	4179.05	3646.61	2049.65	278.64	293.05	56.16	17.62	0.00	5927.19
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	2.08	1389.82	1344.11	3218.57	316.99	331.20	26.21	13.39	1.58	511.07
28MAY	SE	0.00	0.00	0.00	0.00	1.07	690.72	505.78	1706.17	183.68	160.31	8.01	7.48	1.13	1924.44
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.37	0.00	0.00	0.00	11.27	542.10	663.04	567.23	68.11	190.70	46.80	19.20	8.03	162.84
04JUN	SE	0.37	0.00	0.00	0.00	9.63	270.20	185.01	136.11	26.05	109.73	23.69	15.31	8.03	373.41
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-3 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.23	2.21	15.44	1.03	0.00	2.45	0.00	1.56	1.76
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.13	1.26	10.15	0.55	0.00	2.45	0.00	1.12	10.59
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.82	1.27	1.17	1.25	1.39	0.60	0.54	0.00	0.54
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.63	1.13	1.17	1.12	1.39	0.60	0.54	0.00	2.62
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14	1.05	0.00	0.00	0.00	0.00	0.25
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	1.05	0.00	0.00	0.00	0.00	1.60
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.07
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.79
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-4 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	103	102	124	0	0	330
23APR	SE	0	0	0	0	0	0	0	0	103	102	124	0	0	191
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	113	981	4815	3896	6364	38516	1961	2454	930	50	0	60080
30APR	SE	0	0	113	404	1214	1876	2147	14403	450	335	417	50	0	14756
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	352	392	5572	59593	32689	98335	57139	15104	8249	2494	0	279918
07MAY	SE	0	0	213	216	2302	29712	8061	47351	14633	3824	3929	1483	0	58666
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	279	173	2836	41593	95779	499795	46855	21005	2965	51	28	711359
14MAY	SE	0	0	222	91	1304	21685	28241	107133	17498	9986	844	51	28	114690
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	57	0	13506	1801487	1007258	1739228	100304	70219	25426	3527	0	4761012
21MAY	SE	0	0	57	0	7403	866969	509763	611069	46111	41458	9900	2832	0	1178518
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	434	288327	187895	959563	52456	46854	4620	2153	112	1542414
28MAY	SE	0	0	0	0	224	143294	70703	508665	30397	22679	1412	1202	80	534522
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	76	0	0	0	2348	112462	92688	169111	11272	26978	8251	3086	572	426842
04JUN	SE	76	0	0	0	2007	56055	25862	40579	4311	15523	4177	2461	572	75797
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-4 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	48	310	4604	171	0	432	0	111	5674
11JUN	SE	0	0	0	0	0	28	177	3027	91	0	432	0	80	3065
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	171	177	350	206	197	105	86	0	1292
18JUN	SE	0	0	0	0	0	132	158	350	185	197	105	86	0	506
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	638	173	0	0	0	0	811
25JUN	SE	0	0	0	0	0	0	0	360	173	0	0	0	0	400
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	23	0	232	0	0	0	0	0	256
02JUL	SE	0	0	0	0	0	23	0	232	0	0	0	0	0	234
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-5 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	1.26	7.50	6.05	57.45	53.58	85.67	31.70	9.50	1.63	0.00	0.00	19.56
	SE	0.00	0.00	0.73	1.99	2.68	27.97	21.28	33.13	9.06	5.54	1.63	0.00	0.00	49.59
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.11	2.18	137.42	408.48	484.54	526.67	363.40	31.70	23.11	10.52	0.00	0.39	152.96
	SE	0.00	0.11	1.99	25.20	89.96	240.51	118.15	137.88	13.96	6.14	7.01	0.00	0.39	315.96
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	1.10	32.14	177.11	521.91	1386.93	736.11	1162.98	131.37	128.05	96.06	37.45	5.12	339.72
	SE	0.00	0.71	24.31	89.19	99.96	65.73	237.38	384.82	47.86	31.39	46.64	15.03	3.48	482.68
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	4.79	1.97	2.58	127.58	2699.24	18229.00	7185.56	4331.18	434.06	1116.78	158.02	178.71	0.66	2651.55
	SE	4.53	1.62	1.12	44.14	895.22	4548.72	1154.21	3603.06	312.75	499.43	45.02	24.24	0.66	6013.19
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	1.38	6.21	144.51	1344.96	3704.54	3519.25	6703.30	2707.77	921.44	1259.99	279.75	105.99	10.51	1593.05
	SE	0.73	2.97	51.47	430.87	771.77	349.96	1916.60	1013.98	337.19	320.25	61.87	31.30	10.51	2414.35
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-5 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	3.42	9.56	40.99	214.14	2201.85	2585.92	1300.85	654.56	870.97	593.38	573.34	7.99	696.69
11JUN	SE	0.00	2.71	3.14	5.78	158.31	613.74	1071.41	754.87	362.26	195.43	285.62	248.39	3.58	1559.56
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	6.35	33.19	98.53	139.44	171.80	369.49	629.47	115.95	257.28	362.36	284.53	198.14	0.66	205.17
18JUN	SE	3.84	10.24	26.41	37.90	65.18	64.02	98.92	32.75	99.98	53.00	52.40	131.18	0.66	232.85
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.82	1.21	31.67	51.18	96.56	151.60	74.83	49.09	55.63	40.83	65.86	9.94	48.40
25JUN	SE	0.00	0.82	0.74	9.03	28.87	30.59	56.50	16.80	21.66	7.68	10.79	12.39	9.94	78.89
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.30	0.97	1.41	3.93	64.01	92.44	22.51	15.70	36.37	62.55	4.29	11.41	24.30
02JUL	SE	0.00	0.30	0.75	1.17	2.06	17.91	46.89	12.32	6.53	11.37	54.86	2.32	11.41	77.43
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	4.04	6.47	13.08	NS	NS	NS	NS	NS	2.95
16JUL	SE	0.00	0.00	0.00	0.00	0.00	3.63	3.44	8.80						10.12
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	NS	NS	NS	NS	NS	0.04
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00						0.32
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-6 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	404	1108	1261	11918	7490	25540	5246	1343	287	0	0	54598
07MAY	SE	0	0	234	294	559	5802	2974	9877	1499	784	287	0	0	11978
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	26	703	20301	85101	100520	73623	108340	5246	3269	1854	0	28	399011
14MAY	SE	0	26	639	3723	18743	49896	16516	41105	2310	868	1235	0	28	69464
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	253	10343	26165	108733	287727	102902	346722	21740	18115	16935	6020	364	946020
21MAY	SE	0	162	7825	13176	20824	13636	33183	114727	7919	4441	8223	2416	248	123587
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	1002	452	831	18848	562350	3781710	1004477	1291270	71831	157991	27858	28725	47	6947392
28MAY	SE	946	372	362	6521	186507	943659	161348	1074194	51756	70654	7937	3896	47	1453615
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	288	1425	46505	198701	771790	730089	937062	807275	152485	178251	49319	17037	747	3890972
04JUN	SE	152	682	16565	63656	160788	72600	267924	302300	55800	45305	10908	5032	747	451587
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-6 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	784	3077	6056	44614	456786	361488	387826	108320	123216	104610	92153	569
11JUN	SE	0	621	1010	854	32981	127323	149773	225052	59949	27648	50353	39924	254
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	1327	7614	31708	20600	35791	76652	87994	34569	42576	51264	50161	31847	47
18JUN	SE	803	2350	8500	5599	13579	13281	13829	9765	16546	7498	9237	21085	47
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	188	390	4678	10663	20031	21192	22309	8124	7869	7198	10586	707
25JUN	SE	0	188	239	1335	6014	6345	7898	5009	3584	1086	1903	1991	707
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	68	312	208	819	13280	12922	6710	2599	5145	11028	689	812
02JUL	SE	0	68	243	173	429	3717	6555	3672	1081	1609	9672	373	812
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	838	904	3898	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	752	481	2622					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	44	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	44	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-7 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-7 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.00	0.27	4.91	0.00	0.00	1.15	0.00	0.27	6.69	2.52	13.80	1.90
18JUN	SE	0.00	0.00	0.27	4.91	0.00	0.00	0.68	0.00	0.27	3.60	1.37	7.68	0.05
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	3.33	4.77	2.17	6.32	3.17	0.28	2.21	11.06	2.32	2.39
25JUN	SE	0.00	0.00	0.00	2.63	2.68	1.01	2.83	1.25	0.17	1.55	3.59	2.32	2.39
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	11.58	10.45	0.13	0.00	2.72	0.00	0.28	5.46	12.70	14.36	2.54
02JUL	SE	0.00	0.00	5.40	5.58	0.10	0.00	0.96	0.00	0.17	1.90	5.76	6.32	2.54
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	1.72	0.00	2.54	0.72	0.00	1.49	4.20	4.95	NS	NS	NS	NS	NS
16JUL	SE	1.72	0.00	1.36	0.72	0.00	0.68	1.69	1.91					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	0.00	0.00	2.98	2.66	6.21	0.38	4.14	0.53	NS	NS	NS	NS	NS
29JUL	SE	0.00	0.00	2.20	2.00	3.43	0.24	1.08	0.26					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	0.00	0.00	0.00	0.00	9.73	0.25	0.79	0.00	NS	NS	NS	NS	NS
12AUG	SE	0.00	0.00	0.00	0.00	6.29	0.15	0.79	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	0.00	0.00	0.00	0.00	1.65	0.12	1.56	0.72	NS	NS	NS	NS	NS
26AUG	SE	0.00	0.00	0.00	0.00	1.65	0.12	0.81	0.72					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	0.00	0.00	0.00	0.97	1.11	0.45	6.56	0.42	NS	NS	NS	NS	NS
10SEP	SE	0.00	0.00	0.00	0.97	0.61	0.33	4.79	0.42					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	2.46	0.00	0.00	0.00	3.27	0.93	2.50	0.00	NS	NS	NS	NS	NS
23SEP	SE	2.46	0.00	0.00	0.00	1.92	0.50	1.71	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	0.00	0.00	0.00	4.34	3.51	1.00	1.14	1.02	NS	NS	NS	NS	NS
07OCT	SE	0.00	0.00	0.00	2.05	3.35	0.68	0.76	0.80					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-8 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-8 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED													
DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN- ST. CROP	0	0	85	726	0	0	161	0	45	946	444	2218	135
18JUN SE	0	0	85	726	0	0	94	0	45	509	241	1234	3
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN- ST. CROP	0	0	0	492	994	449	884	944	47	313	1949	372	170
25JUN SE	0	0	0	389	558	209	396	372	29	219	634	372	170
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN- ST. CROP	0	0	3727	1545	28	0	381	0	46	772	2238	2308	180
02JUL SE	0	0	1739	825	21	0	135	0	28	269	1015	1016	180
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL- ST. CROP	359	0	818	106	0	309	587	1475	NS	NS	NS	NS	NS
16JUL SE	359	0	439	106	0	141	236	570					
NO. TOWS	6	11	13	14	13	8	10	6					
27JUL- ST. CROP	0	0	959	393	1293	78	579	158	NS	NS	NS	NS	NS
29JUL SE	0	0	709	295	715	50	150	79					
NO. TOWS	6	11	13	14	13	8	10	6					
10AUG- ST. CROP	0	0	0	0	2026	52	111	0	NS	NS	NS	NS	NS
12AUG SE	0	0	0	0	1311	30	111	0					
NO. TOWS	6	11	13	14	13	8	10	6					
24AUG- ST. CROP	0	0	0	0	345	26	217	214	NS	NS	NS	NS	NS
26AUG SE	0	0	0	0	345	26	113	214					
NO. TOWS	6	11	13	14	13	8	10	6					
08SEP- ST. CROP	0	0	0	143	231	94	917	125	NS	NS	NS	NS	NS
10SEP SE	0	0	0	143	127	68	670	125					
NO. TOWS	6	11	13	14	13	8	10	5					
21SEP- ST. CROP	514	0	0	0	681	194	349	0	NS	NS	NS	NS	NS
23SEP SE	514	0	0	0	399	103	238	0					
NO. TOWS	6	11	13	14	13	8	10	6					
04OCT- ST. CROP	0	0	0	641	732	207	159	304	NS	NS	NS	NS	NS
07OCT SE	0	0	0	303	698	142	107	238					
NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-9 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL-	DENSITY	0.00	0.33	1.10	1.38	1.23	6.05	11.19	7.23	1.06	0.43	0.42	2.69	0.10	2.55
09JUL	SE	0.00	0.33	0.58	0.63	1.23	1.39	6.21	3.21	1.02	0.19	0.17	1.81	0.10	7.59
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.15	0.07	0.02	4.62	1.04	0.28	0.00	1.22	0.22	0.26	0.44	0.64
23JUL	SE	0.00	0.00	0.10	0.05	0.02	1.95	0.73	0.20	0.00	0.60	0.14	0.26	0.31	2.22
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	5.88	7.28	1.76	0.54	1.39	0.30	0.22	2.81	1.88	2.35	2.15	2.04
06AUG	SE	0.00	0.00	2.15	2.46	0.64	0.24	0.43	0.20	0.05	1.17	0.39	0.74	1.24	3.87
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	1.34	1.27	1.69	0.33	0.83	0.66	0.14	1.73	1.30	0.85	0.94	0.85
20AUG	SE	0.00	0.00	0.51	0.86	0.60	0.13	0.22	0.28	0.04	0.52	0.54	0.50	0.43	1.58
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.77	1.73	0.53	0.30	0.64	0.36	0.06	3.12	2.56	3.51	0.89	1.11
03SEP	SE	0.00	0.00	0.34	0.67	0.12	0.07	0.17	0.22	0.04	1.64	0.24	0.66	0.36	1.99
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.77	0.89	0.80	0.43	1.19	0.21	0.39	0.91	1.83	0.62	0.17	0.63
16SEP	SE	0.00	0.00	0.35	0.38	0.25	0.13	0.42	0.08	0.35	0.32	0.30	0.47	0.10	1.04
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.02	1.11	0.36	0.70	0.59	0.15	0.00	0.48	0.33	0.47	0.19	0.34
30SEP	SE	0.00	0.00	0.02	0.58	0.13	0.27	0.21	0.06	0.00	0.20	0.33	0.47	0.19	0.94
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	1.16	3.54	2.97	0.63	0.23	0.30	0.20	0.19	0.06	0.00	0.38	0.00	0.00	0.74
14OCT	SE	0.36	1.16	0.76	0.30	0.08	0.22	0.07	0.19	0.04	0.00	0.23	0.00	0.00	1.51
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.05	0.57	2.89	0.52	0.05	0.00	0.03	0.00	0.00	0.00	0.03	0.08	0.00	0.33
29OCT	SE	0.05	0.28	0.58	0.22	0.03	0.00	0.02	0.00	0.00	0.00	0.03	0.05	0.00	0.69
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.23	1.09	1.10	0.41	0.02	0.01	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.22
12NOV	SE	0.15	0.28	0.39	0.17	0.02	0.01	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.53
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.27	0.15	0.36	0.47	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
03DEC	SE	0.12	0.07	0.24	0.26	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-10 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL	ST. CROP	0	75	354	204	257	1254	1564	2156	176	61	74	433	7	6615
09JUL	SE	0	75	186	93	257	288	868	958	169	27	31	291	7	1409
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL	ST. CROP	0	0	49	10	3	958	145	82	0	173	39	41	31	1533
23JUL	SE	0	0	32	7	3	404	101	61	0	86	25	41	22	434
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG	ST. CROP	0	0	1891	1075	367	112	195	91	37	398	332	377	153	5028
06AUG	SE	0	0	691	363	134	49	60	60	8	165	68	119	88	832
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG	ST. CROP	0	0	431	188	352	68	116	196	23	245	229	137	67	2052
20AUG	SE	0	0	165	127	124	27	31	83	6	74	96	80	30	299
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG	ST. CROP	0	0	249	255	109	62	89	107	10	442	452	564	63	2401
03SEP	SE	0	0	109	98	26	14	24	66	7	232	42	106	25	308
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP	ST. CROP	0	0	249	132	167	89	167	64	65	129	323	100	12	1495
16SEP	SE	0	0	113	55	52	28	59	25	58	46	52	76	7	194
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP	ST. CROP	0	0	7	164	74	145	82	44	0	68	59	75	14	733
30SEP	SE	0	0	7	85	26	56	30	19	0	28	59	75	14	150
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT	ST. CROP	242	813	956	92	49	61	28	55	10	0	67	0	0	2373
14OCT	SE	75	265	243	44	16	45	10	55	7	0	41	0	0	380
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT	ST. CROP	11	131	930	77	10	0	5	0	0	0	5	13	0	1182
29OCT	SE	11	64	186	33	7	0	3	0	0	0	5	8	0	200
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV	ST. CROP	47	251	354	61	5	1	0	4	0	0	4	0	0	727
12NOV	SE	31	65	126	26	5	1	0	4	0	0	4	0	0	147
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV	ST. CROP	57	34	115	69	0	2	0	0	0	0	0	0	0	277
03DEC	SE	24	17	77	39	0	2	0	0	0	0	0	0	0	91
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-11 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	1.00	0.09	0.00	0.33	0.00	0.00	0.75	4.63	2.38	3.47	18.32	0.67	2.64
17JUN	SE	1.00	0.09	0.00	0.33	0.00	0.00	0.53	1.40	0.96	1.73	4.83	0.41	5.55
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	34.33	23.82	37.57	15.00	21.67	39.00	2.63	8.38	38.00	18.93	97.79	16.33	29.45
01JUL	SE	14.45	6.39	5.89	10.26	10.81	23.44	0.82	7.11	18.18	6.53	32.91	6.76	51.07
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	9.00	36.27	16.14	146.00	48.67	16.33	2.25	5.88	6.75	8.33	13.53	8.58	26.48
15JUL	SE	4.73	16.73	4.71	135.01	7.51	4.48	0.96	4.34	4.26	4.79	3.53	4.61	136.83
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	8.40	28.58	33.07	15.60	5.40	6.17	0.60	0.40	3.20	4.89	7.40	23.00	11.39
30JUL	SE	3.44	4.34	5.34	6.24	0.93	3.53	0.60	0.24	1.20	3.06	1.81	11.22	15.87
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	5.00	7.88	26.50	3.00	7.00	7.33	0.80	1.00	1.60	10.89	5.10	2.00	6.51
13AUG	SE	1.95	1.80	7.62	2.51	2.30	3.23	0.20	1.00	1.12	7.37	2.95	1.07	12.39
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	1.80	6.63	22.43	12.20	6.20	4.67	2.80	0.60	1.40	7.11	11.90	8.86	7.22
27AUG	SE	1.32	1.67	4.99	6.09	1.93	1.48	0.97	0.60	0.68	1.92	5.05	2.70	10.52
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.80	9.21	10.21	17.00	5.60	4.83	1.80	4.60	5.40	4.67	2.30	1.71	5.68
10SEP	SE	0.20	2.50	3.13	5.89	2.68	2.18	0.58	4.35	4.66	2.55	1.08	0.75	10.58
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	4.80	9.00	14.64	13.40	2.80	4.83	1.20	0.60	1.60	3.89	2.70	0.29	4.98
24SEP	SE	3.38	1.70	4.06	7.69	1.59	2.10	0.97	0.60	1.60	1.47	1.15	0.18	10.21
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	5.20	3.83	8.07	3.00	13.80	2.00	2.20	0.40	9.80	2.11	2.80	0.43	4.47
07OCT	SE	3.56	0.98	2.05	1.10	7.75	0.37	0.73	0.24	6.92	0.87	1.18	0.30	11.41
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	5.40	1.46	2.07	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.82
22OCT	SE	2.42	0.37	0.96	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	2.69
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-12 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	8	4	0	3	0	0	5	6	20	61	360	9	477
17JUN	SE	8	4	0	3	0	0	4	2	8	30	95	6	101
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	259	1082	1010	138	57	415	19	10	327	332	1924	222	5796
01JUL	SE	109	290	158	95	28	250	6	9	156	115	647	92	812
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	68	1648	434	1345	128	174	16	7	58	146	266	117	4408
15JUL	SE	36	760	127	1244	20	48	7	5	37	84	69	63	1471
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	63	1299	889	144	14	66	4	< 0.5	28	86	146	312	3051
30JUL	SE	26	197	144	58	2	38	4	< 0.5	10	54	36	152	304
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	38	358	713	28	18	78	6	1	14	191	100	27	1572
13AUG	SE	15	82	205	23	6	34	1	1	10	129	58	15	266
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	14	301	603	112	16	50	20	1	12	125	234	120	1608
27AUG	SE	10	76	134	56	5	16	7	1	6	34	99	37	199
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	6	418	275	157	15	51	13	6	46	82	45	23	1137
10SEP	SE	2	114	84	54	7	23	4	5	40	45	21	10	167
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	36	409	394	123	7	51	9	1	14	68	53	4	1169
24SEP	SE	25	77	109	71	4	22	7	1	14	26	23	3	160
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	39	174	217	28	36	21	16	< 0.5	84	37	55	6	714
07OCT	SE	27	45	55	10	20	4	5	< 0.5	60	15	23	4	103
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	41	66	56	7	0	0	0	0	0	0	2	0	172
22OCT	SE	18	17	26	5	0	0	0	0	0	0	2	0	36
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-13 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.21	0.80	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.14
26MAR	SE	0.21	0.44	0.00	0.00	0.00	0.00	0.00							0.49
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.86	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.12
02APR	SE	0.00	0.43	0.00	0.00	0.00	0.00	0.00							0.43
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.49	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
08APR	SE	0.49	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.28	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
16APR	SE	0.00	0.28	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.46	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
30APR	SE	0.00	0.00	0.00	0.30	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.30
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.31	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
07MAY	SE	0.00	0.00	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.04
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.30
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-13 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.00	0.07
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.30
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.22	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.08
18JUN	SE	0.00	0.00	0.00	0.22	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.79
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
02JUL	SE	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	1.80	0.00	3.69	2.56	0.13	0.00	0.00	0.91	NS	NS	NS	NS	NS	1.14
10SEP	SE	1.80	0.00	2.84	1.38	0.13	0.00	0.00	0.91						3.75
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.76	2.96	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.47
07OCT	SE	0.00	0.00	0.76	2.26	0.00	0.00	0.00	0.00						2.38
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-14 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	44	183	0	0	0	0	0	NS	NS	NS	NS	NS	NS	227
26MAR	SE	44	102	0	0	0	0	0							111
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	197	0	0	0	0	0	NS	NS	NS	NS	NS	NS	197
02APR	SE	0	99	0	0	0	0	0							99
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	101	116	0	0	0	0	0	0	0	0	0	0	0	218
08APR	SE	101	67	0	0	0	0	0	0	0	0	0	0	0	122
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	65	0	29	0	0	0	0	0	0	0	0	0	94
16APR	SE	0	65	0	29	0	0	0	0	0	0	0	0	0	71
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	68	0	0	5	0	0	0	0	0	0	73
30APR	SE	0	0	0	44	0	0	5	0	0	0	0	0	0	45
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	100	27	0	0	0	0	0	0	0	0	0	127
07MAY	SE	0	0	58	27	0	0	0	0	0	0	0	0	0	64
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	5	0	0	0	0	0	0	5
14MAY	SE	0	0	0	0	0	0	5	0	0	0	0	0	0	5
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	85	0	0	85
04JUN	SE	0	0	0	0	0	0	0	0	0	0	52	0	0	52
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-14 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	156	0	0	156
11JUN	SE	0	0	0	0	0	0	0	0	0	0	52	0	0	52
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	32	0	0	106	0	0	0	0	0	0	139
18JUN	SE	0	0	0	32	0	0	106	0	0	0	0	0	0	111
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	165	0	0	0	0	0	0	0	0	0	165
02JUL	SE	0	0	0	83	0	0	0	0	0	0	0	0	0	83
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	376	0	1188	378	26	0	0	273	NS	NS	NS	NS	NS	2241
10SEP	SE	376	0	915	203	26	0	0	273						1046
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	246	437	0	0	0	0	NS	NS	NS	NS	NS	683
07OCT	SE	0	0	246	333	0	0	0	0						414
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-15 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
09JUL	SE	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.11	0.01
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.11	0.13
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.00	0.21	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.53	0.00	0.06
06AUG	SE	0.00	0.00	0.00	0.16	0.04	0.00	0.00	0.02	0.00	0.00	0.00	0.53	0.00	0.55
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.19	0.03
20AUG	SE	0.00	0.00	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.11	0.14
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.03	0.05	0.15	0.00	0.21	0.03	0.00	0.00	0.00	0.86	0.00	0.00	0.10
03SEP	SE	0.00	0.03	0.04	0.07	0.00	0.21	0.03	0.00	0.00	0.00	0.86	0.00	0.00	0.89
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.10	0.06	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.08	0.02
16SEP	SE	0.00	0.00	0.08	0.06	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.08	0.13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.07	0.00	0.03	0.00	0.00	< 0.005	0.00	0.02	0.00	0.00	0.00	0.00	0.01
14OCT	SE	0.00	0.04	0.00	0.03	0.00	0.00	< 0.005	0.00	0.02	0.00	0.00	0.00	0.00	0.05
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.04	0.20	0.26	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
29OCT	SE	0.00	0.03	0.09	0.18	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.02	0.18	0.16	0.11	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
12NOV	SE	0.02	0.09	0.08	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.11	0.00	0.10	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
03DEC	SE	0.06	0.00	0.06	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-16 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL	ST. CROP	0	0	0	6	0	0	0	0	0	0	0	0	0	6
09JUL	SE	0	0	0	6	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL	ST. CROP	0	0	0	0	0	0	0	0	0	0	13	0	8	21
23JUL	SE	0	0	0	0	0	0	0	0	0	0	13	0	8	15
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG	ST. CROP	0	0	0	31	11	0	0	5	0	0	0	84	0	131
06AUG	SE	0	0	0	23	8	0	0	5	0	0	0	84	0	88
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG	ST. CROP	0	0	11	8	0	0	0	0	0	0	11	0	13	44
20AUG	SE	0	0	11	8	0	0	0	0	0	0	11	0	8	19
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG	ST. CROP	0	7	17	22	0	43	4	0	0	0	152	0	0	245
03SEP	SE	0	7	11	10	0	43	4	0	0	0	152	0	0	159
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP	ST. CROP	0	0	31	8	3	0	0	0	3	0	0	0	6	51
16SEP	SE	0	0	24	8	3	0	0	0	3	0	0	0	6	27
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP	ST. CROP	0	0	0	0	0	0	1	0	0	0	0	0	0	1
30SEP	SE	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT	ST. CROP	0	17	0	4	0	0	1	0	3	0	0	0	0	25
14OCT	SE	0	9	0	4	0	0	1	0	3	0	0	0	0	11
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT	ST. CROP	0	9	63	38	2	0	0	0	0	0	0	0	0	113
29OCT	SE	0	6	30	27	2	0	0	0	0	0	0	0	0	41
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV	ST. CROP	3	41	50	16	6	0	0	0	0	0	0	0	0	117
12NOV	SE	3	20	25	11	4	0	0	0	0	0	0	0	0	34
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV	ST. CROP	22	0	31	12	4	0	0	0	0	0	0	0	0	69
03DEC	SE	12	0	20	8	3	0	0	0	0	0	0	0	0	25
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-17 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN -	CPUE	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.03
17JUN	SE	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.34
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN -	CPUE	0.33	0.00	0.00	0.00	0.00	0.00	0.50	0.38	1.13	1.20	2.16	0.17	0.49
01JUL	SE	0.33	0.00	0.00	0.00	0.00	0.00	0.27	0.38	0.85	0.55	0.65	0.17	1.34
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL -	CPUE	0.00	0.09	0.00	0.00	0.00	0.00	0.13	0.00	0.00	5.33	0.74	0.08	0.53
15JUL	SE	0.00	0.09	0.00	0.00	0.00	0.00	0.13	0.00	0.00	5.33	0.30	0.08	5.34
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL -	CPUE	0.00	0.04	0.00	0.20	0.20	0.17	0.20	0.00	0.00	0.11	0.60	0.00	0.13
30JUL	SE	0.00	0.04	0.00	0.20	0.20	0.17	0.20	0.00	0.00	0.11	0.27	0.00	0.48
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG -	CPUE	0.00	0.33	0.07	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.07
13AUG	SE	0.00	0.25	0.07	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.44
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG -	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	1.00	0.09
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.49	0.50
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP -	CPUE	0.00	0.54	0.64	0.20	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.13
10SEP	SE	0.00	0.23	0.37	0.20	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.51
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP -	CPUE	0.40	0.63	0.86	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.14	0.22
24SEP	SE	0.40	0.24	0.64	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.13	0.14	0.86
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT -	CPUE	0.40	0.13	0.29	0.00	0.20	0.17	0.00	0.00	0.00	0.00	0.10	0.14	0.12
07OCT	SE	0.24	0.09	0.16	0.00	0.20	0.17	0.00	0.00	0.00	0.00	0.10	0.14	0.44
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT -	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.02
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-18 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	3	0	0	0	0	0	0	0	1	4
17JUN	SE	0	0	0	3	0	0	0	0	0	0	0	1	3
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	3	0	0	0	0	0	4	< 0.5	10	21	42	2	82
01JUL	SE	3	0	0	0	0	0	2	< 0.5	7	10	13	2	18
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	4	0	0	0	0	1	0	0	94	14	1	114
15JUL	SE	0	4	0	0	0	0	1	0	0	94	6	1	94
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	2	0	2	1	2	1	0	0	2	12	0	21
30JUL	SE	0	2	0	2	1	2	1	0	0	2	5	0	7
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	15	2	2	0	0	0	0	0	0	0	4	23
13AUG	SE	0	11	2	2	0	0	0	0	0	0	0	4	12
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	2	14	16
27AUG	SE	0	0	0	0	0	0	0	0	0	0	2	7	7
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	25	17	2	0	2	0	0	0	0	0	0	46
10SEP	SE	0	11	10	2	0	2	0	0	0	0	0	0	15
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	3	28	23	2	0	0	1	0	0	0	4	2	64
24SEP	SE	3	11	17	2	0	0	1	0	0	0	3	2	21
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	3	6	8	0	1	2	0	0	0	0	2	2	23
07OCT	SE	2	4	4	0	1	2	0	0	0	0	2	2	7
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	1	0	0	0	0	0	1
22OCT	SE	0	0	0	0	0	0	1	0	0	0	0	0	1
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-19 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.57	0.12	0.00	0.27	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.14
02APR	SE	0.57	0.12	0.00	0.27	0.00	0.00	0.00							0.64
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.25	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
08APR	SE	0.25	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.02
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.24
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
30APR	SE	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.01
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.16
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
14MAY	SE	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.02
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.22
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.01
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.14
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-19 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.69	0.86	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.19
10SEP	SE	0.00	0.00	0.69	0.86	0.00	0.00	0.00	0.00						1.11
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-20 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	119	28	0	40	0	0	0	NS	NS	NS	NS	NS	NS	187
02APR	SE	119	28	0	40	0	0	0							129
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	53	59	0	0	0	0	0	0	0	0	0	0	0	113
08APR	SE	53	59	0	0	0	0	0	0	0	0	0	0	0	80
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	39	0	0	0	0	39
16APR	SE	0	0	0	0	0	0	0	0	39	0	0	0	0	39
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	68	0	0	0	0	0	0	0	0	0	68
30APR	SE	0	0	0	44	0	0	0	0	0	0	0	0	0	44
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	46	0	0	0	0	0	46
07MAY	SE	0	0	0	0	0	0	0	46	0	0	0	0	0	46
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	27	0	0	0	0	0	0	0	0	0	27
14MAY	SE	0	0	0	27	0	0	0	0	0	0	0	0	0	27
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	37	0	0	0	0	37
21MAY	SE	0	0	0	0	0	0	0	0	37	0	0	0	0	37
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	43	0	0	0	0	0	43
28MAY	SE	0	0	0	0	0	0	0	43	0	0	0	0	0	43
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-20 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	223	127	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	223	127	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-21 REGIONAL DENSITY (NO./1,000m3) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
06AUG	SE	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
20AUG	SE	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03SEP	SE	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
16SEP	SE	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.02	0.03	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
30SEP	SE	0.00	0.00	0.02	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.09	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
14OCT	SE	0.00	0.08	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.08
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
29OCT	SE	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.03	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
12NOV	SE	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.02	0.02	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
03DEC	SE	0.00	0.02	0.02	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-22 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	0	5	0	0	0	0	0	0	5
09JUL	SE	0	0	0	0	0	0	5	0	0	0	0	0	0	5
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	9	5	0	0	0	0	0	0	0	0	0	15
06AUG	SE	0	0	9	5	0	0	0	0	0	0	0	0	0	11
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	6	0	0	0	0	0	0	0	0	0	0	0	0	6
20AUG	SE	6	0	0	0	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	8	0	0	0	0	0	0	0	0	0	0	8
03SEP	SE	0	0	8	0	0	0	0	0	0	0	0	0	0	8
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	8	4	0	0	0	0	0	0	0	0	0	12
16SEP	SE	0	0	8	4	0	0	0	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	7	5	0	0	2	0	0	0	0	0	0	14
30SEP	SE	0	0	7	5	0	0	2	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	22	8	0	0	0	0	4	0	0	0	0	0	34
14OCT	SE	0	17	8	0	0	0	0	4	0	0	0	0	0	20
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	26	39	0	0	0	0	0	0	0	0	0	0	66
29OCT	SE	0	10	24	0	0	0	0	0	0	0	0	0	0	26
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	7	7	11	0	0	0	0	0	0	0	0	0	26
12NOV	SE	0	5	7	7	0	0	0	0	0	0	0	0	0	11
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	5	6	13	10	0	0	0	0	0	0	0	0	34
03DEC	SE	0	5	6	10	3	0	0	0	0	0	0	0	0	13
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-23 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.01
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.13
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.25	0.00	0.79	0.00	0.11
01JUL	SE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.25	0.00	0.79	0.00	0.89
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.03
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.40
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.01
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.04	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
10SEP	SE	0.00	0.04	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.01
07OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-24 REGIONAL STANDING CROP (IN THOUSANDS) OF STRIPED BASS OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
17JUN	SE	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	1	0	0	0	2	0	16	0	19
01JUL	SE	0	0	0	0	1	0	0	0	2	0	16	0	16
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	3	0	0	0	0	0	3
30JUL	SE	0	0	0	0	0	0	3	0	0	0	0	0	3
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	2	0	0	2
27AUG	SE	0	0	0	0	0	0	0	0	0	2	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	2	4	0	0	0	0	0	0	0	0	0	6
10SEP	SE	0	2	4	0	0	0	0	0	0	0	0	0	4
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	2	0	0	0	0	0	0	0	0	2	0	4
07OCT	SE	0	2	0	0	0	0	0	0	0	0	2	0	3
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-25 REGIONAL DENSITY (NO./1,000m³) OF WHITE PERCH EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.10
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.77
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476.91	13.12	190.11	9.29	53.03
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476.91	7.65	83.45	4.98	484.24
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.10	0.10	1.71	3.97	0.88	7.10	1.35	143.14	63.93	17.10
	SE	0.00	0.00	0.00	0.00	0.06	0.10	1.21	3.97	0.67	6.68	1.35	131.78	30.54	135.51
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.19	0.04	0.32	0.85	84.96	10.51	292.97	216.94	46.68
	SE	0.00	0.00	0.00	0.00	0.00	0.19	0.04	0.20	0.67	45.09	6.43	122.49	185.52	226.92
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.05	7.13	17.71	70.74	18.00	160.65	46.78	257.13	95.95	51.86
	SE	0.00	0.00	0.00	0.00	0.05	3.89	10.67	69.00	14.30	123.97	23.71	69.78	39.11	165.60
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.65	4.39	1.19	6.39	0.88	155.04	95.47	295.55	37.89	45.96
	SE	0.00	0.00	0.00	0.00	0.65	3.05	0.85	5.16	0.71	139.09	90.11	59.49	16.92	177.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.13	0.00	0.00	0.20	0.00	7.73	220.23	16.06	8.51	238.05	486.66	6.11	75.67
	SE	0.00	0.13	0.00	0.00	0.20	0.00	7.06	179.78	12.85	8.51	153.26	87.37	3.23	252.47
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	1.23	16.32	62.31	95.82	57.75	24.04	613.67	98.66	74.60
	SE	0.00	0.00	0.00	0.00	0.00	0.73	11.35	31.45	95.82	23.77	15.55	129.74	71.20	181.68
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.83	322.72	2.67	12.48	39.85	48.06	0.45	32.85
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.50	318.69	1.72	5.36	22.39	16.05	0.45	319.93
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-25 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.00	0.56	0.61	0.22
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	0.00	0.56	0.61	1.61
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.01
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.14
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.10	1.16
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.10	15.10
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-26 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	213	0	213
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	124	0	124
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST.CROP	0	0	0	0	0	0	0	0	0	67468	2313	30557	661	100999
16APR	SE	0	0	0	0	0	0	0	0	0	67468	1349	13413	354	68803
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST.CROP	0	0	0	0	21	21	239	1183	145	1004	238	23007	4548	30406
23APR	SE	0	0	0	0	12	21	169	1183	111	945	238	21181	2173	21349
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST.CROP	0	0	0	0	0	39	5	96	140	12019	1853	47089	15435	76678
30APR	SE	0	0	0	0	0	39	5	59	111	6379	1134	19688	13199	24573
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST.CROP	0	0	0	0	10	1480	2476	21089	2979	22727	8246	41329	6827	107163
07MAY	SE	0	0	0	0	10	807	1492	20572	2367	17538	4181	11216	2783	29838
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST.CROP	0	0	0	0	135	910	167	1904	146	21934	16832	47505	2696	92228
14MAY	SE	0	0	0	0	135	632	119	1539	118	19677	15886	9563	1204	27115
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST.CROP	0	30	0	0	42	0	1080	65659	2658	1204	41968	78222	435	191298
21MAY	SE	0	30	0	0	42	0	987	53598	2126	1204	27019	14043	230	61701
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST.CROP	0	0	0	0	0	255	2282	18575	15856	8169	4239	98636	7020	155032
28MAY	SE	0	0	0	0	0	151	1587	9376	15856	3362	2742	20853	5066	28657
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST.CROP	0	0	0	0	0	0	116	96212	441	1765	7025	7725	32	113317
04JUN	SE	0	0	0	0	0	0	70	95012	284	758	3947	2580	32	95132
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-26 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
08JUN- ST.CROP	0	0	0	0	0	0	0	0	0	245	0	89	44	379
11JUN SE	0	0	0	0	0	0	0	0	0	195	0	89	44	219
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN- ST.CROP	0	0	0	0	0	0	0	0	23	0	0	0	0	23
18JUN SE	0	0	0	0	0	0	0	0	23	0	0	0	0	23
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	1075	1075
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	1075	1075
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-27 REGIONAL DENSITY (NO./1,000m³) OF WHITE PERCH YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.97	2.29	1.37	5.39	4.05	17.86	11.07	3.31
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.79	1.65	0.79	4.35	1.90	8.47	3.07	10.37
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.19	0.06	1.44	1.19	10.07	62.02	82.82	93.01	231.82	56.92	41.50
	SE	0.00	0.00	0.00	0.19	0.06	1.09	0.85	2.73	6.50	27.75	24.17	32.78	11.20	51.05
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.34	0.00	1.69	10.90	9.93	112.35	303.67	502.11	373.17	132.86	111.31
	SE	0.00	0.00	0.00	0.34	0.00	1.23	5.31	3.05	35.47	66.07	97.89	154.73	32.29	200.57
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.33	0.16	0.60	16.42	64.40	128.74	365.58	749.79	240.22	205.63	55.56	140.57
	SE	0.00	0.00	0.33	0.16	0.55	14.05	23.39	52.73	111.74	248.03	91.04	86.60	15.59	305.88
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.39	28.45	17.49	20.88	37.64	47.83	134.52	240.79	171.73	53.82
	SE	0.00	0.00	0.00	0.00	0.39	7.74	5.54	6.12	13.51	16.10	38.84	86.84	100.35	140.32
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.06	1.15	5.46	24.44	58.45	85.74	29.72	56.62	222.26	37.22
	SE	0.00	0.00	0.00	0.00	0.06	0.18	3.28	11.35	25.94	18.13	6.36	12.58	46.15	58.91
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.65	5.39	6.44	2.57	0.65	37.57	49.41	24.19	9.76
	SE	0.00	0.00	0.00	0.00	0.00	0.50	2.32	5.02	1.58	0.65	16.93	13.31	20.45	30.26
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-27 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	1.46	0.00	1.73	0.00	0.00	0.00	2.04	0.40
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	1.41	0.00	1.15	0.00	0.00	0.00	1.56	2.39
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-28 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR-	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR-	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR-	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR-	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR-	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	135	682	226	763	713	2871	788	6179
23APR-	SE	0	0	0	0	0	0	111	493	131	616	335	1361	218	1632
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	28	12	298	167	3002	10264	11716	16397	37261	4050	83195
30APR-	SE	0	0	0	28	12	226	118	814	1075	3926	4261	5268	797	7990
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	50	0	351	1524	2961	18593	42960	88520	59980	9453	224391
07MAY-	SE	0	0	0	50	0	256	742	908	5869	9348	17258	24869	2297	32324
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	106	24	125	3407	9003	38381	60498	106072	42349	33051	3953	296969
14MAY-	SE	0	0	106	24	115	2915	3270	15722	18491	35089	16050	13919	1109	47876
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	82	5902	2445	6224	6229	6766	23715	38702	12218	102284
21MAY-	SE	0	0	0	0	82	1606	774	1824	2235	2278	6847	13959	7140	17590
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	12	239	763	7287	9672	12130	5239	9100	15814	60256
28MAY-	SE	0	0	0	0	12	38	459	3385	4293	2565	1121	2022	3284	7267
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	135	753	1920	425	92	6624	7941	1721	19612
04JUN-	SE	0	0	0	0	0	103	324	1498	262	92	2986	2139	1455	4248
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-28 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	204	0	286	0	0	0	145	635
11JUN	SE	0	0	0	0	0	0	197	0	190	0	0	0	111	295
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-29 REGIONAL DENSITY (NO./1,000m³) OF WHITE PERCH POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.26	0.00	0.00	0.32	0.00	0.00	0.05
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.26	0.00	0.00	0.32	0.00	0.00	0.43
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	1.71	0.76	1.07	3.69	4.94	16.23	18.08	12.01	2.09	0.00	4.66
	SE	0.00	0.00	0.00	1.22	0.53	1.07	0.60	1.45	1.94	7.75	3.86	0.87	0.00	9.22
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.35	0.34	0.55	3.19	25.67	45.58	173.58	1064.65	596.40	212.29	0.38	163.31
	SE	0.00	0.00	0.23	0.34	0.55	3.19	10.81	13.93	38.59	189.82	191.66	91.69	0.38	288.07
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.24	0.33	1.07	6.11	29.49	112.53	167.47	782.39	1447.61	627.44	74.52	0.00	249.94
	SE	0.00	0.24	0.33	0.47	2.24	12.26	27.95	44.94	318.29	438.08	281.09	32.12	0.00	613.37
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.20	0.54	7.22	248.21	505.35	499.04	560.45	882.58	521.33	263.49	9.27	269.05
	SE	0.00	0.00	0.20	0.39	3.98	80.90	107.02	122.88	297.08	125.04	174.88	67.91	5.95	415.01
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.22	1.99	86.42	198.17	859.33	1756.04	1666.86	627.12	759.13	8.84	458.78
	SE	0.00	0.00	0.00	0.22	1.34	28.30	25.03	414.65	545.04	677.51	96.19	159.40	4.38	981.90
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.63	0.00	0.00	1.96	23.55	273.82	672.43	642.74	458.51	1920.89	1711.25	1703.12	1167.52	659.73
	SE	0.63	0.00	0.00	0.89	14.32	33.30	121.10	195.22	277.53	614.67	383.69	468.30	613.62	1118.92
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-29 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010														
														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.00	0.24	1.91	99.93	214.24	645.60	395.24	2164.88	3097.02	3965.40	264.65
11JUN	SE	0.00	0.00	0.00	0.24	0.80	53.80	63.78	428.20	140.70	449.69	919.10	694.06	238.38
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.60	0.00	3.90	8.15	78.56	215.84	151.36	313.95	1094.07	581.81	430.53	0.62
18JUN	SE	0.00	0.60	0.00	2.19	2.49	23.97	72.25	26.82	70.91	306.35	226.10	367.23	0.62
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	0.00	3.14	24.15	34.10	91.23	62.98	106.57	53.84	71.10	30.28
25JUN	SE	0.00	0.00	0.00	0.00	2.49	8.29	10.55	50.01	31.32	15.54	24.31	16.52	30.28
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	0.00	0.92	0.04	29.45	28.86	13.87	17.34	28.94	11.05	6.31	13.31
02JUL	SE	0.00	0.00	0.00	0.65	0.04	6.76	13.62	5.06	6.93	9.51	5.19	2.39	13.31
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.79	14.70	NS	NS	NS	NS	NS
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.32	12.58					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.52	NS	NS	NS	NS	NS
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.26					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-30 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	17	79	0	0	57	0	0	153
23APR	SE	0	0	0	0	0	0	11	79	0	0	57	0	0	98
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	252	159	223	515	1474	2687	2558	2118	335	0	10321
30APR	SE	0	0	0	181	109	223	84	433	321	1097	681	141	0	1442
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	114	50	114	662	3588	13588	28724	150616	105144	34122	27	336749
07MAY	SE	0	0	74	50	114	662	1511	4154	6386	26854	33788	14737	27	46268
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	55	106	158	1273	6117	15730	49929	129474	204793	110616	11978	0	530228
14MAY	SE	0	55	106	69	467	2543	3907	13399	52672	61976	49554	5163	0	96432
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	64	80	1505	51492	70643	148781	92746	124858	91908	42351	659	625087
21MAY	SE	0	0	64	57	829	16784	14960	36636	49162	17689	30830	10915	424	75154
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	32	415	17928	27702	256194	290598	235811	110558	122016	629	1061880
28MAY	SE	0	0	0	32	278	5871	3499	123622	90195	95847	16958	25621	311	183289
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	132	0	0	290	4907	56806	94000	191621	75877	271748	301686	273745	83068	1353881
04JUN	SE	132	0	0	132	2984	6908	16929	58200	45927	86957	67644	75271	43659	159840
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-30 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	35	399	20731	29948	192474	65406	306266	545992	637366	18829
11JUN	SE	0	0	0	35	167	11161	8916	127662	23283	63617	162034	111557	16960
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	138	0	576	1697	16298	30172	45125	51954	154778	102570	69200	44
18JUN	SE	0	138	0	323	519	4972	10100	7995	11734	43339	39860	59026	44
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	653	5009	4767	27199	10422	15076	9492	11428	2155
25JUN	SE	0	0	0	0	519	1719	1475	14909	5184	2199	4286	2656	2155
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	137	9	6110	4035	4135	2870	4094	1949	1015	947
02JUL	SE	0	0	0	97	9	1402	1904	1509	1147	1345	915	383	947
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	22	111	4381	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	22	44	3752					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	44	156	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	44	78					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-31 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN -	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-31 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	8.17	0.00	0.79
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	4.09	0.00	4.45
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.33	0.00	0.00	0.04
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.33	0.00	0.00	0.37
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.22	0.05	2.73	NS	NS	NS	NS	NS	0.37
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.13	0.05	1.68						1.69
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.30	0.38	4.21	2.10	NS	NS	NS	NS	NS	0.87
29JUL	SE	0.00	0.00	0.00	0.00	0.30	0.38	1.14	1.16						1.69
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.14	1.76	0.88	NS	NS	NS	NS	NS	0.35
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.14	1.25	0.88						1.54
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.60	3.78	2.36	NS	NS	NS	NS	NS	0.84
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.36	2.34	1.21						2.66
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.46	3.79	2.52	NS	NS	NS	NS	NS	0.85
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.33	0.84	2.52						2.67
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.35	0.84	0.26	NS	NS	NS	NS	NS	0.18
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.35	0.84	0.26						0.95
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.54	1.13	0.12	1.03	1.49	NS	NS	NS	NS	NS	0.54
07OCT	SE	0.00	0.00	0.00	0.34	0.61	0.12	0.84	0.85						1.39
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-32 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-32 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	375	1313	0	1688
18JUN	SE	0	0	0	0	0	0	0	0	0	0	309	658	0	727
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	27	0	0	0	59	0	0	86
25JUN	SE	0	0	0	0	0	0	22	0	0	0	59	0	0	62
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	47	7	812	NS	NS	NS	NS	NS	866
16JUL	SE	0	0	0	0	0	27	7	501						502
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	62	78	589	627	NS	NS	NS	NS	NS	1356
29JUL	SE	0	0	0	0	62	78	159	346						393
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	29	246	261	NS	NS	NS	NS	NS	536
12AUG	SE	0	0	0	0	0	29	175	261						316
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	124	529	703	NS	NS	NS	NS	NS	1355
26AUG	SE	0	0	0	0	0	76	327	361						493
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	96	530	751	NS	NS	NS	NS	NS	1376
10SEP	SE	0	0	0	0	0	68	117	751						763
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	72	118	79	NS	NS	NS	NS	NS	268
23SEP	SE	0	0	0	0	0	72	118	79						159
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	80	235	24	144	443	NS	NS	NS	NS	NS	926
07OCT	SE	0	0	0	50	127	24	118	255						313
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-33 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.21	0.00	0.07	0.00	1.51	0.00	0.19
09JUL	SE	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.21	0.00	0.07	0.00	1.51	0.00	1.65
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.08	0.06	0.02	0.00	0.00	0.00	0.00	0.01
23JUL	SE	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.04	0.02	0.00	0.00	0.00	0.00	0.07
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.48	1.53	3.50	1.92	0.99	0.06	0.00	0.09	0.66
06AUG	SE	0.00	0.00	0.00	0.00	0.01	0.14	0.31	1.43	0.53	0.67	0.06	0.00	0.09	1.70
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.44	0.99	1.06	0.94	1.03	0.31	0.14	0.00	0.68	0.43
20AUG	SE	0.00	0.00	0.00	0.00	0.36	0.38	0.21	0.16	0.12	0.12	0.08	0.00	0.57	0.84
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.60	0.93	1.02	0.51	0.42	0.00	0.00	0.88	0.34
03SEP	SE	0.00	0.00	0.00	0.00	0.01	0.13	0.23	0.28	0.18	0.35	0.00	0.00	0.31	0.63
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.35	1.39	2.45	1.28	0.73	0.18	0.00	0.09	0.50
16SEP	SE	0.00	0.00	0.00	0.00	0.01	0.13	0.40	0.80	0.40	0.37	0.18	0.00	0.09	1.07
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.45	1.90	1.31	1.61	0.66	0.07	0.00	0.00	0.46
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.44	0.33	0.73	0.44	0.07	0.00	0.00	1.02
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.07	0.64	0.52	0.87	0.77	3.67	3.46	3.15	1.76	0.15	0.25	0.20	1.19
14OCT	SE	0.00	0.05	0.22	0.22	0.73	0.49	1.40	0.84	1.90	0.84	0.15	0.12	0.11	2.81
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.02	0.31	0.95	0.68	0.47	2.37	1.91	4.50	4.46	0.86	0.04	0.00	1.28
29OCT	SE	0.00	0.02	0.19	0.40	0.22	0.11	0.61	0.57	0.57	0.82	0.24	0.04	0.00	1.42
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	1.36	6.04	2.27	1.02	0.40	4.72	0.41	2.14	3.89	1.49	0.00	0.00	1.83
12NOV	SE	0.00	0.54	1.78	0.44	0.32	0.10	0.94	0.15	0.53	1.23	0.55	0.00	0.00	2.60
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.60	1.07	0.94	4.78	1.38	0.27	0.33	2.03	1.19	0.45	0.00	0.00	0.00	1.00
03DEC	SE	0.20	0.24	0.18	1.06	0.37	0.07	0.14	0.41	0.28	0.14	0.00	0.00	0.00	1.30
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-34 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL	ST. CROP	0	0	0	0	128	0	0	63	0	10	0	243	0	446
09JUL	SE	0	0	0	0	128	0	0	63	0	10	0	243	0	283
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL	ST. CROP	0	0	0	0	3	0	12	18	3	0	0	0	0	35
23JUL	SE	0	0	0	0	3	0	7	12	3	0	0	0	0	14
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG	ST. CROP	0	0	0	0	1	100	214	1043	318	140	11	0	7	1835
06AUG	SE	0	0	0	0	1	30	43	426	88	95	11	0	7	449
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG	ST. CROP	0	0	0	0	91	206	148	279	171	44	24	0	49	1012
20AUG	SE	0	0	0	0	76	79	29	47	19	16	14	0	41	133
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG	ST. CROP	0	0	0	0	3	124	130	303	85	60	0	0	62	767
03SEP	SE	0	0	0	0	3	28	32	84	30	50	0	0	22	113
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP	ST. CROP	0	0	0	0	2	73	195	730	212	103	32	0	6	1353
16SEP	SE	0	0	0	0	1	27	56	238	67	52	32	0	6	262
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP	ST. CROP	0	0	0	0	0	93	265	391	267	94	12	0	0	1122
30SEP	SE	0	0	0	0	0	22	61	97	121	62	12	0	0	180
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT	ST. CROP	0	17	206	77	182	160	513	1032	522	250	27	39	14	3039
14OCT	SE	0	12	71	33	152	101	196	249	315	118	27	20	8	504
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT	ST. CROP	0	4	100	141	143	97	331	570	745	631	152	6	0	2920
29OCT	SE	0	4	63	59	45	23	85	170	94	116	42	6	0	265
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV	ST. CROP	0	312	1944	336	213	83	659	122	354	550	263	0	0	4837
12NOV	SE	0	124	571	66	67	21	131	44	88	174	97	0	0	646
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV	ST. CROP	126	244	303	707	287	56	47	605	197	64	0	0	0	2636
03DEC	SE	41	54	59	156	78	15	20	122	47	20	0	0	0	238
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-35 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.37	1.08	0.14
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16	1.00	1.02
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	4.67	4.88	16.13	22.88	18.00	5.21	4.08	6.32
01JUL	SE	0.00	0.00	0.00	0.00	0.00	4.67	3.15	9.46	9.47	6.17	1.27	2.65	16.05
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	5.57	0.00	3.67	9.00	2.00	20.50	6.88	12.87	15.26	6.25	6.83
15JUL	SE	0.00	0.00	3.60	0.00	2.03	9.00	1.02	6.20	3.59	4.82	5.02	4.06	14.67
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.38	15.86	9.60	2.80	4.83	10.40	20.20	1.20	13.22	24.60	31.29	11.20
30JUL	SE	0.00	0.29	9.02	3.83	2.80	1.94	4.84	5.29	0.80	6.47	11.51	18.83	26.25
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.13	68.29	0.40	2.80	8.50	3.00	14.60	1.60	16.33	9.60	5.14	10.87
13AUG	SE	0.00	0.07	31.37	0.40	2.56	7.34	1.67	7.88	1.12	6.26	7.28	3.54	34.86
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.17	18.36	10.80	3.40	0.83	1.60	11.80	2.00	3.33	8.30	4.29	5.41
27AUG	SE	0.00	0.08	12.01	8.01	1.99	0.65	0.75	5.69	1.05	2.64	3.28	2.84	16.52
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.88	15.36	15.20	0.60	1.00	10.60	29.60	1.60	11.67	3.20	0.57	7.52
10SEP	SE	0.00	0.53	7.80	7.28	0.60	0.63	4.04	13.40	0.60	3.38	1.76	0.37	18.05
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	1.83	2.36	6.40	3.40	2.33	0.60	9.00	0.40	15.89	5.10	0.14	3.95
24SEP	SE	0.00	1.15	1.84	3.43	2.93	2.33	0.60	5.80	0.40	5.49	3.54	0.14	10.36
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.42	5.50	1.00	21.20	3.67	1.80	0.80	45.00	8.78	2.20	1.57	7.66
07OCT	SE	0.00	0.27	3.45	0.63	14.60	3.11	0.86	0.80	29.36	2.69	1.55	1.15	33.31
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.21	0.14	2.80	1.60	0.00	0.60	0.40	0.00	4.78	0.00	0.71	0.94
22OCT	SE	0.00	0.12	0.10	2.13	0.93	0.00	0.60	0.24	0.00	2.04	0.00	0.57	3.21
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-36 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
15JUN-	ST. CROP	0	0	0	0	0	0	0	< 0.5	0	0	7	15	22
17JUN	SE	0	0	0	0	0	0	0	< 0.5	0	0	3	14	14
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	50	35	20	197	316	103	55	775
01JUL	SE	0	0	0	0	0	50	22	12	82	108	25	36	153
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	150	0	10	96	14	25	59	226	300	85	965
15JUL	SE	0	0	97	0	5	96	7	8	31	85	99	55	199
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	17	426	88	7	51	74	25	10	232	484	425	1841
30JUL	SE	0	13	243	35	7	21	34	7	7	114	226	256	438
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	6	1836	4	7	91	21	18	14	287	189	70	2542
13AUG	SE	0	3	843	4	7	78	12	10	10	110	143	48	868
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	8	494	100	9	9	11	15	17	59	163	58	942
27AUG	SE	0	4	323	74	5	7	5	7	9	46	64	39	343
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	40	413	140	2	11	75	37	14	205	63	8	1006
10SEP	SE	0	24	210	67	2	7	29	17	5	59	35	5	234
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	83	63	59	9	25	4	11	3	279	100	2	640
24SEP	SE	0	52	50	32	8	25	4	7	3	96	70	2	145
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	19	148	9	56	39	13	1	387	154	43	21	891
07OCT	SE	0	12	93	6	38	33	6	1	253	47	31	16	281
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	9	4	26	4	0	4	< 0.5	0	84	0	10	142
22OCT	SE	0	5	3	20	2	0	4	< 0.5	0	36	0	8	42
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-37 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.21	0.29	1.47	2.73	3.05	1.24	0.90	NS	NS	NS	NS	NS	NS	1.41
26MAR	SE	0.21	0.29	0.40	1.14	1.79	0.53	0.63							2.34
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	1.27	1.30	2.41	1.49	0.05	0.44	0.76	NS	NS	NS	NS	NS	NS	1.10
02APR	SE	0.98	0.77	0.93	1.05	0.05	0.20	0.50							1.95
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	2.01	1.51	3.46	3.74	1.02	0.40	1.66	1.80	1.57	0.88	1.01	0.00	0.00	1.47
08APR	SE	0.38	0.59	1.42	1.67	0.69	0.29	0.68	1.05	0.93	0.88	0.65	0.00	0.00	3.08
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.19	1.93	1.07	0.59	1.37	5.01	0.66	0.62	0.66	0.00	0.00	0.93
16APR	SE	0.00	0.00	0.19	1.11	0.83	0.29	1.29	2.83	0.66	0.36	0.38	0.00	0.00	3.52
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.21	0.00	0.19	2.50	1.18	0.31	0.00	0.25	0.63	0.00	0.00	0.00	0.41
23APR	SE	0.00	0.21	0.00	0.19	2.06	0.81	0.31	0.00	0.25	0.63	0.00	0.00	0.00	2.35
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	1.31	0.00	0.21	0.14	0.17	0.00	0.48	0.00	0.00	0.18
30APR	SE	0.00	0.00	0.00	0.00	0.98	0.00	0.21	0.14	0.17	0.00	0.48	0.00	0.00	1.13
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.18	0.00	0.15	0.23	0.00	0.14	0.00	0.00	0.00	0.00	0.05
07MAY	SE	0.00	0.00	0.00	0.18	0.00	0.15	0.23	0.00	0.14	0.00	0.00	0.00	0.00	0.36
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.18	0.00	0.17	1.55	0.00	0.00	0.00	0.48	0.00	0.00	0.18
14MAY	SE	0.00	0.00	0.00	0.18	0.00	0.17	1.55	0.00	0.00	0.00	0.48	0.00	0.00	1.64
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	1.09	0.00	0.45	0.16	0.00	0.00	0.00	0.00	0.00	0.13
21MAY	SE	0.00	0.00	0.00	0.00	1.09	0.00	0.26	0.16	0.00	0.00	0.00	0.00	0.00	1.13
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.21	0.00	0.37	0.00	0.38	0.00	1.06	0.00	0.00	0.15
28MAY	SE	0.00	0.00	0.00	0.00	0.21	0.00	0.23	0.00	0.38	0.00	0.49	0.00	0.00	0.70
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.58	0.49	0.00	0.00	0.12
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.49	0.00	0.00	0.68
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-37 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	0.00	0.00	0.14
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.00	0.00	1.17
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.10	0.00	2.52	0.00	0.14	0.00	0.00	0.00	0.00	0.21
18JUN	SE	0.00	0.00	0.00	0.00	0.10	0.00	2.07	0.00	0.14	0.00	0.00	0.00	0.00	2.08
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.29	0.00	0.00	0.06
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.29	0.00	0.00	0.42
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	NS	NS	NS	NS	NS	0.03
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24						0.24
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	NS	NS	NS	NS	NS	0.08
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00						0.61
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	NS	NS	NS	NS	NS	0.03
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27						0.27
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	NS	NS	NS	NS	NS	0.04
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00						0.31
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.23	1.81	3.34	NS	NS	NS	NS	NS	0.67
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.23	1.01	0.86						1.35
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.35	3.69	1.04	NS	NS	NS	NS	NS	0.63
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.35	2.02	0.52						2.11
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.04	0.00	0.52	1.22	NS	NS	NS	NS	NS	0.22
07OCT	SE	0.00	0.00	0.00	0.00	0.04	0.00	0.43	0.89						0.99
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-38 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR-	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	44	66	474	403	636	257	125	NS	NS	NS	NS	NS	NS	2005
26MAR-	SE	44	66	129	168	374	110	89							459
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	266	299	775	219	11	91	106	NS	NS	NS	NS	NS	NS	1767
02APR-	SE	205	176	300	155	11	41	70							440
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	420	347	1115	553	213	83	232	538	260	124	179	0	0	4063
08APR-	SE	80	135	458	246	143	61	95	312	153	124	115	0	0	691
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	61	285	222	123	192	1495	108	88	116	0	0	2689
16APR-	SE	0	0	61	164	173	60	180	842	108	51	67	0	0	908
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	49	0	29	520	244	43	0	42	89	0	0	0	1016
23APR-	SE	0	49	0	29	429	168	43	0	42	89	0	0	0	476
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	272	0	29	41	29	0	85	0	0	455
30APR-	SE	0	0	0	0	203	0	29	41	29	0	85	0	0	228
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	27	0	32	32	0	23	0	0	0	0	114
07MAY-	SE	0	0	0	27	0	32	32	0	23	0	0	0	0	57
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	27	0	36	216	0	0	0	84	0	0	363
14MAY-	SE	0	0	0	27	0	36	216	0	0	0	84	0	0	236
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	227	0	62	48	0	0	0	0	0	338
21MAY-	SE	0	0	0	0	227	0	36	48	0	0	0	0	0	235
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	43	0	52	0	63	0	186	0	0	343
28MAY-	SE	0	0	0	0	43	0	33	0	63	0	87	0	0	120
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	158	0	82	87	0	0	326
04JUN-	SE	0	0	0	0	0	0	0	100	0	47	87	0	0	140
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-38 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	325	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	207	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	0	0	21	0	352	0	23	0	0	0	0
18JUN	SE	0	0	0	0	21	0	290	0	23	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	0	0	73	0	0	0	51	0	0
02JUL	SE	0	0	0	0	0	0	43	0	0	0	51	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	0	72	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	0	72					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	85	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	85	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	79	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	79					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	43	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	43	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	48	253	996	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	48	141	256					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	72	516	311	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	72	282	156					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	8	0	73	364	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	8	0	60	264					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-39 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	1.61	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.00	0.10	0.14
09JUL	SE	0.00	0.00	0.00	1.61	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.00	0.10	1.62
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.03
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.36
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.04	0.25	0.14	0.62	0.19	0.06	0.11	1.90	0.26
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.05	0.39	0.19	0.06	0.11	0.90	1.02
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.75	0.52	0.06	0.00	0.00	1.09	0.20
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.32	0.17	0.06	0.00	0.00	1.09	1.15
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.24	0.35	0.41	0.18	0.52	0.00	0.33	1.22	0.25
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.21	0.10	0.09	0.10	0.33	0.00	0.33	0.37	0.65
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.15	0.05	0.02	0.08	0.42	0.77	0.23	0.49	0.00	0.21	1.75	0.32
16SEP	SE	0.00	0.00	0.15	0.05	0.02	0.03	0.09	0.28	0.09	0.28	0.00	0.21	1.25	1.35
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.07	0.24	0.32	0.52	0.20	0.00	0.00	0.37	0.13
30SEP	SE	0.00	0.00	0.00	0.00	0.01	0.02	0.10	0.16	0.15	0.20	0.00	0.00	0.21	0.38
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.00	0.17	0.05	0.00	0.33	0.08	0.74	1.32	0.51	0.00	0.24	0.55	0.31
14OCT	SE	0.00	0.00	0.07	0.05	0.00	0.21	0.04	0.41	1.09	0.51	0.00	0.24	0.35	1.36
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.00	0.04	0.16	0.21	0.07	0.38	0.43	3.25	2.49	1.26	0.30	0.00	0.66
29OCT	SE	0.00	0.00	0.02	0.13	0.09	0.03	0.10	0.14	1.19	0.48	0.47	0.16	0.00	1.40
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.58	3.18	1.49	0.36	0.06	2.23	0.31	1.39	2.38	1.10	0.00	0.00	1.01
12NOV	SE	0.00	0.25	1.14	0.35	0.16	0.02	0.43	0.11	0.44	0.99	0.57	0.00	0.00	1.79
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.33	0.75	0.83	0.51	0.45	0.01	0.06	0.40	0.85	0.43	0.00	0.00	0.00	0.36
03DEC	SE	0.18	0.25	0.25	0.19	0.28	0.01	0.04	0.09	0.32	0.16	0.00	0.00	0.00	0.64
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-40 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL-	ST. CROP	0	0	0	238	0	0	0	0	6	10	0	0	7	261
09JUL	SE	0	0	0	238	0	0	0	0	6	10	0	0	7	238
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	64	0	0	64
23JUL	SE	0	0	0	0	0	0	0	0	0	0	64	0	0	64
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	0	0	0	9	35	43	103	27	11	17	135	380
06AUG	SE	0	0	0	0	0	4	13	14	65	27	11	17	64	100
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	0	0	0	0	0	0	22	224	87	8	0	0	77	418
20AUG	SE	0	0	0	0	0	0	10	95	28	8	0	0	77	126
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	0	0	0	50	49	123	30	74	0	53	87	467
03SEP	SE	0	0	0	0	0	43	14	28	16	46	0	53	26	94
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	50	7	3	16	59	229	38	69	0	33	125	629
16SEP	SE	0	0	50	7	3	6	12	83	15	39	0	33	89	143
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	1	15	34	97	85	28	0	0	26	287
30SEP	SE	0	0	0	0	1	5	14	47	26	28	0	0	15	64
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	0	56	8	0	68	11	221	218	73	0	39	39	732
14OCT	SE	0	0	21	8	0	44	6	122	180	73	0	39	25	239
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	0	12	24	44	15	53	129	537	353	222	48	0	1437
29OCT	SE	0	0	8	20	18	6	14	43	198	68	83	26	0	233
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	132	1024	220	76	11	312	92	230	337	195	0	0	2628
12NOV	SE	0	57	366	52	33	4	60	33	73	141	101	0	0	425
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	69	173	266	75	94	2	8	118	141	61	0	0	0	1009
03DEC	SE	38	56	80	29	59	2	5	26	53	23	0	0	0	139
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-41 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	1.14	0.00	0.00	0.00	0.00	1.75	1.25	0.20	1.21	0.00	0.46
17JUN	SE	0.00	0.00	0.55	0.00	0.00	0.00	0.00	1.28	1.25	0.11	0.55	0.00	1.95
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.27	3.00	0.00	1.67	1.67	1.50	1.25	1.50	3.40	3.84	0.42	1.54
01JUL	SE	0.00	0.19	1.93	0.00	0.88	1.67	0.65	0.45	1.10	1.02	1.20	0.34	3.43
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	1.00	0.33	0.00	0.00	0.00	0.13	0.38	1.27	1.68	0.08	0.41
15JUL	SE	0.00	0.00	1.00	0.33	0.00	0.00	0.00	0.13	0.38	0.69	0.45	0.08	1.40
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.20	3.33	0.20	1.00	2.40	3.56	0.80	0.14	0.97
30JUL	SE	0.00	0.00	0.00	0.00	0.20	1.99	0.20	0.45	1.60	1.83	0.51	0.14	3.23
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	2.50	1.00	4.00	0.50	0.80	0.00	0.60	2.56	0.00	0.00	1.00
13AUG	SE	0.00	0.00	1.55	0.63	2.43	0.34	0.80	0.00	0.60	1.32	0.00	0.00	3.40
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.71	0.00	0.20	0.00	0.00	0.20	0.00	2.89	0.30	2.00	0.53
27AUG	SE	0.00	0.00	0.58	0.00	0.20	0.00	0.00	0.20	0.00	2.06	0.15	1.38	2.56
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.07	0.20	0.00	0.00	0.20	0.40	0.20	1.22	0.90	0.00	0.27
10SEP	SE	0.00	0.00	0.07	0.20	0.00	0.00	0.20	0.24	0.20	0.74	0.50	0.00	0.99
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.04	0.07	2.60	1.60	0.00	0.00	0.60	0.00	3.33	1.10	0.00	0.78
24SEP	SE	0.00	0.04	0.07	1.94	1.17	0.00	0.00	0.40	0.00	2.58	0.67	0.00	3.52
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.38	0.21	0.00	0.80	1.00	0.00	0.60	3.80	0.89	0.30	0.71	0.72
07OCT	SE	0.00	0.23	0.15	0.00	0.37	0.82	0.00	0.60	1.93	0.51	0.21	0.57	2.37
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.78	0.00	0.29	0.14
22OCT	SE	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.55	0.00	0.18	0.73
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-42 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	31	0	0	0	0	2	11	4	24	0	71
17JUN	SE	0	0	15	0	0	0	0	2	11	2	11	0	21
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	12	81	0	4	18	11	2	13	60	76	6	281
01JUL	SE	0	9	52	0	2	18	5	1	9	18	24	5	64
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	27	3	0	0	0	< 0.5	3	22	33	1	90
15JUL	SE	0	0	27	3	0	0	0	< 0.5	3	12	9	1	31
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	1	36	1	1	21	62	16	2	139
30JUL	SE	0	0	0	0	1	21	1	1	14	32	10	2	42
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	67	9	11	5	6	0	5	45	0	0	148
13AUG	SE	0	0	42	6	6	4	6	0	5	23	0	0	49
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	19	0	1	0	0	< 0.5	0	51	6	27	104
27AUG	SE	0	0	16	0	1	0	0	< 0.5	0	36	3	19	44
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	2	2	0	0	1	< 0.5	2	21	18	0	47
10SEP	SE	0	0	2	2	0	0	1	< 0.5	2	13	10	0	17
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	2	2	24	4	0	0	1	0	59	22	0	113
24SEP	SE	0	2	2	18	3	0	0	< 0.5	0	45	13	0	51
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	17	6	0	2	11	0	1	33	16	6	10	100
07OCT	SE	0	11	4	0	1	9	0	1	17	9	4	8	25
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	2	0	0	0	0	0	0	< 0.5	0	14	0	4	20
22OCT	SE	2	0	0	0	0	0	0	< 0.5	0	10	0	3	10
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-43 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.21	1.65	1.34	1.00	1.01	0.76	5.22	NS	NS	NS	NS	NS	NS	1.60
	SE	0.21	0.83	0.45	0.51	0.52	0.32	2.62							2.90
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	2.13	3.36	3.38	1.50	1.29	0.58	0.26	NS	NS	NS	NS	NS	NS	1.79
	SE	1.41	2.72	1.20	0.82	1.05	0.58	0.26							3.61
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	1.77	1.67	0.42	2.96	1.85	0.21	0.00	1.16	2.58	7.36	4.67	0.00	0.49	1.93
	SE	0.46	0.36	0.42	0.74	0.45	0.21	0.00	0.81	1.34	1.56	2.74	0.00	0.49	3.73
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.99	0.37	2.34	1.15	0.49	1.68	1.18	2.12	4.70	2.69	0.00	0.00	1.36
	SE	0.00	0.99	0.22	1.74	0.48	0.15	1.16	0.78	0.78	1.37	1.82	0.00	0.00	3.48
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.83	2.30	0.59	1.55	0.75	0.31	0.79	0.71	6.65	1.34	0.58	0.00	1.26
	SE	0.00	0.58	1.05	0.20	0.72	0.66	0.31	0.79	0.40	1.55	0.95	0.58	0.00	2.64
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.66	0.79	0.00	0.28	0.14	0.28	0.00	3.44	0.54	0.00	0.47
	SE	0.00	0.00	0.00	0.33	0.79	0.00	0.25	0.14	0.17	0.00	1.76	0.54	0.00	2.06
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.15	0.18	0.92	0.00	3.94	0.80	0.14	0.00	0.00	0.53	0.00	0.51
	SE	0.00	0.00	0.15	0.18	0.47	0.00	2.37	0.45	0.14	0.00	0.00	0.53	0.00	2.53
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.18	0.00	2.77	3.17	0.51	1.61	0.84	0.00	0.00	0.00	0.70
	SE	0.00	0.00	0.00	0.18	0.00	1.19	1.16	0.34	0.75	0.42	0.00	0.00	0.00	1.91
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.64	0.00	0.23	0.41	0.14	1.66	3.03	0.97	1.00	0.00	0.73	0.00	0.68
	SE	0.00	0.28	0.00	0.23	0.41	0.14	0.90	1.96	0.56	0.68	0.00	0.73	0.00	2.51
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.59	0.00	1.84	0.38	0.38	2.88	1.00	0.00	0.63	0.59
	SE	0.00	0.00	0.00	0.00	0.36	0.00	0.40	0.38	0.38	0.70	0.48	0.00	0.63	1.30
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.91	0.22	1.36	1.11	4.74	1.20	0.00	6.85	3.68	1.14	1.15	1.72
	SE	0.00	0.00	0.56	0.22	1.36	0.99	2.23	0.82	0.00	3.58	1.78	0.57	1.15	5.15
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-43 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.35	0.00	0.11	0.81	1.52	1.99	0.73	2.04	2.08	1.64	4.29	1.20
11JUN	SE	0.00	0.00	0.35	0.00	0.11	0.62	0.74	1.41	0.23	2.04	1.04	1.64	2.68	4.27
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.74	0.00	0.58	0.00	2.80	0.26	1.14	2.18	2.94	2.60	0.61	1.07
18JUN	SE	0.00	0.00	0.74	0.00	0.39	0.00	1.04	0.26	0.93	1.15	2.94	1.57	0.61	3.94
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	2.17	0.00	0.59	1.18	1.39	1.69	0.56	0.55	2.99	0.86
25JUN	SE	0.00	0.00	0.00	0.00	1.69	0.00	0.30	0.78	1.39	0.98	0.56	0.55	2.99	4.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.10	0.45	2.27	1.14	0.27	0.00	0.88	0.00	0.63	0.44
02JUL	SE	0.00	0.00	0.00	0.00	0.10	0.31	1.55	0.66	0.27	0.00	0.56	0.00	0.63	1.93
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.52	NS	NS	NS	NS	NS	0.21
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.26						0.55
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	3.58	0.52	NS	NS	NS	NS	NS	0.51
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	1.86	0.52						1.93
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	3.47	3.97	NS	NS	NS	NS	NS	0.93
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.83	2.90						3.02
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.74	0.82	0.00	0.80	2.38	3.41	NS	NS	NS	NS	NS	1.02
26AUG	SE	0.00	0.00	0.74	0.82	0.00	0.38	0.78	1.90						2.37
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.86	0.00	0.00	1.58	2.49	NS	NS	NS	NS	NS	0.62
10SEP	SE	0.00	0.00	0.00	0.86	0.00	0.00	0.46	0.81						1.27
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	2.32	4.16	NS	NS	NS	NS	NS	0.81
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.25						1.28
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	2.66	0.00	0.00	0.52	0.54	NS	NS	NS	NS	NS	0.47
07OCT	SE	0.00	0.00	0.00	1.99	0.00	0.00	0.43	0.54						2.11
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-44 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS
18MAR-	SE	0	0	0	0	0	0	0						
	NO. TOWS	10	10	11	11	10	10	12						
24MAR-	ST. CROP	44	378	432	148	210	157	730	NS	NS	NS	NS	NS	NS
26MAR-	SE	44	190	144	75	108	65	366						
	NO. TOWS	10	10	11	11	10	10	12						
30MAR-	ST. CROP	445	771	1088	221	269	121	37	NS	NS	NS	NS	NS	NS
02APR-	SE	295	625	388	122	219	121	37						
	NO. TOWS	10	10	11	11	10	10	12						
05APR-	ST. CROP	369	383	134	438	386	44	0	345	426	1041	824	0	35
08APR-	SE	97	83	134	110	95	44	0	242	222	221	482	0	35
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	ST. CROP	0	228	120	345	240	102	235	352	351	664	474	0	0
16APR-	SE	0	228	69	258	100	32	163	234	128	194	322	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	ST. CROP	0	190	742	87	322	155	43	237	118	940	236	94	0
23APR-	SE	0	132	338	29	149	136	43	237	66	219	168	94	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	ST. CROP	0	0	0	97	165	0	40	41	47	0	606	87	0
30APR-	SE	0	0	0	49	165	0	35	41	29	0	310	87	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	ST. CROP	0	0	47	27	191	0	550	239	23	0	0	85	0
07MAY-	SE	0	0	47	27	98	0	331	135	23	0	0	85	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	ST. CROP	0	0	0	27	0	574	442	152	266	119	0	0	0
14MAY-	SE	0	0	0	27	0	247	161	103	124	60	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	ST. CROP	0	146	0	34	84	28	232	902	160	141	0	117	0
21MAY-	SE	0	65	0	34	84	28	127	586	93	96	0	117	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	ST. CROP	0	0	0	0	124	0	257	112	63	407	176	0	45
28MAY-	SE	0	0	0	0	75	0	56	112	63	99	85	0	45
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	ST. CROP	0	0	292	33	284	230	663	356	0	970	648	184	82
04JUN-	SE	0	0	180	33	284	206	311	244	0	507	314	92	82
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-44 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	113	0	24	169	212	593	121	289	367	263	305
11JUN	SE	0	0	113	0	24	128	104	420	38	289	184	263	191
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	237	0	120	0	392	77	189	308	518	417	44
18JUN	SE	0	0	237	0	82	0	145	77	154	162	518	253	44
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	453	0	82	353	229	239	99	88	213
25JUN	SE	0	0	0	0	351	0	42	231	229	138	99	88	213
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	20	94	317	339	45	0	154	0	45
02JUL	SE	0	0	0	0	20	65	217	196	45	0	99	0	45
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	159	154	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	68	78					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	500	157	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	260	157					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	486	1184	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	116	866					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	240	121	0	166	333	1016	NS	NS	NS	NS	NS
26AUG	SE	0	0	240	121	0	79	110	567					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	127	0	0	220	743	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	127	0	0	65	243					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	324	1239	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	176	74					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	394	0	0	73	160	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	295	0	0	60	160					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-45 REGIONAL DENSITY (NO./1,000m3) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	REGIONS COMBINED
06JUL -	DENSITY	0.00	0.02	0.37	0.18	0.43	0.43	0.71	0.36	0.53	0.87	1.52	1.93	0.71	0.62
09JUL	SE	0.00	0.02	0.15	0.11	0.15	0.11	0.37	0.07	0.21	0.34	0.33	1.26	0.48	1.51
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.52	0.18	0.42	0.25	2.94	0.27	0.84	3.89	2.60	2.39	1.91	1.25
23JUL	SE	0.00	0.00	0.17	0.09	0.15	0.15	1.06	0.10	0.42	1.83	1.42	0.82	0.64	2.80
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.31	0.45	0.22	0.37	0.77	0.94	2.11	16.91	0.89	7.38	25.91	4.33
06AUG	SE	0.00	0.00	0.17	0.18	0.08	0.11	0.33	0.27	1.54	10.80	0.36	2.95	11.09	15.85
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.71	0.36	0.79	0.49	0.75	1.06	2.41	3.25	1.42	1.09	4.95	1.33
20AUG	SE	0.00	0.00	0.37	0.21	0.18	0.14	0.18	0.28	0.70	1.40	0.25	0.59	2.25	2.87
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.08	0.18	0.41	0.73	0.59	0.94	0.39	1.12	4.45	2.32	2.71	16.74	2.36
03SEP	SE	0.00	0.06	0.07	0.29	0.22	0.25	0.27	0.13	0.29	0.47	1.35	1.31	3.75	4.26
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	1.16	0.78	0.59	0.57	1.12	1.23	2.10	5.39	0.68	1.71	10.03	1.95
16SEP	SE	0.00	0.00	0.48	0.40	0.16	0.26	0.38	0.46	0.82	3.60	0.17	0.41	4.74	6.10
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.09	0.12	0.09	0.37	0.31	1.27	1.63	1.55	6.18	1.34	2.78	6.94	1.74
30SEP	SE	0.00	0.06	0.06	0.05	0.18	0.08	0.59	0.40	0.36	2.14	0.58	0.48	3.09	3.92
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.29	2.44	2.28	1.94	0.20	0.41	1.72	1.40	3.55	2.56	1.58	0.97	1.81	1.63
14OCT	SE	0.15	1.82	0.49	0.59	0.08	0.22	0.46	0.32	0.93	1.08	0.83	0.79	0.96	2.93
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.13	2.01	3.16	0.60	1.24	0.18	1.05	0.89	9.30	5.14	4.41	0.67	0.29	2.24
29OCT	SE	0.09	0.51	0.66	0.29	0.53	0.06	0.26	0.23	2.50	2.00	1.08	0.16	0.17	3.56
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.09	1.95	7.35	1.43	0.77	0.04	1.57	0.21	2.80	3.17	2.27	0.60	0.40	1.74
12NOV	SE	0.07	0.61	2.16	0.39	0.29	0.02	0.26	0.10	0.78	1.11	0.93	0.45	0.19	2.88
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	3.55	5.90	4.98	2.56	1.05	0.01	0.19	0.92	2.09	0.94	0.06	0.07	0.05	1.72
03DEC	SE	0.90	0.79	0.66	0.56	0.47	0.01	0.06	0.25	0.44	0.23	0.04	0.05	0.05	1.65
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-46 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL -	ST. CROP	0	5	120	27	89	89	100	107	88	123	268	311	51
09JUL	SE	0	5	49	16	31	24	51	20	35	48	58	202	34
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL -	ST. CROP	0	0	166	27	87	53	410	81	139	551	458	383	136
23JUL	SE	0	0	55	14	31	31	148	30	70	259	250	132	46
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG -	ST. CROP	0	0	99	67	45	77	107	280	349	2392	157	1186	1844
06AUG	SE	0	0	54	27	17	22	46	81	255	1528	63	474	789
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG -	ST. CROP	0	0	227	53	164	102	105	316	399	460	250	175	352
20AUG	SE	0	0	120	31	38	28	25	83	116	198	43	95	160
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG -	ST. CROP	0	18	59	61	152	123	131	115	186	629	410	436	1191
03SEP	SE	0	13	24	43	46	51	37	38	49	67	237	210	267
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP -	ST. CROP	0	0	372	115	123	118	157	368	347	763	120	274	714
16SEP	SE	0	0	154	60	33	54	53	136	136	510	31	66	337
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP -	ST. CROP	0	20	39	13	78	64	177	486	257	874	237	447	494
30SEP	SE	0	14	18	7	38	17	83	121	60	303	103	76	220
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT -	ST. CROP	61	561	735	287	41	86	241	418	588	362	279	156	129
14OCT	SE	31	418	157	87	17	46	65	96	154	152	147	127	69
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT -	ST. CROP	27	460	1017	89	259	37	146	265	1539	727	778	108	20
29OCT	SE	19	117	213	43	109	13	36	69	413	283	190	26	12
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV -	ST. CROP	18	448	2364	211	160	8	219	64	463	449	401	96	29
12NOV	SE	14	140	697	58	59	3	37	31	130	157	164	72	13
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV -	ST. CROP	742	1352	1604	378	218	1	26	274	347	132	11	12	3
03DEC	SE	187	181	213	83	98	1	9	74	74	33	7	8	3
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-47 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.14	4.00	0.67	0.00	1.00	4.00	3.38	0.13	1.95	0.50	1.31
17JUN	SE	0.00	0.00	0.14	3.51	0.67	0.00	0.63	1.81	2.11	0.09	0.77	0.26	4.65
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.09	5.29	1.00	0.33	0.33	1.38	1.13	2.88	2.13	2.47	1.50	1.54
01JUL	SE	0.00	0.09	1.94	1.00	0.33	0.33	0.53	0.55	2.47	0.67	0.82	1.02	3.72
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.64	2.14	0.00	0.67	2.67	0.50	2.38	2.88	2.87	6.05	2.08	1.91
15JUL	SE	0.00	0.64	1.83	0.00	0.67	0.88	0.19	0.75	1.53	1.14	1.58	1.59	3.78
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.63	2.00	1.60	0.40	0.67	0.60	0.80	4.60	5.56	3.30	0.00	1.68
30JUL	SE	0.00	0.27	1.31	1.17	0.40	0.67	0.60	0.49	4.12	3.88	0.96	0.00	6.11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.50	0.60	3.60	0.50	0.60	1.00	0.60	7.89	2.20	0.14	1.47
13AUG	SE	0.00	0.00	0.36	0.60	2.23	0.50	0.60	1.00	0.40	5.62	2.09	0.14	6.57
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.25	16.57	1.40	1.20	0.00	0.00	0.20	0.00	1.44	0.20	3.57	2.07
27AUG	SE	0.00	0.14	16.11	0.68	0.58	0.00	0.00	0.20	0.00	0.56	0.20	2.71	16.38
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.40	0.63	0.36	0.20	1.00	3.67	0.00	1.00	0.20	1.44	1.90	0.14	0.91
10SEP	SE	0.40	0.25	0.29	0.20	0.77	2.79	0.00	0.63	0.20	0.65	0.91	0.14	3.23
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	19.54	0.29	1.80	1.00	0.17	0.00	0.60	0.00	2.44	0.40	0.29	2.21
24SEP	SE	0.00	19.11	0.19	1.11	0.63	0.17	0.00	0.40	0.00	1.99	0.22	0.29	19.26
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	1.20	0.92	0.57	0.80	1.00	0.67	0.20	0.00	1.60	2.56	2.40	0.29	1.02
07OCT	SE	0.49	0.25	0.20	0.58	0.55	0.33	0.20	0.00	0.68	1.12	1.56	0.18	2.30
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.25	0.07	0.00	0.00	0.00	0.40	0.00	0.40	0.44	0.10	1.00	0.22
22OCT	SE	0.00	0.11	0.07	0.00	0.00	0.00	0.40	0.00	0.40	0.24	0.10	0.85	1.06
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-48 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE PERCH OLDER-THAN-YEARLING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	4	37	2	0	7	5	29	2	38	7	131
17JUN	SE	0	0	4	32	2	0	4	2	18	2	15	4	41
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	4	142	9	1	4	10	1	25	37	49	20	302
01JUL	SE	0	4	52	9	1	4	4	1	21	12	16	14	62
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	29	58	0	2	28	4	3	25	50	119	28	346
15JUL	SE	0	29	49	0	2	9	1	1	13	20	31	22	73
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	28	54	15	1	7	4	1	40	98	65	0	312
30JUL	SE	0	12	35	11	1	7	4	1	35	68	19	0	89
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	13	6	9	5	4	1	5	138	43	2	228
13AUG	SE	0	0	10	6	6	5	4	1	3	99	41	2	108
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	11	446	13	3	0	0	< 0.5	0	25	4	49	551
27AUG	SE	0	6	433	6	2	0	0	< 0.5	0	10	4	37	435
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	3	28	10	2	3	39	0	1	2	25	37	2	152
10SEP	SE	3	11	8	2	2	30	0	1	2	11	18	2	39
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	888	8	17	3	2	0	1	0	43	8	4	972
24SEP	SE	0	868	5	10	2	2	0	< 0.5	0	35	4	4	869
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	9	42	15	7	3	7	1	0	14	45	47	4	194
07OCT	SE	4	12	5	5	1	4	1	0	6	20	31	3	40
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	11	2	0	0	0	3	0	3	8	2	14	43
22OCT	SE	0	5	2	0	0	0	3	0	3	4	2	11	14
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-49 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-49 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-50 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
16MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-50 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
08JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-51 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.38	0.00	5.61	9.23	2.09	1.10	1.78	NS	NS	NS	NS	NS	NS	2.88
18MAR	SE	0.38	0.00	2.53	4.52	1.67	0.64	0.98							5.58
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-51 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-52 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	78	0	1806	1364	436	229	248	NS	NS	NS	NS	NS	NS	4161
18MAR	SE	78	0	814	668	349	133	136							1128
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-52 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-53 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	47.32	54.10	127.41	71.53	7.68	4.63	3.05	NS	NS	NS	NS	NS	NS	45.10
18MAR	SE	21.89	13.07	27.83	33.51	3.36	1.94	0.99							50.63
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	112.11	86.61	0.28	0.43	0.00	0.00	0.05	NS	NS	NS	NS	NS	NS	28.50
26MAR	SE	23.76	18.07	0.28	0.43	0.00	0.00	0.05							29.86
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	556.76	317.16	0.40	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	124.90
02APR	SE	225.46	176.93	0.40	0.00	0.00	0.00	0.00							286.60
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	546.22	168.86	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.02
08APR	SE	273.89	142.57	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	308.78
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	70.52	1129.38	52.51	58.67	141.89	0.50	0.80	0.00	0.00	0.00	0.00	0.00	0.00	111.87
16APR	SE	26.79	639.80	15.66	19.84	107.25	0.50	0.80	0.00	0.00	0.00	0.00	0.00	0.00	649.77
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	376.08	143.57	11.52	27.96	44.70	7.74	0.49	0.00	0.00	0.00	0.00	0.00	0.00	47.08
23APR	SE	125.56	11.84	1.99	8.41	18.06	6.63	0.37	0.00	0.00	0.00	0.00	0.00	0.00	127.87
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	90.81	31.00	5.67	1.75	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.98
30APR	SE	19.70	10.29	3.17	0.83	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.47
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	4.82	0.19	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
07MAY	SE	3.38	0.19	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
14MAY	SE	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-53 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-54 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	9891	12412	41003	10568	1600	962	427	NS	NS	NS	NS	NS	NS	76861
18MAR	SE	4575	2999	8957	4951	701	403	138							11634
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	23432	19870	91	63	0	0	7	NS	NS	NS	NS	NS	NS	43463
26MAR	SE	4967	4147	91	63	0	0	7							6471
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	116369	72762	127	0	0	0	0	NS	NS	NS	NS	NS	NS	189258
02APR	SE	47124	40592	127	0	0	0	0							62197
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	114168	38740	61	0	0	0	0	0	0	0	0	0	0	152969
08APR	SE	57247	32709	61	0	0	0	0	0	0	0	0	0	0	65933
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	14739	259102	16900	8668	29560	103	113	0	0	0	0	0	0	329184
16APR	SE	5600	146783	5039	2931	22343	103	113	0	0	0	0	0	0	148694
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	78605	32937	3708	4131	9312	1607	69	0	0	0	0	0	0	130368
23APR	SE	26244	2715	640	1242	3763	1376	52	0	0	0	0	0	0	26723
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	18979	7113	1826	259	94	0	0	0	0	0	0	0	0	28271
30APR	SE	4118	2360	1020	123	50	0	0	0	0	0	0	0	0	4857
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	1007	43	197	0	0	0	0	0	0	0	0	0	0	1246
07MAY	SE	706	43	114	0	0	0	0	0	0	0	0	0	0	717
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	55	0	0	0	0	0	0	0	0	0	0	0	55
14MAY	SE	0	55	0	0	0	0	0	0	0	0	0	0	0	55
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-54 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-55 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	12.42	9.18	0.89	2.65	4.21	1.35	0.00	0.00	0.25	0.00	0.00	0.00	0.00	2.38
23APR	SE	10.29	2.22	0.54	1.79	1.80	0.97	0.00	0.00	0.25	0.00	0.00	0.00	0.00	10.88
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	764.16	241.05	31.63	107.09	63.29	11.96	3.92	3.87	4.32	0.88	0.99	0.00	0.00	94.86
30APR	SE	170.94	60.05	10.83	15.30	26.92	4.38	1.31	2.77	1.24	0.44	0.49	0.00	0.00	184.21
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	445.83	41.48	49.47	105.70	66.93	17.55	12.49	4.88	5.60	0.78	0.00	4.21	0.00	58.07
07MAY	SE	146.01	19.94	17.32	29.66	38.13	13.02	4.69	2.21	3.27	0.78	0.00	2.34	0.00	156.73
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	220.40	45.17	46.50	17.22	26.71	240.37	57.73	12.30	1.16	1.22	0.00	1.16	0.00	51.53
14MAY	SE	126.69	9.80	28.79	9.97	21.06	77.99	19.65	4.07	0.86	1.22	0.00	1.16	0.00	154.94
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	178.80	55.71	25.47	1.94	40.17	125.30	17.07	25.46	25.91	2.52	0.25	1.46	0.00	38.46
21MAY	SE	22.63	39.65	5.65	1.22	17.92	42.50	9.75	19.61	20.58	2.52	0.25	1.46	0.00	71.81
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	31.08	50.34	5.08	4.55	55.06	57.43	120.07	1.45	0.89	6.60	2.10	1.75	0.00	25.88
28MAY	SE	12.16	32.51	2.44	2.37	31.36	20.15	38.79	0.89	0.44	3.61	2.10	0.97	0.00	64.26
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	69.43	6.61	12.55	18.20	7.84	49.65	13.43	4.61	1.03	3.98	1.21	0.00	0.00	14.50
04JUN	SE	30.41	3.38	2.99	5.00	7.84	13.63	1.61	1.99	1.03	1.76	0.76	0.00	0.00	35.05
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-55 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	4.70	3.21	7.64	112.10	106.24	6.10	2.31	0.00	0.00	0.00	0.00	18.64
11JUN	SE	0.00	0.00	3.27	1.97	5.03	57.90	57.26	1.50	1.22	0.00	0.00	0.00	0.00	81.69
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	35.11	2.49	0.86	1.19	0.41	37.82	12.03	3.35	5.83	1.19	0.30	0.00	0.00	7.74
18JUN	SE	27.83	1.90	0.46	1.19	0.19	18.95	3.61	0.88	3.27	0.69	0.30	0.00	0.00	34.12
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	17.73	1.77	3.33	1.25	27.53	40.24	18.76	4.88	1.85	0.29	0.00	0.00	0.00	9.05
25JUN	SE	12.18	1.77	2.19	1.25	20.68	7.51	2.40	1.88	1.20	0.29	0.00	0.00	0.00	25.55
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	10.48	0.00	0.26	5.22	1.56	26.78	2.13	2.11	0.69	0.00	0.59	0.00	0.00	3.83
02JUL	SE	5.26	0.00	0.26	2.79	0.74	13.94	0.84	0.57	0.37	0.00	0.59	0.00	0.00	15.23
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	1.38	0.00	0.00	5.97	3.00	1.37	0.26	NS	NS	NS	NS	NS	1.50
16JUL	SE	0.00	1.38	0.00	0.00	3.26	1.05	0.32	0.26						3.72
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.18	0.00	0.12	0.00	0.00	NS	NS	NS	NS	NS	0.04
07OCT	SE	0.00	0.00	0.00	0.18	0.00	0.12	0.00	0.00						0.21
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-56 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	2595	2107	287	392	876	281	0	0	42	0	0	0	0	6580
23APR	SE	2150	508	174	264	374	200	0	0	42	0	0	0	0	2272
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	159720	55302	10180	15822	13186	2481	548	1153	715	125	174	0	0	259404
30APR	SE	35728	13777	3485	2261	5608	908	183	827	205	62	87	0	0	38944
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	93184	9516	15921	15616	13945	3641	1746	1456	927	110	0	677	0	156738
07MAY	SE	30518	4575	5574	4382	7944	2701	656	659	542	110	0	377	0	32776
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	46066	10364	14964	2545	5564	49867	8070	3667	193	172	0	186	0	141657
14MAY	SE	26480	2248	9266	1473	4387	16180	2746	1213	142	172	0	186	0	32930
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	37370	12780	8196	286	8369	25994	2386	7591	4287	357	43	234	0	107894
21MAY	SE	4730	9097	1817	180	3734	8816	1363	5845	3406	357	43	234	0	15746
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	6497	11549	1634	673	11471	11913	16784	432	147	934	370	281	0	62685
28MAY	SE	2543	7458	786	350	6533	4181	5422	266	73	511	370	156	0	12365
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	14512	1517	4040	2688	1634	10300	1877	1374	170	563	214	0	0	38889
04JUN	SE	6356	775	962	739	1634	2827	225	594	170	249	134	0	0	7325
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-56 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010														
														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	1513	474	1592	23255	14851	1819	382	0	0	0	0
11JUN	SE	0	0	1052	291	1048	12011	8004	447	201	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	7338	571	277	175	86	7846	1681	998	965	168	54	0	0
18JUN	SE	5816	435	147	175	39	3932	504	263	541	98	54	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	3707	405	1072	184	5735	8348	2623	1456	306	41	0	0	0
25JUN	SE	2546	405	706	184	4308	1559	335	561	198	41	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	2190	0	83	772	325	5557	298	628	115	0	104	0	0
02JUL	SE	1099	0	83	412	153	2893	118	170	62	0	104	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	316	0	0	1244	622	192	79	NS	NS	NS	NS	NS
16JUL	SE	0	316	0	0	680	217	44	79					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	26	0	25	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	26	0	25	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-57 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.06	0.51	0.09	0.11	0.65	13.36	0.55	0.35	0.15	0.00	0.00	0.00	0.00	1.22
09JUL	SE	0.04	0.23	0.06	0.08	0.32	5.57	0.26	0.12	0.04	0.00	0.00	0.00	0.00	5.59
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.44	0.78	0.00	0.00	0.00	0.80	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.18
23JUL	SE	0.11	0.25	0.00	0.00	0.00	0.76	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.87
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
06AUG	SE	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
20AUG	SE	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.28	0.03	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
03SEP	SE	0.11	0.03	0.00	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.13	0.00	0.00	0.02	0.00	0.03	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.02
16SEP	SE	0.09	0.00	0.00	0.02	0.00	0.03	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.11
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.13	0.03	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02
30SEP	SE	0.10	0.03	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.11
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.07	0.02	0.03	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01
14OCT	SE	0.00	0.07	0.02	0.03	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.09
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.03	0.04	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
29OCT	SE	0.03	0.03	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	< 0.005
12NOV	SE	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-58 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED													
DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL- ST. CROP	12	117	29	16	135	2771	77	105	25	0	0	0	0
09JUL SE	8	53	20	12	67	1155	36	36	7	0	0	0	0
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL- ST. CROP	91	179	0	0	0	166	47	0	0	0	0	0	0
23JUL SE	24	58	0	0	0	158	42	0	0	0	0	0	0
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG- ST. CROP	20	6	0	0	0	0	0	0	0	0	0	0	0
06AUG SE	20	6	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG- ST. CROP	6	33	0	0	0	0	0	0	0	0	0	0	0
20AUG SE	6	13	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG- ST. CROP	59	6	0	14	0	5	0	0	0	0	0	0	0
03SEP SE	23	6	0	14	0	2	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP- ST. CROP	27	0	0	3	0	7	8	4	0	0	0	0	0
16SEP SE	19	0	0	3	0	5	5	4	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP- ST. CROP	28	6	0	0	0	5	5	0	0	0	0	0	0
30SEP SE	21	6	0	0	0	3	5	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT- ST. CROP	0	17	8	4	0	0	9	0	0	0	0	0	0
14OCT SE	0	17	8	4	0	0	6	0	0	0	0	0	0
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT- ST. CROP	6	8	18	0	3	0	0	0	0	0	0	0	0
29OCT SE	6	6	9	0	3	0	0	0	0	0	0	0	0
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV- ST. CROP	0	0	0	0	2	0	0	0	6	0	0	0	0
12NOV SE	0	0	0	0	2	0	0	0	6	0	0	0	0
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV- ST. CROP	0	0	0	0	0	2	0	0	0	0	0	0	0
03DEC SE	0	0	0	0	0	2	0	0	0	0	0	0	0
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-59 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-60 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-61 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.91	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.13
	SE	0.00	0.00	0.70	0.00	0.00	0.00	0.00							0.70
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	SE	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-61 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-62 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	292	0	0	0	0	NS	NS	NS	NS	NS	NS	292
02APR	SE	0	0	225	0	0	0	0							225
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	69	0	0	0	0	0	0	0	0	0	0	69
08APR	SE	0	0	69	0	0	0	0	0	0	0	0	0	0	69
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-62 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-63 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
09JUL	SE	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
23JUL	SE	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
06AUG	SE	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03SEP	SE	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.02	0.06	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
29OCT	SE	0.00	0.02	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
12NOV	SE	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.03	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03DEC	SE	0.03	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-64 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		0	0	0	4	0	0	0	0	0	0	0	0	0	4
09JUL - SE		0	0	0	4	0	0	0	0	0	0	0	0	0	4
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		0	6	0	0	0	0	0	0	0	0	0	0	0	6
23JUL - SE		0	6	0	0	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		6	7	0	0	0	0	0	0	0	0	0	0	0	13
06AUG - SE		6	7	0	0	0	0	0	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	0	0	0	3	0	0	0	0	0	0	0	0	3
03SEP - SE		0	0	0	0	3	0	0	0	0	0	0	0	0	3
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
16SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		0	0	0	0	0	2	0	0	0	0	0	0	0	2
14OCT - SE		0	0	0	0	0	2	0	0	0	0	0	0	0	2
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		0	4	18	0	5	0	0	0	0	0	0	0	0	28
29OCT - SE		0	4	13	0	3	0	0	0	0	0	0	0	0	14
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		0	7	13	0	0	0	0	0	0	0	0	0	0	20
12NOV - SE		0	5	8	0	0	0	0	0	0	0	0	0	0	10
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		6	4	0	0	2	0	0	0	0	0	0	0	0	11
03DEC - SE		6	4	0	0	2	0	0	0	0	0	0	0	0	7
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-65 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-66 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC TOMCOD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-67 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	2.42	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
14MAY	SE	1.64	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	73.40	78.10	8.09	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.33
21MAY	SE	17.97	27.14	3.23	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.71
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	7785.27	19429.89	8559.30	114.46	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2760.90
28MAY	SE	1319.15	5001.78	2169.04	46.44	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5609.36
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	52567.93	26666.71	5927.99	109.51	1.50	0.00	0.49	0.71	0.56	0.00	0.00	1.60	0.00	6559.77
04JUN	SE	10050.26	7991.31	960.40	41.50	0.61	0.00	0.49	0.71	0.56	0.00	0.00	1.18	0.00	12876.06
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-67 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	22662.60	65980.41	47660.07	7049.32	7181.57	0.67	1.52	0.00	0.68	0.00	0.00	0.00	0.00	11579.76
11JUN	SE	1085.30	20500.76	17338.08	480.34	6345.12	0.56	0.77	0.00	0.55	0.00	0.00	0.00	0.00	27614.48
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	41813.45	34827.01	15535.17	75.57	1.43	0.24	0.00	0.00	0.55	0.00	0.00	0.00	0.00	7096.42
18JUN	SE	5912.31	13902.04	4111.60	46.91	0.91	0.24	0.00	0.00	0.55	0.00	0.00	0.00	0.00	15656.62
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	33394.63	58896.10	34964.67	9450.48	69.02	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10521.20
25JUN	SE	7588.91	8959.93	10842.10	4328.30	36.52	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16557.74
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	35459.76	14843.23	8191.19	26.09	4.51	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4501.94
02JUL	SE	5722.11	5032.06	4451.70	15.00	3.13	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8825.08
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	10406.29	27135.24	11478.34	1501.93	612.41	129.90	0.97	0.00	NS	NS	NS	NS	NS	6408.13
16JUL	SE	2804.41	5969.46	5537.79	305.81	162.74	110.45	0.76	0.00						8619.66
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	8908.37	1258.45	96.89	4.21	0.13	3.63	1.43	0.00	NS	NS	NS	NS	NS	1284.14
29JUL	SE	1752.12	868.37	47.92	2.57	0.13	1.58	1.43	0.00						1956.09
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	159.24	55.94	0.00	1.37	114.15	95.67	0.00	0.00	NS	NS	NS	NS	NS	53.30
12AUG	SE	148.92	23.33	0.00	1.37	97.51	89.99	0.00	0.00						200.82
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	4526.36	970.24	1.65	1.07	94.18	0.00	0.00	0.53	NS	NS	NS	NS	NS	699.25
26AUG	SE	1991.89	547.37	1.65	1.07	40.08	0.00	0.00	0.53						2066.12
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	56.60	115.92	0.00	17.81	48.82	0.00	0.00	0.00	NS	NS	NS	NS	NS	29.89
10SEP	SE	28.65	59.79	0.00	10.57	31.45	0.00	0.00	0.00						74.14
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	17.29	4.44	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	2.72
23SEP	SE	0.00	4.91	4.44	0.00	0.00	0.00	0.00	0.00						6.62
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-68 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST.CROP	505	106	0	0	0	0	0	0	0	0	0	0	0	611
14MAY	SE	342	106	0	0	0	0	0	0	0	0	0	0	0	358
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST.CROP	15341	17917	2604	95	0	0	0	0	0	0	0	0	0	35957
21MAY	SE	3755	6226	1039	52	0	0	0	0	0	0	0	0	0	7345
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST.CROP	1627220	4457611	2754480	16909	593	0	0	0	0	0	0	0	0	8856813
28MAY	SE	275720	1147511	698022	6862	231	0	0	0	0	0	0	0	0	1371162
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST.CROP	10987363	6117884	1907695	16178	312	0	68	212	93	0	0	257	0	19030062
04JUN	SE	2100631	1833368	309067	6132	127	0	68	212	93	0	0	190	0	2805254
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-68 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	ST.CROP	4736770	15137244	15337558	1041444	1496182	138	213	0	112	0	0	0	0	37749661
11JUN	SE	226841	4703291	5579593	70965	1321918	116	107	0	91	0	0	0	0	7420025
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST.CROP	8739544	7990022	4999395	11164	298	49	0	0	91	0	0	0	0	21740561
18JUN	SE	1235748	3189411	1323160	6931	190	49	0	0	91	0	0	0	0	3667454
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST.CROP	6979898	13511959	11252032	1396183	14379	137	0	0	0	0	0	0	0	33154589
25JUN	SE	1586178	2055590	3489113	639449	7609	115	0	0	0	0	0	0	0	4395939
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST.CROP	7411539	3405339	2636019	3854	941	93	0	0	0	0	0	0	0	13457785
02JUL	SE	1195994	1154457	1432607	2217	652	93	0	0	0	0	0	0	0	2194434
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST.CROP	2175047	6225375	3693861	221891	127587	26949	135	0	NS	NS	NS	NS	NS	12470845
16JUL	SE	586159	1369516	1782124	45179	33904	22914	106	0						2323540
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST.CROP	1861964	288713	31181	622	26	752	200	0	NS	NS	NS	NS	NS	2183459
29JUL	SE	366216	199221	15422	380	26	328	200	0						417183
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST.CROP	33282	12835	0	203	23783	19847	0	0	NS	NS	NS	NS	NS	89950
12AUG	SE	31125	5352	0	203	20315	18670	0	0						41937
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST.CROP	946068	222593	532	158	19620	0	0	157	NS	NS	NS	NS	NS	1189129
26AUG	SE	416331	125577	532	158	8350	0	0	157						434938
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST.CROP	11829	26594	0	2632	10172	0	0	0	NS	NS	NS	NS	NS	51227
10SEP	SE	5988	13717	0	1562	6552	0	0	0						16413
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST.CROP	0	3967	1430	0	0	0	0	0	NS	NS	NS	NS	NS	5397
23SEP	SE	0	1127	1430	0	0	0	0	0						1821
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-69 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
04JUN	SE	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-69 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	48.64	15.75	6.67	0.88	26.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.54
11JUN	SE	26.43	10.10	4.41	0.88	21.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.60
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	2.02	1.89	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
25JUN	SE	2.02	1.89	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.35
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-70 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST. CROP		0	226	0	0	0	0	0	0	0	0	0	0	0	226
04JUN - SE		0	226	0	0	0	0	0	0	0	0	0	0	0	226
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-70 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	10166	3614	2145	130	5426	0	0	0	0	0	0	0	0	21482
11JUN	SE	5523	2318	1418	130	4402	0	0	0	0	0	0	0	0	7569
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	423	433	0	279	0	0	0	0	0	0	0	0	0	1134
25JUN	SE	423	433	0	279	0	0	0	0	0	0	0	0	0	666
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-71 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	57.05	13.74	11.19	3.89	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	32.25	7.95	5.51	2.47	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-71 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	2045.20	1248.33	714.40	1153.37	914.94	0.54	2.85	0.00	0.00	0.00	0.00	0.00	0.00	467.66
11JUN	SE	259.72	530.49	79.83	308.67	352.53	0.54	2.85	0.00	0.00	0.00	0.00	0.00	0.00	758.16
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	921.23	1307.81	2852.65	1864.77	566.83	4.34	0.38	0.00	0.00	0.00	0.00	0.00	0.00	578.31
18JUN	SE	221.75	422.05	1147.28	550.39	106.66	1.79	0.38	0.00	0.00	0.00	0.00	0.00	0.00	1363.03
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	118.66	586.67	1669.83	4302.93	1310.22	43.59	28.48	3.45	0.00	0.00	0.00	0.00	0.00	620.29
25JUN	SE	28.43	191.62	458.74	1034.12	427.76	16.36	6.61	2.01	0.00	0.00	0.00	0.00	0.00	1225.01
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	4818.76	3052.10	5270.95	2991.87	993.10	45.57	95.31	12.59	0.14	0.00	0.00	0.00	0.00	1329.26
02JUL	SE	819.17	410.42	761.60	519.89	341.49	10.17	35.13	5.60	0.14	0.00	0.00	0.00	0.00	1344.55
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	2515.05	1997.21	5078.49	4163.04	837.17	666.52	736.32	89.82	NS	NS	NS	NS	NS	2010.45
16JUL	SE	822.99	483.54	634.51	721.85	388.55	301.81	276.31	50.67						1468.26
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	2974.00	3657.47	846.60	1404.43	862.03	363.97	358.18	20.73	NS	NS	NS	NS	NS	1310.93
29JUL	SE	939.84	2253.42	185.63	369.45	153.77	148.49	253.68	12.06						2498.47
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	231.23	195.02	95.72	229.91	174.53	46.14	62.70	46.65	NS	NS	NS	NS	NS	135.24
12AUG	SE	69.19	45.15	26.07	47.26	38.02	6.74	9.47	12.93						107.18
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	363.84	361.73	161.63	712.28	380.30	100.72	13.44	7.12	NS	NS	NS	NS	NS	262.63
26AUG	SE	130.11	84.45	52.52	183.19	130.87	40.06	5.02	3.32						281.33
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	83.83	101.95	120.31	242.66	284.75	261.54	26.75	25.97	NS	NS	NS	NS	NS	143.47
10SEP	SE	63.89	33.80	24.81	47.74	160.01	106.81	17.62	8.47						213.34
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	13.10	17.77	36.61	36.97	42.78	22.20	24.90	15.12	NS	NS	NS	NS	NS	26.18
23SEP	SE	7.21	7.65	11.75	20.82	17.42	13.93	12.18	12.16						38.42
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	3.10	12.49	22.18	37.93	3.11	3.84	1.33	0.00	NS	NS	NS	NS	NS	10.50
07OCT	SE	1.55	6.55	8.48	8.49	1.87	2.19	0.82	0.00						14.09
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-72 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	28	0	0	0	0	0	0	0	0	0	0	0	28
21MAY	SE	0	28	0	0	0	0	0	0	0	0	0	0	0	28
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	260	0	0	0	0	0	0	0	0	0	0	260
28MAY	SE	0	0	260	0	0	0	0	0	0	0	0	0	0	260
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	11924	3152	3602	575	11	0	0	0	0	0	0	0	0	19263
04JUN	SE	6742	1824	1774	364	11	0	0	0	0	0	0	0	0	7215
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-72 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	427473	286391	229904	170395	190615	113	399	0	0	0	0	0	0	1305289
11JUN	SE	54286	121706	25689	45602	73444	113	399	0	0	0	0	0	0	160913
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	192549	300038	918017	275495	118092	900	53	0	0	0	0	0	0	1805144
18JUN	SE	46349	96826	369207	81312	22221	370	53	0	0	0	0	0	0	393628
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	24803	134593	537372	635701	272966	9043	3981	1030	0	0	0	0	0	1619488
25JUN	SE	5943	43961	147629	152777	89118	3394	924	599	0	0	0	0	0	234644
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	1007181	700215	1696253	442009	206899	9453	13323	3752	23	0	0	0	0	4079107
02JUL	SE	171218	94159	245093	76807	71145	2110	4910	1671	23	0	0	0	0	330521
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	525677	458202	1634317	615034	174412	138273	102930	26780	NS	NS	NS	NS	NS	3675624
16JUL	SE	172015	110934	204193	106644	80950	62612	38626	15107						327348
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	621604	839098	272446	207486	179592	75508	50070	6180	NS	NS	NS	NS	NS	2251983
29JUL	SE	196438	516981	59738	54582	32036	30804	35462	3595						561828
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	48329	44742	30804	33966	36361	9573	8765	13907	NS	NS	NS	NS	NS	226448
12AUG	SE	14462	10359	8389	6983	7921	1397	1323	3856						22736
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	76047	82989	52014	105230	79230	20895	1879	2124	NS	NS	NS	NS	NS	420407
26AUG	SE	27196	19375	16901	27064	27265	8312	702	990						54286
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	17521	23390	38717	35850	59323	54258	3739	7742	NS	NS	NS	NS	NS	240540
10SEP	SE	13354	7754	7983	7053	33336	22158	2463	2526						44347
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	2738	4077	11782	5462	8912	4606	3480	4508	NS	NS	NS	NS	NS	45566
23SEP	SE	1506	1756	3782	3077	3629	2889	1703	3625						8166
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	648	2865	7139	5604	648	796	186	0	NS	NS	NS	NS	NS	17886
07OCT	SE	325	1503	2730	1255	390	454	115	0						3430
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-73 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-73 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	3.10	189.74	686.25	529.79	45.50	47.42	30.38	39.44	NS	NS	NS	NS	NS
16JUL	SE	3.10	111.91	105.60	104.25	20.11	31.71	20.49	38.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	776.54	292.01	140.30	66.42	23.70	51.83	141.95	1.03	NS	NS	NS	NS	NS
29JUL	SE	591.02	84.22	43.61	33.07	9.33	30.25	48.82	0.82					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	28.24	120.15	171.49	36.33	26.98	39.49	208.35	49.72	NS	NS	NS	NS	NS
12AUG	SE	4.41	25.75	46.75	7.56	9.02	12.54	47.74	39.12					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	339.36	649.31	187.46	726.95	247.78	255.10	21.75	44.06	NS	NS	NS	NS	NS
26AUG	SE	129.53	299.29	73.87	292.43	89.03	94.97	7.37	31.69					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	165.94	136.34	1041.95	2465.77	712.79	91.10	166.86	108.46	NS	NS	NS	NS	NS
10SEP	SE	51.24	24.15	303.18	264.99	396.10	20.64	70.67	34.75					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	80.96	135.48	313.29	218.10	170.96	96.30	225.04	65.91	NS	NS	NS	NS	NS
23SEP	SE	21.83	44.85	100.85	64.89	70.72	35.19	95.50	65.39					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	125.15	167.88	320.44	352.53	52.06	56.86	134.61	87.17	NS	NS	NS	NS	NS
07OCT	SE	53.90	37.74	93.03	78.41	15.91	24.84	86.68	38.83					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-74 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-74 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	648	43531	220844	78270	9479	9837	4246	11757	NS	NS	NS	NS	NS	378612
16JUL	SE	648	25675	33985	15402	4189	6578	2864	11329						47426
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	162308	66993	45150	9813	4937	10753	19843	308	NS	NS	NS	NS	NS	320103
29JUL	SE	123531	19321	14033	4886	1944	6275	6825	244						126269
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	5903	27564	55189	5368	5621	8193	29126	14823	NS	NS	NS	NS	NS	151787
12AUG	SE	922	5907	15045	1118	1880	2602	6673	11662						21312
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	70930	148964	60325	107398	51623	52922	3041	13136	NS	NS	NS	NS	NS	508339
26AUG	SE	27073	68664	23772	43202	18547	19702	1030	9448						93283
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	34683	31279	335313	364285	148500	18899	23325	32336	NS	NS	NS	NS	NS	988620
10SEP	SE	10709	5539	97566	39148	82521	4282	9879	10361						135019
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	16921	31082	100819	32221	35618	19979	31459	19651	NS	NS	NS	NS	NS	287750
23SEP	SE	4562	10290	32454	9586	14733	7301	13350	19496						45832
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	26158	38516	103121	52082	10846	11796	18817	25987	NS	NS	NS	NS	NS	287321
07OCT	SE	11266	8659	29939	11583	3314	5154	12116	11576						39380
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-75 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.32	71.46	160.66	45.20	183.04	10.45	25.11	39.37	0.00	0.00	0.00	0.00	0.00	41.20
09JUL	SE	0.32	66.37	60.51	23.22	55.75	1.74	12.56	18.83	0.00	0.00	0.00	0.00	0.00	110.59
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	13.08	129.71	44.73	28.74	1.68	16.32	72.50	13.56	0.02	49.65	10.55	2.79	0.00	29.49
23JUL	SE	1.31	29.76	16.90	10.32	1.06	4.49	34.88	8.30	0.02	9.46	10.55	1.60	0.00	52.81
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	2.52	213.66	121.23	11.84	7.78	14.90	8.02	32.86	5.23	31.21	21.48	3.29	1.26	36.56
06AUG	SE	0.80	64.07	26.92	3.87	3.47	2.98	3.39	9.27	3.98	24.11	21.22	1.67	1.26	77.56
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	1.04	104.71	405.24	185.81	47.64	32.20	55.55	150.32	7.73	29.81	8.20	15.09	0.00	80.26
20AUG	SE	0.40	32.72	171.96	78.49	15.47	9.78	15.94	52.49	6.64	11.74	2.77	4.32	0.00	200.88
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	31.83	88.91	115.69	35.41	10.99	35.66	43.50	121.03	1.63	5.80	1.70	1.20	0.00	37.95
03SEP	SE	11.37	13.77	25.35	9.30	5.55	9.28	28.92	61.62	1.63	2.51	1.70	0.54	0.00	76.23
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	8.99	49.08	119.00	73.22	33.20	60.55	79.25	66.51	49.23	40.94	19.19	4.63	2.08	46.61
16SEP	SE	2.15	11.03	27.61	15.20	9.46	13.12	32.41	24.80	23.81	16.47	6.83	3.93	2.08	62.86
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	22.55	112.17	44.67	24.14	71.74	42.27	21.46	78.23	9.82	28.72	10.20	4.13	0.72	36.22
30SEP	SE	5.60	29.66	8.47	13.76	29.88	16.49	17.40	36.00	7.92	16.07	9.79	2.05	0.72	66.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	25.04	77.81	53.55	10.78	1.65	6.38	31.99	26.28	0.84	0.00	0.00	0.00	0.00	18.02
14OCT	SE	5.83	26.82	21.29	4.06	0.54	2.17	8.86	7.31	0.84	0.00	0.00	0.00	0.00	36.89
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	3.98	1.44	4.96	0.12	0.03	0.00	0.01	0.02	0.00	0.00	0.00	0.57	0.00	0.86
29OCT	SE	0.64	0.30	0.81	0.07	0.02	0.00	0.01	0.02	0.00	0.00	0.00	0.57	0.00	1.22
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.64	0.66	2.39	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
12NOV	SE	0.20	0.20	0.81	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03DEC	SE	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-76 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		67	16394	51703	6677	38134	2168	3510	11738	0	0	0	0	0	130391
09JUL - SE		67	15228	19472	3431	11615	362	1756	5613	0	0	0	0	0	28150
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		2734	29758	14396	4247	350	3385	10135	4044	3	7024	1860	449	0	78385
23JUL - SE		274	6827	5438	1525	221	932	4876	2474	3	1339	1860	257	0	10710
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		526	49018	39014	1750	1621	3091	1120	9797	865	4415	3787	528	90	115623
06AUG - SE		166	14699	8663	572	723	617	474	2765	658	3410	3742	268	90	18066
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		216	24022	130411	27450	9925	6679	7765	44815	1280	4217	1446	2425	0	260652
20AUG - SE		83	7508	55338	11596	3223	2030	2229	15648	1099	1660	488	694	0	59348
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		6653	20397	37230	5231	2289	7397	6081	36084	269	820	300	192	0	122943
03SEP - SE		2376	3159	8158	1374	1156	1926	4042	18371	269	355	300	86	0	21053
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		1879	11260	38295	10817	6917	12561	11079	19830	8147	5792	3384	743	148	130854
16SEP - SE		449	2531	8885	2246	1972	2721	4531	7395	3940	2330	1204	631	148	14139
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		4713	25733	14375	3566	14947	8768	3000	23324	1625	4064	1798	664	51	106627
30SEP - SE		1170	6805	2724	2032	6225	3420	2432	10731	1310	2273	1726	330	51	15516
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		5235	17851	17232	1592	344	1323	4472	7836	140	0	0	0	0	56023
14OCT - SE		1219	6153	6851	600	112	450	1239	2180	140	0	0	0	0	9652
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		832	331	1596	18	5	0	1	6	0	0	0	92	0	2881
29OCT - SE		133	69	262	10	3	0	1	6	0	0	0	92	0	315
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		133	152	768	36	0	0	0	0	0	0	0	0	0	1089
12NOV - SE		41	45	260	22	0	0	0	0	0	0	0	0	0	268
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		7	0	0	0	0	0	0	0	0	0	0	0	0	7
03DEC - SE		7	0	0	0	0	0	0	0	0	0	0	0	0	7
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-77 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	1.73	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
17JUN	SE	0.00	1.73	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.36
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.18	0.00	16.33	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
01JUL	SE	0.00	0.18	0.00	10.90	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.91
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	2.33	215.73	161.57	57.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.44
15JUL	SE	1.45	108.77	122.99	54.51	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	173.01
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	3896.00	3.96	2.79	2.00	117.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	335.18
30JUL	SE	2980.10	2.15	1.85	0.95	116.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2982.37
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	63.00	25.83	1.14	2.20	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.43	7.79
13AUG	SE	38.30	11.68	1.14	1.96	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.43	40.11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	1455.40	44.79	4.86	10.60	943.80	0.00	0.00	0.00	0.00	0.00	0.00	0.14	204.97
27AUG	SE	1359.45	28.55	4.86	5.56	937.06	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1651.38
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	97.20	55.58	46.14	4.80	8.80	33.67	0.00	0.00	0.00	0.00	0.00	0.00	20.52
10SEP	SE	51.93	27.47	28.80	4.80	4.95	25.59	0.00	0.00	0.00	0.00	0.00	0.00	70.59
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	68.58	243.07	50.00	3.80	13.17	0.00	0.00	0.00	0.00	0.10	0.43	31.60
24SEP	SE	0.00	45.36	206.08	24.48	3.80	5.48	0.00	0.00	0.00	0.00	0.10	0.30	212.53
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	209.80	47.63	5.86	15.00	0.20	0.00	1.40	5.20	10.20	0.00	0.10	0.00	24.62
07OCT	SE	115.73	18.49	2.21	6.95	0.20	0.00	1.40	1.98	8.78	0.00	0.10	0.00	117.78
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.33	0.07	1.00	2.80	0.00	2.40	3.60	0.00	0.00	0.00	0.00	0.85
22OCT	SE	0.00	0.22	0.07	1.00	1.83	0.00	1.60	3.60	0.00	0.00	0.00	0.00	4.46
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-78 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN -	ST. CROP	0	78	0	0	11	0	0	0	0	0	0	0	89
17JUN	SE	0	78	0	0	11	0	0	0	0	0	0	0	79
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN -	ST. CROP	0	8	0	151	2	0	0	0	0	0	0	0	161
01JUL	SE	0	8	0	100	1	0	0	0	0	0	0	0	101
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL -	ST. CROP	18	9802	4345	525	2	0	0	0	0	0	0	0	14691
15JUL	SE	11	4942	3307	502	2	0	0	0	0	0	0	0	5968
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL -	ST. CROP	29341	180	75	18	309	0	0	0	0	0	0	0	29924
30JUL	SE	22443	97	50	9	306	0	0	0	0	0	0	0	22446
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG -	ST. CROP	474	1174	31	20	0	9	0	0	0	0	0	6	1714
13AUG	SE	288	531	31	18	0	7	0	0	0	0	0	6	605
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG -	ST. CROP	10961	2035	131	98	2487	0	0	0	0	0	0	2	15714
27AUG	SE	10238	1297	131	51	2470	0	0	0	0	0	0	2	10612
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP -	ST. CROP	732	2525	1241	44	23	359	0	0	0	0	0	0	4924
10SEP	SE	391	1248	775	44	13	273	0	0	0	0	0	0	1545
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP -	ST. CROP	0	3116	6536	461	10	140	0	0	0	0	2	6	10271
24SEP	SE	0	2061	5542	226	10	58	0	0	0	0	2	4	5917
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT -	ST. CROP	1580	2164	158	138	1	0	10	6	88	0	2	0	4146
07OCT	SE	872	840	59	64	1	0	10	2	76	0	2	0	1216
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT -	ST. CROP	0	15	2	9	7	0	17	4	0	0	0	0	55
22OCT	SE	0	10	2	9	5	0	11	4	0	0	0	0	19
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-79 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.52	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.07
02APR	SE	0.52	0.00	0.00	0.00	0.00	0.00	0.00							0.52
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
16APR	SE	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.78	19.96	0.24	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65
30APR	SE	0.78	13.95	0.24	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.98
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	2.31	20.99	11.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.66
07MAY	SE	0.00	1.33	9.63	3.28	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.26
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	2.74	3.69	7.37	29.87	5.93	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.83
14MAY	SE	2.13	1.78	3.05	10.67	4.06	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.13
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	62.95	11.44	4.21	11.87	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.24
21MAY	SE	17.92	4.57	2.38	4.37	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.32
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	3.92	30.57	36.79	7.07	2.59	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.30
28MAY	SE	2.82	9.88	10.45	2.37	1.01	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.91
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	43.60	115.03	34.60	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.17
04JUN	SE	8.19	37.00	12.08	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.92
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-79 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	37.08	59.99	52.56	37.60	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.72
11JUN	SE	37.08	37.47	26.16	19.02	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.87
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	31.75	57.11	51.18	16.24	3.75	1.68	0.38	0.00	0.00	0.00	0.00	0.00	0.00	12.47
18JUN	SE	6.74	27.74	20.25	7.94	1.70	1.28	0.38	0.00	0.00	0.00	0.00	0.00	0.00	35.96
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	38.48	37.32	13.60	53.55	8.91	0.54	0.50	0.95	0.00	0.00	0.00	0.00	0.00	11.83
25JUN	SE	14.43	10.77	6.85	14.33	4.11	0.54	0.38	0.77	0.00	0.00	0.00	0.00	0.00	24.38
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	1.84	27.29	61.95	5.29	0.89	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	7.52
02JUL	SE	1.84	10.13	14.70	2.36	0.77	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	18.12
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	33.18	45.75	23.27	5.58	6.27	1.94	1.84	0.00	NS	NS	NS	NS	NS	14.73
16JUL	SE	17.75	12.53	7.44	4.15	2.85	0.77	1.16	0.00						23.55
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	7.98	0.00	1.46	2.33	0.04	2.85	1.27	0.00	NS	NS	NS	NS	NS	1.99
29JUL	SE	4.29	0.00	1.46	2.33	0.04	1.89	0.80	0.00						5.50
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	8.62	5.48	3.10	0.00	0.00	3.36	2.52	3.13	NS	NS	NS	NS	NS	3.28
12AUG	SE	8.62	3.30	3.10	0.00	0.00	1.77	1.26	3.13						10.45
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	22.00	16.12	1.49	2.15	0.21	0.84	0.05	0.79	NS	NS	NS	NS	NS	5.46
26AUG	SE	1.95	10.28	1.49	2.15	0.15	0.42	0.05	0.79						10.82
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	11.79	22.66	10.68	5.33	2.89	1.25	0.62	6.00	NS	NS	NS	NS	NS	7.65
10SEP	SE	9.39	7.78	3.73	2.69	1.26	0.74	0.44	2.90						13.44
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	12.53	1.44	1.54	0.89	0.00	3.19	0.63	0.00	NS	NS	NS	NS	NS	2.53
23SEP	SE	6.55	1.44	1.54	0.89	0.00	1.64	0.58	0.00						7.16
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	12.40	0.00	5.26	9.73	0.73	0.00	0.00	0.00	NS	NS	NS	NS	NS	3.52
07OCT	SE	6.21	0.00	2.01	3.66	0.59	0.00	0.00	0.00						7.51
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-80 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS
18MAR	SE	0	0	0	0	0	0	0						0
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS
26MAR	SE	0	0	0	0	0	0	0						0
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	ST. CROP	108	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS
02APR	SE	108	0	0	0	0	0	0						108
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	ST. CROP	160	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	160	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	ST. CROP	163	4579	78	75	0	0	0	0	0	0	0	0	0
30APR	SE	163	3201	78	75	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	ST. CROP	0	530	6755	1640	41	0	0	0	0	0	0	0	0
07MAY	SE	0	305	3100	485	41	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	ST. CROP	572	846	2373	4413	1236	36	0	0	0	0	0	0	0
14MAY	SE	444	408	982	1576	845	36	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	ST. CROP	13157	2624	1355	1754	759	0	0	0	0	0	0	0	0
21MAY	SE	3746	1048	765	645	522	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	ST. CROP	819	7014	11840	1045	539	185	0	0	0	0	0	0	0
28MAY	SE	590	2268	3363	350	210	185	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	ST. CROP	9113	26391	11134	584	0	0	0	0	0	0	0	0	0
04JUN	SE	1712	8489	3887	501	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-80 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	7750	13762	16913	5554	857	0	0	0	0	0	0	0	0
11JUN	SE	7750	8598	8420	2810	355	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	6635	13103	16471	2400	780	349	54	0	0	0	0	0	0
18JUN	SE	1408	6364	6518	1173	354	266	54	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	8043	8561	4377	7911	1856	112	70	284	0	0	0	0	0
25JUN	SE	3016	2470	2203	2118	857	112	54	231	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	384	6260	19936	782	186	0	77	0	0	0	0	0	0
02JUL	SE	384	2323	4731	349	160	0	54	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	6935	10496	7487	824	1305	402	257	0	NS	NS	NS	NS	NS
16JUL	SE	3709	2874	2393	612	593	160	162	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	1667	0	471	344	8	592	178	0	NS	NS	NS	NS	NS
29JUL	SE	898	0	471	344	8	393	112	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	1801	1258	997	0	0	698	352	933	NS	NS	NS	NS	NS
12AUG	SE	1801	756	997	0	0	367	177	933					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	4598	3698	479	317	44	174	7	235	NS	NS	NS	NS	NS
26AUG	SE	407	2358	479	317	32	88	7	235					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	2464	5199	3436	787	602	259	86	1789	NS	NS	NS	NS	NS
10SEP	SE	1962	1784	1200	397	262	154	61	865					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	2618	331	496	131	0	662	88	0	NS	NS	NS	NS	NS
23SEP	SE	1370	331	496	131	0	341	81	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	2591	0	1694	1438	153	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	1298	0	646	540	123	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-81 REGIONAL DENSITY (NO./1,000m3) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010															ALL
															REGIONS
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	COMBINED
06JUL -	DENSITY	0.00	11.80	6.09	0.12	1.50	1.04	0.33	0.43	0.00	0.00	0.00	0.00	0.00	1.64
09JUL	SE	0.00	8.91	3.79	0.12	1.21	0.58	0.33	0.43	0.00	0.00	0.00	0.00	0.00	9.79
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	1.01	9.55	0.59	0.80	0.00	3.47	0.30	0.59	0.00	0.00	0.00	0.00	0.00	1.25
23JUL	SE	0.00	5.43	0.43	0.30	0.00	1.67	0.30	0.41	0.00	0.00	0.00	0.00	0.00	5.73
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	2.34	7.29	1.72	0.07	0.44	0.83	< 0.005	0.40	0.00	0.00	0.00	0.00	0.00	1.01
06AUG	SE	1.06	5.15	0.81	0.07	0.37	0.60	< 0.005	0.27	0.00	0.00	0.00	0.00	0.00	5.37
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.79	2.07	0.91	0.00	0.57	2.07	0.02	0.38	0.38	0.00	0.00	0.00	0.00	0.55
20AUG	SE	0.13	0.51	0.48	0.00	0.24	0.71	0.02	0.25	0.38	0.00	0.00	0.00	0.00	1.13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.28	2.76	0.25	0.27	0.23	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.30
03SEP	SE	0.17	1.49	0.17	0.12	0.09	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	1.51
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.16	0.34	1.03	0.29	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.14
16SEP	SE	0.13	0.16	0.34	0.12	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.42
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	2.92	0.39	0.59	0.06	1.02	0.70	0.06	0.22	0.00	0.00	0.00	0.00	0.00	0.46
30SEP	SE	1.53	0.33	0.17	0.04	0.98	0.34	0.04	0.21	0.00	0.00	0.00	0.00	0.00	1.90
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	2.57	4.68	2.51	0.84	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
14OCT	SE	1.39	2.10	1.28	0.27	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	2.03	1.65	1.37	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.42
29OCT	SE	0.42	0.51	0.37	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.87
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.06	0.46	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
12NOV	SE	0.03	0.12	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-82 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010															ALL
															REGIONS
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	COMBINED
06JUL -	ST. CROP	0	2707	1960	17	312	215	46	128	0	0	0	0	0	5386
09JUL	SE	0	2043	1220	17	251	120	46	128	0	0	0	0	0	2400
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	212	2190	190	119	0	720	42	175	0	0	0	0	0	3647
23JUL	SE	0	1245	139	44	0	347	42	124	0	0	0	0	0	1307
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	488	1673	555	11	93	173	1	118	0	0	0	0	0	3110
06AUG	SE	221	1180	260	11	77	124	1	79	0	0	0	0	0	1240
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	164	474	292	0	118	429	3	113	62	0	0	0	0	1656
20AUG	SE	28	118	156	0	49	148	2	76	62	0	0	0	0	270
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	59	633	80	40	49	2	3	4	0	0	0	0	0	870
03SEP	SE	36	341	55	18	18	2	2	4	0	0	0	0	0	348
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	33	78	330	44	1	0	0	13	0	0	0	0	0	499
16SEP	SE	27	37	110	17	1	0	0	13	0	0	0	0	0	121
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	611	89	191	9	212	146	8	66	0	0	0	0	0	1330
30SEP	SE	319	75	56	6	204	70	5	62	0	0	0	0	0	402
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	537	1074	808	124	0	42	0	0	0	0	0	0	0	2586
14OCT	SE	291	482	412	40	0	42	0	0	0	0	0	0	0	700
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	425	378	440	7	0	0	0	0	0	0	0	67	0	1317
29OCT	SE	89	117	120	7	0	0	0	0	0	0	0	67	0	201
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	13	106	68	0	0	0	0	0	0	0	0	0	0	187
12NOV	SE	6	28	33	0	0	0	0	0	0	0	0	0	0	44
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-83 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	6.00	3.00	0.14	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
17JUN	SE	3.46	2.14	0.14	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.48
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	5.91	1.57	1.33	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
01JUL	SE	0.00	4.37	0.69	1.33	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.38
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	3.67	4.18	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
15JUL	SE	1.20	1.52	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	3.60	0.08	0.14	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.40
30JUL	SE	2.14	0.06	0.14	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	2.27
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.08
13AUG	SE	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.82
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.40	0.14	0.13
27AUG	SE	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.40	0.14	1.09
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	4.60	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
10SEP	SE	2.93	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.93
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	4.00	6.96	0.29	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
07OCT	SE	2.76	6.24	0.29	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.83
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.13	0.00	1.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
22OCT	SE	0.00	0.07	0.00	1.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-84 REGIONAL STANDING CROP (IN THOUSANDS) OF BAY ANCHOVY YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	45	136	4	0	6	0	0	0	0	0	0	0	191
17JUN	SE	26	97	4	0	5	0	0	0	0	0	0	0	101
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	268	42	12	40	0	0	0	0	0	0	0	363
01JUL	SE	0	198	18	12	24	0	0	0	0	0	0	0	201
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	28	190	0	3	0	0	0	0	0	0	0	0	221
15JUL	SE	9	69	0	3	0	0	0	0	0	0	0	0	70
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	27	4	4	2	0	0	0	0	0	0	0	10	46
30JUL	SE	16	3	4	2	0	0	0	0	0	0	0	10	19
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	6	0	0	0	0	0	0	0	0	0	4	0	10
13AUG	SE	6	0	0	0	0	0	0	0	0	0	4	0	7
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	3	0	0	0	0	0	8	2	12
27AUG	SE	0	0	0	0	3	0	0	0	0	0	8	2	9
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	35	4	0	0	0	0	0	0	0	0	0	0	38
10SEP	SE	22	3	0	0	0	0	0	0	0	0	0	0	22
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	30	316	8	0	1	0	0	0	0	0	0	0	354
07OCT	SE	21	283	8	0	1	0	0	0	0	0	0	0	284
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	6	0	13	1	0	0	0	0	0	0	0	19
22OCT	SE	0	3	0	13	1	0	0	0	0	0	0	0	13
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-85 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	31.31	4.44
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	5.45	3.58
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	1.58	13.79
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.91	7.54
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.53	6.55
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.32	3.01
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81	14.18	2.96
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81	7.16	1.70
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	3.10	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.79	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	8.11	0.00	0.00	0.00	0.17	0.00	0.00	0.56	2.75
28MAY	SE	0.00	0.00	0.00	0.00	8.11	0.00	0.00	0.00	0.17	0.00	0.00	0.56	2.75
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	4.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	4.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-85 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.85	0.44	0.33
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.85	0.44	3.87
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-86 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	47	0	0	47
08APR	SE	0	0	0	0	0	0	0	0	0	0	47	0	0	47
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	61	5033	316	5410
16APR	SE	0	0	0	0	0	0	0	0	0	0	61	877	254	915
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST.CROP	0	0	0	0	0	23	0	0	0	0	0	0	0	23
23APR	SE	0	0	0	0	0	23	0	0	0	0	0	0	0	23
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST.CROP	0	0	0	0	0	0	0	0	0	123	0	253	981	1358
30APR	SE	0	0	0	0	0	0	0	0	0	62	0	146	537	560
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	4425	466	4891
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	2784	214	2792
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	115	142	2280	211	2747
14MAY	SE	0	0	0	0	0	0	0	0	0	115	142	1151	121	1172
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	393	498	0	891
21MAY	SE	0	0	0	0	0	0	0	0	0	0	212	128	0	247
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST.CROP	0	0	0	0	1690	0	0	0	29	0	0	89	195	2003
28MAY	SE	0	0	0	0	1690	0	0	0	29	0	0	89	195	1703
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST.CROP	0	0	0	0	0	0	0	0	0	0	168	643	0	811
04JUN	SE	0	0	0	0	0	0	0	0	0	0	168	643	0	665
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-86 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
08JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	618	31	650
11JUN SE	0	0	0	0	0	0	0	0	0	0	0	618	31	619
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-87 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73	0.36
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	1.36
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74	0.21
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48	1.48
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	1.49	0.59	0.19
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	1.49	0.36	1.59
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.56	0.00	1.11	0.17
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.35	0.00	0.80	1.04
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.17
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	2.22
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-87 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-88 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	337	337
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	97	97
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	195	195
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	105	105
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	72	240	42	354
14MAY	SE	0	0	0	0	0	0	0	0	0	0	72	240	26	252
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	81	99	0	79	258
21MAY	SE	0	0	0	0	0	0	0	0	0	81	61	0	57	116
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	358	0	358
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	358	0	358
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-88 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-89 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.05
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.63
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.31	1.47	0.26
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.31	1.47	1.80
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	2.31	0.34
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.50	2.13
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.90	0.30
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29	2.29
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.32	9.83	1.09
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.32	9.83	10.74
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-89 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.88	19.29	2.17
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.28	19.29	20.29
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.48	1.84	0.49
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.48	1.84	4.84
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.07	2.12	0.00	0.71
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.89	2.12	0.00	6.26
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-90 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	101	0	101
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	101	0	101
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	284	51	105	440
14MAY	SE	0	0	0	0	0	0	0	0	0	0	175	51	105	210
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	333	164	497
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	333	36	335
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	278	278
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	163	163
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	694	700	1393
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	694	700	985
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-90 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	1428	1373	2801
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	1010	1373	1704
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	720	131	851
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	720	131	732
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	1246	340	0	1586
25JUN	SE	0	0	0	0	0	0	0	0	0	0	1038	340	0	1092
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-91 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-91 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	1.22	0.78
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	1.22	8.99
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.11	1.84	0.84
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.11	1.84	9.29
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	8.28	29.35	0.00	2.91
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	5.92	1.92	0.00	6.23
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.97	0.19	0.00	0.00	0.00	2.15	0.90	0.33
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.70	0.19	0.00	0.00	0.00	2.15	0.90	2.44
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.59	0.05	0.00	NS	NS	NS	NS	NS	0.08
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.59	0.05	0.00						0.59
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	NS	NS	NS	NS	NS	0.04
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29						0.29
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	NS	NS	NS	NS	NS	0.05
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00						0.34
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	NS	NS	NS	NS	NS	0.04
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00						0.29
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.54	NS	NS	NS	NS	NS	0.08
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.54						0.55
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-92 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-92 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	1431	87	1517
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	1431	87	1434
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	1464	131	1595
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	1464	131	1470
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	55	0	0	1461	4718	0	6233
25JUN	SE	0	0	0	0	0	0	0	55	0	0	1044	308	0	1090
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	23	135	58	0	0	0	346	64	626
02JUL	SE	0	0	0	0	0	23	97	58	0	0	0	346	64	370
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	122	6	0	NS	NS	NS	NS	NS	129
16JUL	SE	0	0	0	0	0	122	6	0						123
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	87	NS	NS	NS	NS	NS	87
12AUG	SE	0	0	0	0	0	0	0	87						87
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	53	0	NS	NS	NS	NS	NS	53
10SEP	SE	0	0	0	0	0	0	47	0						47
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	40	0	NS	NS	NS	NS	NS	40
23SEP	SE	0	0	0	0	0	0	40	0						40
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	24	0	160	NS	NS	NS	NS	NS	184
07OCT	SE	0	0	0	0	0	24	0	160						162
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-93 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.01	0.00	0.00	0.00	0.50	0.10	0.08
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.01	0.00	0.00	0.00	0.50	0.10	0.60
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.02
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.30
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.75	0.00	0.06
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.28	0.00	0.28
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005	0.00	0.00	0.00	0.26	0.31	0.18	0.06
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005	0.00	0.00	0.00	0.10	0.31	0.10	0.34
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.13	0.70	0.28	0.09
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.08	0.52	0.28	0.60
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.12	0.11	0.08	0.03
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.07	0.11	0.08	0.17
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.14	0.00	0.29	0.04
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.08	0.00	0.10	0.13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.07	0.03	0.12	0.03	0.02	0.01	0.10	0.22	0.02	0.18	0.08	0.48	0.20	0.12
14OCT	SE	0.07	0.03	0.07	0.03	0.02	0.01	0.09	0.21	0.02	0.06	0.08	0.24	0.11	0.38
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
29OCT	SE	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-94 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL -	ST. CROP	0	0	0	0	0	93	0	4	0	0	0	81	7	186
09JUL	SE	0	0	0	0	0	63	0	4	0	0	0	81	7	103
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	42	0	0	0	42
23JUL	SE	0	0	0	0	0	0	0	0	0	42	0	0	0	42
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	0	0	0	0	0	0	5	12	0	0	0	120	0	137
06AUG	SE	0	0	0	0	0	0	4	9	0	0	0	45	0	46
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	0	0	0	0	0	0	1	0	0	0	47	49	13	109
20AUG	SE	0	0	0	0	0	0	1	0	0	0	18	49	7	53
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	0	0	0	0	0	0	0	7	0	9	24	112	20	172
03SEP	SE	0	0	0	0	0	0	0	7	0	9	14	84	20	88
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	0	0	0	0	0	0	0	0	6	8	21	17	6	59
16SEP	SE	0	0	0	0	0	0	0	0	6	8	12	17	6	24
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	0	0	0	0	0	0	0	4	6	0	24	0	21	55
30SEP	SE	0	0	0	0	0	0	0	4	4	0	14	0	7	16
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	14	6	38	4	4	2	14	66	3	25	14	78	14	282
14OCT	SE	14	6	22	4	3	2	13	62	3	9	14	39	8	81
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	5	0	0	0	0	0	0	0	0	0	0	0	0	5
29OCT	SE	5	0	0	0	0	0	0	0	0	0	0	0	0	5
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-95 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.38	0.38	0.33	3.05	2.42	0.56
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.18	0.38	0.23	1.32	1.31	1.92
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.29	0.00	7.00	2.00	1.38	5.13	7.00	0.53	8.89	11.83	3.67
01JUL	SE	0.00	0.00	0.29	0.00	4.36	1.15	0.60	1.99	3.03	0.29	3.89	4.22	8.18
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	2.27	0.14	6.00	0.33	6.00	2.00	4.00	4.75	5.80	1.79	8.00	3.42
15JUL	SE	0.00	1.00	0.14	2.89	0.33	4.58	0.96	1.54	2.69	1.89	0.57	3.95	7.78
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.04	0.29	1.80	4.80	2.33	1.00	0.60	1.40	2.00	0.70	5.71	1.72
30JUL	SE	0.00	0.04	0.22	1.80	2.18	1.05	0.77	0.40	0.75	0.62	0.52	3.05	4.52
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.07	1.00	0.40	11.83	4.60	1.00	2.20	3.89	3.20	0.57	2.40
13AUG	SE	0.00	0.00	0.07	1.00	0.24	3.46	1.91	0.77	1.71	1.52	1.13	0.57	4.91
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.36	0.00	1.40	1.00	1.80	0.20	1.60	10.22	5.50	5.29	2.28
27AUG	SE	0.00	0.00	0.36	0.00	0.87	0.68	0.49	0.20	0.68	1.74	2.22	3.54	4.76
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.13	0.14	0.00	3.00	4.00	1.20	1.60	2.60	4.44	5.40	3.43	2.16
10SEP	SE	0.00	0.09	0.10	0.00	1.26	2.13	0.97	1.60	1.33	2.40	2.66	2.14	5.37
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.08	0.00	0.00	1.20	1.00	1.80	0.20	2.20	3.44	3.70	0.14	1.15
24SEP	SE	0.00	0.06	0.00	0.00	1.20	0.82	1.11	0.20	0.66	1.43	1.58	0.14	2.90
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.17	0.14	0.80	0.20	2.67	2.00	2.80	0.60	1.00	0.30	0.29	0.91
07OCT	SE	0.00	0.12	0.14	0.37	0.20	0.99	0.71	1.07	0.24	0.37	0.21	0.29	1.78
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.21	0.71	0.40	0.20	0.33	0.40	0.20	0.00	0.22	0.40	0.43	0.29
22OCT	SE	0.00	0.10	0.30	0.40	0.20	0.33	0.24	0.20	0.00	0.15	0.22	0.43	0.88
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-96 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	1	< 0.5	3	6	60	33	103
17JUN	SE	0	0	0	0	0	0	1	< 0.5	3	4	26	18	32
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	8	0	18	21	10	6	60	9	175	161	469
01JUL	SE	0	0	8	0	11	12	4	2	26	5	76	57	101
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	103	4	55	1	64	14	5	41	102	35	109	533
15JUL	SE	0	45	4	27	1	49	7	2	23	33	11	54	99
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	2	8	17	13	25	7	1	12	35	14	78	210
30JUL	SE	0	2	6	17	6	11	5	< 0.5	6	11	10	41	50
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	2	9	1	126	33	1	19	68	63	8	330
13AUG	SE	0	0	2	9	1	37	14	1	15	27	22	8	56
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	10	0	4	11	13	< 0.5	14	179	108	72	410
27AUG	SE	0	0	10	0	2	7	3	< 0.5	6	31	44	48	73
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	6	4	0	8	43	9	2	22	78	106	47	324
10SEP	SE	0	4	3	0	3	23	7	2	11	42	52	29	78
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	4	0	0	3	11	13	< 0.5	19	60	73	2	185
24SEP	SE	0	3	0	0	3	9	8	< 0.5	6	25	31	2	42
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	8	4	7	1	28	14	3	5	18	6	4	98
07OCT	SE	0	5	4	3	1	11	5	1	2	7	4	4	16
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	9	19	4	1	4	3	< 0.5	0	4	8	6	57
22OCT	SE	0	5	8	4	1	4	2	< 0.5	0	3	4	6	13
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-97 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
18JUN	SE	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-98 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-98 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	142	0	0	0	0	0	0	0	0	0	0	0	0	142
18JUN	SE	142	0	0	0	0	0	0	0	0	0	0	0	0	142
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-99 REGIONAL DENSITY (NO./1,000m3) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

< 0.005

0.06

210

150

150

TABLE E-100 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	6
16SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT - ST. CROP		0	0	0	0	0	0	0	0	0	8	0	0	0
14OCT - SE		0	0	0	0	0	0	0	0	0	8	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-101 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.08	0.02
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.08	0.16
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.06
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.73
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-102 REGIONAL STANDING CROP (IN THOUSANDS) OF AMERICAN SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	2	0	1	3
01JUL	SE	0	0	0	0	0	0	0	0	0	2	0	1	3
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	13	0	0	13
15JUL	SE	0	0	0	0	0	0	0	0	0	13	0	0	13
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-103 REGIONAL DENSITY (NO./1,000m³) OF ALOSA SPP. EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	41.90	3.36
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	21.83	21.85
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.21	113.30	46.59	12.78
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75	36.26	25.09	44.25
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.09	321.77	26.76
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.24	219.05	219.58
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.35	1.30	1.47	111.26	587.93	54.95
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.18	0.75	0.84	49.88	385.29	388.70
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.46	12.32	0.00	127.59	450.92	893.38	114.29
	SE	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.46	12.32	0.00	57.77	119.01	447.40	466.71
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	10.47	88.79	87.03	14.39
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	10.47	23.78	49.38	55.80
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	32.88	65.91	121.68	17.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	31.35	26.11	106.50	114.05
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	4.29	158.07	28.94	14.98
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	3.21	57.87	12.82	59.46
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	15.26	0.00	1.19
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	8.70	0.00	8.70
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-103 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALOSA SPP. EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.55	0.00	0.06
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.55	0.00	0.62
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.02
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.31
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-104 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
16MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR SE	0	0	0	0	0	0	0							0
NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	283	2981	3265
08APR SE	0	0	0	0	0	0	0	0	0	0	0	142	1553	1560
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	1095	18211	3315	22621
16APR SE	0	0	0	0	0	0	0	0	0	0	661	5828	1785	6131
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST.CROP	0	0	0	0	0	0	0	0	0	0	0	4194	22894	27087
23APR SE	0	0	0	0	0	0	0	0	0	0	0	2449	15585	15776
NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST.CROP	0	0	0	0	0	0	0	0	2045	184	259	17883	41831	62202
30APR SE	0	0	0	0	0	0	0	0	2016	106	148	8018	27413	28633
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST.CROP	0	0	0	0	0	221	0	138	2039	0	22494	72476	63563	160932
07MAY SE	0	0	0	0	0	221	0	138	2039	0	10185	19129	31832	38564
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST.CROP	0	0	0	0	0	0	0	0	117	0	1847	14271	6192	22428
14MAY SE	0	0	0	0	0	0	0	0	74	0	1847	3822	3513	5510
NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST.CROP	0	0	0	0	0	0	0	0	78	0	5797	10594	8658	25127
21MAY SE	0	0	0	0	0	0	0	0	78	0	5527	4197	7577	10276
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST.CROP	0	0	0	0	0	0	0	0	0	489	756	25407	2059	28711
28MAY SE	0	0	0	0	0	0	0	0	0	489	567	9302	912	9377
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST.CROP	0	0	0	0	0	0	0	0	0	0	43	2453	0	2496
04JUN SE	0	0	0	0	0	0	0	0	0	0	43	1398	0	1398
NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-104 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
08JUN- ST.CROP	0	0	0	0	0	0	0	0	0	40	0	88	0	129
11JUN SE	0	0	0	0	0	0	0	0	0	40	0	88	0	97
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN- ST.CROP	0	0	0	0	0	0	0	0	0	44	0	0	0	44
18JUN SE	0	0	0	0	0	0	0	0	0	44	0	0	0	44
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN- ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT- ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT SE	0	0	0	0	0	0	0	0						0
NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-105 REGIONAL DENSITY (NO./1,000m³) OF ALOSA SPP. YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.43	0.00	0.04
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.43	0.00	0.43
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.55	1.97	1.56	1.96	22.87	23.89	4.07
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.55	1.28	1.56	1.48	8.32	12.43	15.17
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.57	0.17	1.60	2.91	8.65	11.46	9.02	49.13	167.52	19.31
	SE	0.00	0.00	0.00	0.00	0.57	0.17	0.60	1.08	3.04	2.85	2.80	21.41	44.07	49.27
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.56	2.80	5.55	4.40	11.89	34.13	166.60	17.38
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.47	2.25	2.76	2.49	6.51	10.43	52.10	53.71
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.05	0.00	5.20	4.29	16.83	35.98	40.84	562.06	453.55	86.06
	SE	0.00	0.00	0.00	0.00	0.05	0.00	2.91	1.75	7.47	17.44	12.51	205.61	155.07	258.56
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.42	0.00	0.12	2.36	2.47	4.55	3.68	29.70	147.03	618.85	62.24
	SE	0.00	0.00	0.00	0.27	0.00	0.12	0.91	0.98	3.05	1.10	6.34	46.74	97.49	108.36
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.54	0.00	0.19	0.00	0.00	0.00	0.22	0.89	4.70	3.55	2.96	3.34	37.61	4.15
	SE	0.54	0.00	0.19	0.00	0.00	0.00	0.22	0.51	4.23	1.56	1.50	2.49	10.07	11.44
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	1.86	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.84	4.32	21.00	3.27
	SE	1.86	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.60	4.32	21.00	26.01
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-105 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALOSA SPP. YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	21.21	5.19	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.21	3.19
11JUN	SE	18.05	3.71	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.64	19.61
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.17
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.18
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.60	0.09
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.60	0.82
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-106 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	6	0	0	0	0	69	0	75
16APR	SE	0	0	0	0	0	0	6	0	0	0	0	69	0	70
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	17	165	326	220	346	3676	1699	6450
23APR	SE	0	0	0	0	0	0	11	165	212	220	261	1338	884	1661
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	118	36	223	869	1432	1621	1590	7897	11919	25704
30APR	SE	0	0	0	0	118	36	85	321	504	404	494	3442	3135	4740
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	78	836	919	622	2096	5486	11853	21891
07MAY	SE	0	0	0	0	0	0	65	671	457	352	1148	1677	3707	4320
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	10	0	727	1280	2785	5091	7200	90340	32270	139703
14MAY	SE	0	0	0	0	10	0	407	523	1237	2468	2205	33049	11033	35027
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	62	0	25	330	736	753	521	5236	23632	44030	75326
21MAY	SE	0	0	0	39	0	25	127	291	505	156	1118	7513	6936	10305
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	113	0	62	0	0	0	31	265	777	503	521	537	2676	5485
28MAY	SE	113	0	62	0	0	0	31	151	700	220	264	400	716	1150
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	389	123	0	0	0	0	0	0	0	0	2616	694	1494	5316
04JUN	SE	389	123	0	0	0	0	0	0	0	0	2573	694	1494	3083
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-106 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	4433	1192	596	0	0	0	0	0	0	0	0	0	940	7161
11JUN	SE	3772	850	318	0	0	0	0	0	0	0	0	0	473	3908
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	158	158
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	84	84
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	90	43	132
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	90	43	99
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-107 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALOSA SPP. POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	39.29	41.86	35.04	15.04	10.17	6.85	12.01	199.28	334.41	1465.43	2274.17	2786.06	2277.71	730.56
11JUN	SE	18.53	25.66	27.52	6.59	5.44	3.61	4.20	57.21	112.39	86.98	714.32	448.65	773.75	1155.67
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	4.98	18.03	0.00	0.00	4.46	9.75	98.09	167.26	280.20	695.29	1038.62	1482.65	362.24	320.12
18JUN	SE	4.36	16.37	0.00	0.00	4.38	4.15	21.57	103.28	113.28	63.18	526.06	442.29	127.22	718.90
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	4.43	0.00	0.00	0.00	0.00	1.74	0.63	8.32	63.47	395.04	290.05	465.27	266.43	115.03
25JUN	SE	2.56	0.00	0.00	0.00	0.00	1.63	0.24	4.41	9.53	171.18	81.67	155.99	105.13	267.35
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	44.12	0.00	0.88	4.06	7.49	2.51	4.94	5.68	95.87	109.02	240.51	115.91	48.54
02JUL	SE	0.00	44.12	0.00	0.88	4.06	1.63	1.26	2.61	1.94	39.54	47.45	102.55	40.34	133.93
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-108 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	207	29	483	382	3480	2669	1539	594	65	19	9467
23APR	SE	0	0	0	103	29	483	171	2232	1557	889	266	65	19	2924
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	83	1089	785	72	3356	7958	3074	4569	9022	19244	633	49885
30APR	SE	0	0	83	676	342	72	1301	2678	863	2072	2024	3225	353	5395
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	21	231	185	34	708	1878	12078	3844	21873	17209	22504	10490	91054
07MAY	SE	0	21	133	85	34	516	638	8081	1685	12199	5132	5804	2540	16856
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	441	223	596	1862	5784	17159	25121	40608	79358	41048	1555	213754
14MAY	SE	0	0	206	108	388	1284	1540	7276	8211	13136	32874	20229	813	42281
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	123	451	178	273	4787	11758	12183	28210	47733	70129	91274	2068	269168
21MAY	SE	0	123	303	82	189	1951	6348	4708	11822	29987	46955	31685	523	65684
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	248	0	0	55	509	643	793	16033	42369	55734	114233	220512	82985	534113
28MAY	SE	248	0	0	32	175	294	242	4940	9946	15510	18066	36952	26337	52437
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	27528	5997	1226	444	608	1460	6618	24935	50226	130812	376101	692507	301299	1619760
04JUN	SE	17490	3902	849	130	197	736	2006	3549	10831	35123	74356	146083	52463	176950
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-108 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	8212	9603	11275	2222	2119	1422	1679	59412	55339	207314	400926	447808	162057
11JUN	SE	3873	5888	8857	973	1133	748	587	17056	18599	12305	125932	72112	55052
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	1040	4136	0	0	930	2023	13713	49867	46370	98363	183105	238308	25773
18JUN	SE	911	3757	0	0	912	861	3015	30790	18745	8938	92742	71089	9052
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	925	0	0	0	0	361	88	2480	10503	55886	51134	74783	18956
25JUN	SE	534	0	0	0	0	339	34	1315	1577	24216	14399	25072	7480
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	10123	0	130	847	1553	351	1472	940	13563	19220	38658	8247
02JUL	SE	0	10123	0	130	847	338	176	780	322	5594	8365	16483	2870
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-109 REGIONAL DENSITY (NO./1,000m³) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

[illegible]

TABLE E-109 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-110 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-110 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-111 REGIONAL DENSITY (NO./1,000m3) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.19	0.00	2.34	0.00	0.03	16.11	0.34	16.48	0.07	28.21	0.41	4.94
09JUL	SE	0.00	0.00	0.19	0.00	1.58	0.00	0.03	10.08	0.34	5.49	0.07	20.86	0.17	23.87
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	8.94	1.76	5.99	1.75	1.47
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	4.59	1.76	5.99	1.75	7.95
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.19	0.00	0.00	0.00	1.58	0.00	0.16
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.19	0.00	0.00	0.00	1.58	0.00	1.62
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-112 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
06JUL- ST. CROP	0	0	60	0	487	0	5	4803	56	2332	12	4534	29	12318
09JUL SE	0	0	60	0	329	0	5	3006	56	777	12	3353	12	4582
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- ST. CROP	0	0	0	0	0	0	0	182	0	1265	310	963	125	2846
23JUL SE	0	0	0	0	0	0	0	94	0	650	310	963	125	1213
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- ST. CROP	0	0	0	0	0	0	47	58	0	0	0	253	0	358
06AUG SE	0	0	0	0	0	0	47	58	0	0	0	253	0	264
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16SEP SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14OCT SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-113 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	13.00	23.75	12.13	13.47	86.37	14.92	13.64
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	8.94	8.86	4.12	7.47	34.53	7.26	38.42
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	2.00	7.00	259.63	61.25	398.40	151.00	172.08	87.61
01JUL	SE	0.00	0.00	0.00	0.00	0.00	1.15	6.86	198.75	28.35	265.59	76.21	92.13	353.82
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	3.75	8.75	6.50	18.33	124.32	70.08	19.31
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	1.51	4.95	3.76	13.20	65.02	68.91	95.87
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.02
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.03
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.22
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-114 REGIONAL STANDING CROP (IN THOUSANDS) OF ALOSA SPP. YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	92	29	104	236	1699	203	2365
17JUN	SE	0	0	0	0	0	0	63	11	35	131	679	99	703
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	21	50	322	527	6994	2971	2338	13223
01JUL	SE	0	0	0	0	0	12	49	246	244	4663	1500	1252	5067
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	27	11	56	322	2446	952	3813
15JUL	SE	0	0	0	0	0	0	11	6	32	232	1279	936	1603
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	4	0	4
30JUL	SE	0	0	0	0	0	0	0	0	0	0	4	0	4
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	8	0	8
13AUG	SE	0	0	0	0	0	0	0	0	0	0	4	0	4
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-115 REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-115 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED														
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	2.29	0.00	0.97	0.00	14.11
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	2.29	0.00	0.97	0.00	11.48
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	50.59	144.97	166.35	20.26
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	21.66	89.99	84.21	18.43
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	0.23	0.00	0.56	0.38	8.81	0.62	81.58	147.91	193.03	5.68
25JUN	SE	0.00	0.00	0.00	0.23	0.00	0.56	0.19	5.05	0.50	18.68	39.56	27.65	5.68
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	0.00	0.48	0.14	0.54	38.02	11.39	2.48	96.58	11.28	36.95	20.38
02JUL	SE	0.00	0.00	0.00	0.48	0.11	0.54	3.89	5.37	1.41	28.83	6.22	19.80	11.83
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	1.55	0.00	0.00	0.72	0.79	1.59	9.97	5.58	NS	NS	NS	NS	NS
16JUL	SE	1.55	0.00	0.00	0.72	0.44	0.71	2.45	4.77					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	10.42	4.72	NS	NS	NS	NS	NS
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	4.30	4.72					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	1.14	8.41	NS	NS	NS	NS	NS
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.55	4.57					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	3.28	3.13	NS	NS	NS	NS	NS
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.33	0.80					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	0.00	0.00	0.00	0.97	0.00	0.12	5.57	9.54	NS	NS	NS	NS	NS
10SEP	SE	0.00	0.00	0.00	0.97	0.00	0.12	1.48	5.42					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	0.00	1.44	0.00	0.00	0.00	0.12	3.97	4.93	NS	NS	NS	NS	NS
23SEP	SE	0.00	1.44	0.00	0.00	0.00	0.12	2.05	0.66					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	0.00	0.00	2.20	0.57	3.56	15.25	10.71	9.20	NS	NS	NS	NS	NS
07OCT	SE	0.00	0.00	0.74	0.57	0.68	2.45	1.89	4.39					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-116 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-116 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	0	0	0	0	0	0	49	0	380	0	170	0	1004	1603
11JUN	SE	0	0	0	0	0	0	49	0	380	0	170	0	817	918
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	89	0	0	7157	25557	26737	1441	60982
18JUN	SE	0	0	0	0	0	0	62	0	0	3064	15865	13535	1311	21119
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	34	0	115	52	2626	103	11541	26075	31026	404	71978
25JUN	SE	0	0	0	34	0	115	26	1507	82	2642	6973	4443	404	8821
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	71	29	112	5315	3395	410	13664	1988	5939	1450	32374
02JUL	SE	0	0	0	71	22	112	543	1601	233	4078	1097	3183	842	5622
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	324	0	0	106	164	330	1394	1663	NS	NS	NS	NS	NS	3981
16JUL	SE	324	0	0	106	92	147	342	1423						1513
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	1457	1409	NS	NS	NS	NS	NS	2865
29JUL	SE	0	0	0	0	0	0	602	1409						1532
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	159	2508	NS	NS	NS	NS	NS	2667
12AUG	SE	0	0	0	0	0	0	77	1361						1363
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	23	458	934	NS	NS	NS	NS	NS	1415
26AUG	SE	0	0	0	0	0	23	46	238						244
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	144	0	24	779	2846	NS	NS	NS	NS	NS	3793
10SEP	SE	0	0	0	144	0	24	207	1617						1637
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	331	0	0	0	25	555	1470	NS	NS	NS	NS	NS	2381
23SEP	SE	0	331	0	0	0	25	286	197						480
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	707	85	742	3164	1498	2742	NS	NS	NS	NS	NS	8938
07OCT	SE	0	0	237	85	142	508	264	1309						1458
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-117 REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - 09JUL	DENSITY	0.00	0.00	0.00	0.00	0.61	0.85	0.36	3.68	0.00	5.40	0.29	7.94	0.20	1.49
	SE	0.00	0.00	0.00	0.00	0.61	0.85	0.34	3.18	0.00	1.90	0.22	6.83	0.20	7.85
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - 23JUL	DENSITY	0.25	0.40	0.00	0.00	0.00	0.96	0.38	3.26	0.00	7.87	0.88	0.00	0.00	1.08
	SE	0.00	0.30	0.00	0.00	0.00	0.45	0.32	1.60	0.00	6.02	0.88	0.00	0.00	6.33
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - 06AUG	DENSITY	0.05	0.00	0.00	0.00	0.00	0.07	0.38	2.22	0.00	0.85	6.53	8.66	1.48	1.56
	SE	0.03	0.00	0.00	0.00	0.00	0.03	0.24	0.67	0.00	0.49	3.21	0.96	1.24	3.68
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - 20AUG	DENSITY	0.00	0.00	0.00	0.00	0.00	0.19	0.06	1.24	0.15	2.77	3.77	0.35	0.83	0.72
	SE	0.00	0.00	0.00	0.00	0.00	0.19	0.03	0.81	0.12	1.08	1.64	0.18	0.61	2.23
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - 03SEP	DENSITY	0.00	0.02	0.00	0.00	0.01	0.08	0.36	0.48	0.00	0.59	3.68	14.35	1.00	1.58
	SE	0.00	0.02	0.00	0.00	0.01	0.02	0.09	0.40	0.00	0.36	0.19	8.20	0.65	8.24
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - 16SEP	DENSITY	0.00	0.00	0.11	0.00	0.00	0.29	0.09	0.96	5.35	2.98	5.25	4.92	0.47	1.57
	SE	0.00	0.00	0.11	0.00	0.00	0.22	0.04	0.49	3.22	0.79	0.95	2.72	0.34	4.44
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - 30SEP	DENSITY	0.00	0.00	0.05	0.00	0.01	0.86	0.34	0.62	0.26	0.24	1.28	0.96	0.79	0.42
	SE	0.00	0.00	0.03	0.00	0.01	0.56	0.12	0.36	0.08	0.09	0.45	0.30	0.36	0.94
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - 14OCT	DENSITY	1.33	2.42	2.60	0.59	1.66	2.41	4.63	2.97	1.21	4.06	5.28	1.96	0.48	2.43
	SE	0.37	0.80	0.65	0.24	0.55	0.81	2.86	1.79	0.49	1.80	2.78	0.99	0.36	5.09
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - 29OCT	DENSITY	0.08	0.10	1.93	0.70	0.12	0.00	0.02	0.00	0.00	0.00	0.00	0.07	0.00	0.23
	SE	0.04	0.05	0.56	0.23	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.62
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - 12NOV	DENSITY	0.13	0.41	0.79	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
	SE	0.05	0.11	0.34	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - 03DEC	DENSITY	0.13	0.16	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	SE	0.06	0.08	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-118 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		0	0	0	0	127	177	50	1098	0	764	52	1276	15	3558
09JUL - SE		0	0	0	0	127	177	47	948	0	268	38	1098	15	1492
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		53	91	0	0	0	200	53	973	0	1113	155	0	0	2638
23JUL - SE		0	70	0	0	0	94	45	478	0	852	155	0	0	997
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		11	0	0	0	0	14	52	662	0	120	1152	1391	106	3508
06AUG - SE		7	0	0	0	0	6	33	199	0	70	565	155	89	630
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	0	0	0	0	39	9	369	25	392	665	55	59	1614
20AUG - SE		0	0	0	0	0	39	4	242	19	152	289	29	43	412
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	6	0	0	1	16	50	144	0	83	649	2307	71	3328
03SEP - SE		0	6	0	0	1	4	13	120	0	51	33	1317	46	1325
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	0	35	0	0	60	13	287	886	422	926	791	33	3453
16SEP - SE		0	0	35	0	0	47	6	145	533	112	167	437	24	735
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	16	0	2	179	47	186	43	34	226	154	56	943
30SEP - SE		0	0	11	0	2	116	17	107	13	13	79	48	25	187
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		278	556	837	87	345	499	647	885	200	575	930	316	34	6188
14OCT - SE		76	185	209	36	114	168	399	533	81	255	491	160	25	953
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		16	22	620	103	24	0	3	0	0	0	0	11	0	800
29OCT - SE		8	12	181	35	7	0	3	0	0	0	0	8	0	185
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		27	93	255	23	0	0	0	0	0	0	0	0	0	397
12NOV - SE		10	24	108	19	0	0	0	0	0	0	0	0	0	113
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		26	36	12	13	0	0	0	0	0	0	0	0	0	87
03DEC - SE		12	19	8	10	0	0	0	0	0	0	0	0	0	25
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-119 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.50	0.63	0.20	0.79	0.08	0.27
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.38	0.42	0.20	0.38	0.08	0.95
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	1.18	0.71	0.67	7.67	26.33	0.00	5.50	5.63	15.47	19.63	2.17	7.08
01JUL	SE	0.00	0.55	0.47	0.67	4.98	14.15	0.00	2.57	3.08	5.17	6.98	1.04	17.84
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.33	22.82	2.29	7.00	3.00	11.33	7.38	6.50	8.38	34.07	31.11	2.75	11.41
15JUL	SE	0.33	15.47	2.12	3.79	3.00	11.33	4.49	3.87	3.84	12.26	7.48	2.66	25.67
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.40	0.63	16.64	6.00	14.60	14.67	11.20	29.80	3.40	33.89	20.20	69.71	18.43
30JUL	SE	0.40	0.58	13.17	2.30	14.60	6.66	10.71	8.45	1.57	9.97	15.44	37.63	48.77
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	13.86	8.40	4.40	47.17	9.60	24.20	1.40	56.89	32.00	9.00	17.24
13AUG	SE	0.00	0.00	12.44	8.40	4.15	30.04	5.16	9.31	0.93	17.06	29.03	5.75	49.26
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	1.54	5.86	2.20	0.20	10.67	11.40	6.80	1.00	30.00	26.10	32.00	10.65
27AUG	SE	0.00	0.80	5.48	1.74	0.20	10.27	7.03	3.51	0.63	15.40	12.79	14.09	28.29
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	1.58	0.00	12.40	0.40	13.83	20.40	10.00	3.60	5.44	3.00	1.86	6.04
10SEP	SE	0.00	1.18	0.00	11.17	0.40	7.57	7.06	7.53	2.29	1.48	2.39	1.86	17.51
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.21	1.93	0.00	0.00	16.67	6.20	21.20	0.00	10.33	8.30	3.00	5.65
24SEP	SE	0.00	0.15	1.71	0.00	0.00	16.07	5.04	8.08	0.00	3.99	4.02	2.52	19.76
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.04	0.21	0.00	0.40	1.17	2.80	3.60	14.40	17.56	1.30	0.71	3.52
07OCT	SE	0.00	0.04	0.15	0.00	0.24	0.83	1.07	2.06	12.44	10.62	0.99	0.57	16.58
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.04	0.14	0.00	0.00	0.00	0.20	0.60	0.20	0.33	0.00	0.00	0.13
22OCT	SE	0.00	0.04	0.14	0.00	0.00	0.00	0.20	0.60	0.20	0.33	0.00	0.00	0.76
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-120 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	7	1	5	4	16	1	33
17JUN	SE	0	0	0	0	0	0	4	< 0.5	4	4	7	1	10
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	54	19	6	20	280	0	7	48	272	386	29	1122
01JUL	SE	0	25	13	6	13	151	0	3	26	91	137	14	227
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	3	1037	61	65	8	121	52	8	72	598	612	37	2674
15JUL	SE	3	703	57	35	8	121	32	5	33	215	147	36	765
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	3	28	448	55	38	156	79	37	29	595	397	947	2814
30JUL	SE	3	26	354	21	38	71	76	10	14	175	304	511	724
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	373	77	12	502	68	30	12	999	630	122	2825
13AUG	SE	0	0	334	77	11	320	37	12	8	300	571	78	803
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	70	158	20	1	114	81	8	9	527	514	435	1935
27AUG	SE	0	36	147	16	1	109	50	4	5	270	252	191	459
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	72	0	114	1	147	145	12	31	96	59	25	703
10SEP	SE	0	54	0	103	1	81	50	9	20	26	47	25	163
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	9	52	0	0	178	44	26	0	181	163	41	695
24SEP	SE	0	7	46	0	0	171	36	10	0	70	79	34	213
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	2	6	0	1	12	20	4	124	308	26	10	513
07OCT	SE	0	2	4	0	1	9	8	3	107	186	19	8	216
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	2	4	0	0	0	1	1	2	6	0	0	15
22OCT	SE	0	2	4	0	0	0	1	1	2	6	0	0	8
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-121 REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	COMBINED
16MAR-18MAR	DENSITY	0.23	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.03
	SE	0.23	0.00	0.00	0.00	0.00	0.00	0.00							0.23
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	SE	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	SE	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-121 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.02
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.31
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.02
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.27
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.84	NS	NS	NS	NS	NS	0.11
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.84						0.84
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-122 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	47	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	47
18MAR	SE	47	0	0	0	0	0	0							47
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	75	0	0	0	0	0	0	0	0	0	0	0	0	75
23APR	SE	75	0	0	0	0	0	0	0	0	0	0	0	0	75
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	50	0	0	0	0	0	0	0	0	0	0	50
07MAY	SE	0	0	50	0	0	0	0	0	0	0	0	0	0	50
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-122 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	55	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	55	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	39	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	39	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	8	250	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	8	250					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-123 REGIONAL DENSITY (NO./1,000m3) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT-	DENSITY	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00
14OCT	SE	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT-	DENSITY	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT	SE	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-124 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
06JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	6	6
16SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	6	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	0	0	0	3	0	0	0	0	3
30SEP	SE	0	0	0	0	0	0	0	0	3	0	0	0	0	3
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	0	7	0	6	0	0	60	0	0	0	0	0	73
14OCT	SE	0	0	7	0	4	0	0	60	0	0	0	0	0	60
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	4	0	4	0	0	0	0	0	0	0	0	0	8
29OCT	SE	0	4	0	4	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-125 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
17JUN	SE	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
01JUL	SE	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.06
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.67
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.08	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
27AUG	SE	0.00	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
10SEP	SE	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
24SEP	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
07OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-126 REGIONAL STANDING CROP (IN THOUSANDS) OF ALEWIFE YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	4	0	0	0	0	0	0	0	0	0	4
17JUN	SE	0	0	4	0	0	0	0	0	0	0	0	0	4
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	19	0	0	0	0	0	0	0	0	0	19
01JUL	SE	0	0	19	0	0	0	0	0	0	0	0	0	19
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	12	0	0	12
15JUL	SE	0	0	0	0	0	0	0	0	0	12	0	0	12
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	4	15	0	0	0	0	0	0	0	0	0	19
27AUG	SE	0	4	13	0	0	0	0	0	0	0	0	0	14
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	11	0	0	0	0	0	0	0	0	0	0	11
10SEP	SE	0	8	0	0	0	0	0	0	0	0	0	0	8
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	2	0	0	0	0	0	0	0	0	0	0	2
24SEP	SE	0	2	0	0	0	0	0	0	0	0	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	2	0	0	0	0	0	0	0	0	0	0	2
07OCT	SE	0	2	0	0	0	0	0	0	0	0	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-127 REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

[illegible]

TABLE E-127 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.05
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.61
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	5.23	0.00	0.00	0.47
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	5.23	0.00	0.00	5.31
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.49	61.92	106.91	126.11	6.70	23.27
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.49	15.53	40.19	35.03	1.98	55.57
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	1.54	9.84	18.38	188.88	166.47	51.91	251.37	52.95
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.59	5.83	15.50	54.24	55.36	36.31	243.51	258.65
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	4.58	13.50	6.07	10.41	NS	NS	NS	NS	NS	4.32
16JUL	SE	0.00	0.00	0.00	0.00	2.99	4.94	1.37	7.35						9.44
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.48	0.76	11.83	19.45	NS	NS	NS	NS	NS	4.07
29JUL	SE	0.00	0.00	0.00	0.00	0.42	0.65	5.16	9.48						10.82
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	4.51	87.77	NS	NS	NS	NS	NS	11.53
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	1.57	28.61						28.65
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	18.35	67.78	NS	NS	NS	NS	NS	10.77
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	8.35	30.60						31.72
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	25.91	49.93	NS	NS	NS	NS	NS	9.48
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	10.25	34.14						35.65
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.12	6.66	108.53	NS	NS	NS	NS	NS	14.41
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.12	6.66	63.42						63.77
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.38	1.14	21.15	30.40	56.00	NS	NS	NS	NS	NS	13.63
07OCT	SE	0.00	0.00	0.00	0.27	0.63	8.51	8.82	23.09						26.15
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-128 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-128 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	43	43
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	43	43
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	133	922	0	0	1055
18JUN	SE	0	0	0	0	0	0	0	0	0	133	922	0	0	931
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	116	81	8759	18848	20269	477	48550
25JUN	SE	0	0	0	0	0	0	0	67	81	2197	7086	5630	141	9315
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	215	2932	3041	26722	29348	8343	17885	88486
02JUL	SE	0	0	0	0	0	0	82	1738	2566	7674	9760	5837	17326	22316
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	954	2801	848	3102	NS	NS	NS	NS	NS	7705
16JUL	SE	0	0	0	0	622	1024	191	2190						2504
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	100	159	1653	5799	NS	NS	NS	NS	NS	7711
29JUL	SE	0	0	0	0	88	135	721	2825						2920
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	630	26166	NS	NS	NS	NS	NS	26796
12AUG	SE	0	0	0	0	0	0	219	8530						8533
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	2565	20208	NS	NS	NS	NS	NS	22772
26AUG	SE	0	0	0	0	0	0	1168	9124						9198
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	3622	14886	NS	NS	NS	NS	NS	18509
10SEP	SE	0	0	0	0	0	0	1433	10178						10279
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	25	931	32356	NS	NS	NS	NS	NS	33312
23SEP	SE	0	0	0	0	0	25	931	18908						18931
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	57	237	4388	4250	16696	NS	NS	NS	NS	NS	25627
07OCT	SE	0	0	0	40	130	1766	1233	6883						7214
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-129 REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - 09JUL	DENSITY	0.00	0.00	0.00	0.00	0.00	0.20	0.00	6.31	0.00	2.09	0.14	17.89	0.21	2.06
	SE	0.00	0.00	0.00	0.00	0.00	0.20	0.00	4.89	0.00	1.17	0.08	6.87	0.21	8.51
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - 23JUL	DENSITY	0.33	0.29	0.00	0.00	0.00	1.41	0.00	2.82	0.06	12.18	20.37	12.48	12.00	4.77
	SE	0.33	0.29	0.00	0.00	0.00	0.64	0.00	1.26	0.04	4.65	20.23	10.37	8.27	24.67
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - 06AUG	DENSITY	0.00	0.00	0.00	0.00	0.00	0.05	0.51	8.99	5.70	11.26	36.74	100.04	50.31	16.43
	SE	0.00	0.00	0.00	0.00	0.00	0.02	0.12	1.71	1.62	2.70	9.01	23.25	12.81	28.26
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - 20AUG	DENSITY	0.00	0.03	0.00	0.00	0.00	0.02	0.12	4.77	5.00	13.68	19.99	56.20	104.16	15.69
	SE	0.00	0.03	0.00	0.00	0.00	0.02	0.05	2.04	2.04	1.44	4.59	4.02	63.20	63.58
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - 03SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.20	1.59	5.33	0.26	14.15	20.24	100.88	20.67	12.56
	SE	0.00	0.00	0.00	0.00	0.00	0.05	0.75	2.15	0.13	6.85	6.18	69.76	14.03	71.79
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - 16SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.04	0.48	4.41	26.01	13.33	17.04	23.10	102.84	14.40
	SE	0.00	0.00	0.00	0.00	0.00	0.03	0.25	1.21	11.13	4.84	2.91	6.11	15.20	20.64
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - 30SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.23	0.00	5.05	11.02	6.28	33.66	31.18	26.50	8.76
	SE	0.00	0.00	0.00	0.00	0.00	0.22	0.00	2.44	1.28	2.09	9.63	14.57	10.41	20.63
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - 14OCT	DENSITY	1.13	1.02	11.69	7.15	2.95	2.75	15.76	5.54	32.22	15.26	7.33	6.91	3.83	8.73
	SE	0.26	0.44	2.91	1.76	1.31	0.49	6.48	1.29	25.10	3.84	2.07	3.15	2.75	26.90
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - 29OCT	DENSITY	0.00	0.00	0.02	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	SE	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - 12NOV	DENSITY	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
	SE	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - 03DEC	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-130 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	41	0	1882	0	295	26	2875	15	5133
09JUL	SE	0	0	0	0	0	41	0	1457	0	166	15	1104	15	1836
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	70	66	0	0	0	293	0	842	10	1723	3592	2006	854	9455
23JUL	SE	70	66	0	0	0	133	0	374	7	657	3566	1666	588	4054
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	0	0	0	10	71	2679	943	1593	6477	16079	3580	31432
06AUG	SE	0	0	0	0	0	4	16	510	268	382	1588	3736	912	4218
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	0	6	0	0	0	4	17	1421	828	1935	3524	9033	7411	24179
20AUG	SE	0	6	0	0	0	4	7	607	338	204	809	646	4497	4671
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	0	0	0	41	222	1588	42	2001	3568	16215	1470	25148
03SEP	SE	0	0	0	0	0	9	105	640	22	968	1090	11212	998	11369
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	0	0	0	9	67	1314	4305	1886	3004	3713	7317	21615
16SEP	SE	0	0	0	0	0	7	36	359	1842	685	513	983	1082	2528
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	47	0	1505	1823	889	5935	5011	1885	17095
30SEP	SE	0	0	0	0	0	46	0	727	212	296	1697	2343	741	3095
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	237	235	3761	1056	614	571	2203	1651	5333	2159	1292	1111	272	20495
14OCT	SE	55	101	937	259	272	102	905	384	4153	543	366	506	196	4470
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	0	6	0	0	0	8	0	0	0	0	0	0	14
29OCT	SE	0	0	6	0	0	0	6	0	0	0	0	0	0	8
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	9	0	0	0	0	0	0	0	0	0	9
12NOV	SE	0	0	0	9	0	0	0	0	0	0	0	0	0	9
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-131 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.01
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.13
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN	CPUE	0.00	0.00	0.00	0.00	1.33	0.33	0.00	26.00	0.00	0.07	0.16	0.00	2.32
01JUL	SE	0.00	0.00	0.00	0.00	0.67	0.33	0.00	17.72	0.00	0.07	0.09	0.00	17.73
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL	CPUE	0.33	0.00	0.14	0.33	0.33	9.67	17.63	3.88	9.38	4.80	13.58	3.58	5.30
15JUL	SE	0.33	0.00	0.14	0.33	0.33	9.67	8.53	1.81	4.26	2.64	3.87	2.35	14.68
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL	CPUE	0.20	0.04	1.57	0.00	45.40	15.50	1.40	34.60	3.20	6.11	62.90	265.43	36.36
30JUL	SE	0.20	0.04	0.90	0.00	32.54	5.76	0.93	24.32	2.48	2.97	34.94	152.81	162.09
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG	CPUE	0.00	0.00	0.36	0.00	0.00	73.33	70.80	10.80	98.40	10.67	174.80	71.86	42.58
13AUG	SE	0.00	0.00	0.36	0.00	0.00	21.82	35.47	3.60	55.86	6.07	114.20	28.41	136.95
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG	CPUE	0.00	0.00	0.00	0.00	0.00	41.33	1.20	7.40	149.20	52.11	188.60	439.86	73.31
27AUG	SE	0.00	0.00	0.00	0.00	0.00	38.96	1.20	6.19	132.62	47.40	81.56	311.14	353.35
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP	CPUE	0.00	0.00	0.00	0.00	0.60	48.17	47.80	46.20	350.80	65.56	94.00	219.71	72.74
10SEP	SE	0.00	0.00	0.00	0.00	0.40	24.11	20.26	32.80	197.42	46.16	38.36	96.17	232.15
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP	CPUE	0.00	0.00	0.00	0.00	0.00	30.50	67.40	4.00	63.60	11.89	30.30	17.43	18.76
24SEP	SE	0.00	0.00	0.00	0.00	0.00	29.90	49.86	4.00	63.35	6.17	18.83	9.90	88.88
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT	CPUE	0.00	0.17	0.43	4.20	15.40	44.17	29.00	12.80	45.40	224.44	84.30	15.00	39.61
07OCT	SE	0.00	0.13	0.31	4.20	11.30	24.59	13.90	4.68	16.04	142.30	58.39	14.83	158.43
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT	CPUE	5.60	20.25	43.21	69.80	26.00	0.83	215.20	60.80	32.80	2.56	0.10	1.86	39.92
22OCT	SE	5.35	5.53	22.46	19.09	12.72	0.83	141.46	60.55	24.49	1.80	0.10	1.55	159.29
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-132 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
15JUN-	ST. CROP	0	0	0	0	0	0	1	0	0	0	0	0	1
17JUN	SE	0	0	0	0	0	0	1	0	0	0	0	0	1
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	4	4	0	32	0	1	3	0	44
01JUL	SE	0	0	0	0	2	4	0	22	0	1	2	0	22
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	3	0	4	3	1	103	125	5	81	84	267	49	724
15JUL	SE	3	0	4	3	1	103	61	2	37	46	76	32	157
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	2	2	42	0	120	165	10	43	28	107	1238	3606	5362
30JUL	SE	2	2	24	0	86	61	7	30	21	52	687	2076	2191
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	10	0	0	781	502	13	847	187	3439	976	6756
13AUG	SE	0	0	10	0	0	232	252	4	481	107	2247	386	2358
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	440	9	9	1284	915	3711	5976	12344
27AUG	SE	0	0	0	0	0	415	9	8	1142	832	1605	4227	4755
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	2	513	339	57	3020	1151	1850	2985	9917
10SEP	SE	0	0	0	0	1	257	144	41	1700	810	755	1307	2431
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	325	478	5	548	209	596	237	2397
24SEP	SE	0	0	0	0	0	319	354	5	545	108	370	135	831
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	8	12	39	41	470	206	16	391	3940	1659	204	6984
07OCT	SE	0	6	8	39	30	262	99	6	138	2498	1149	202	2775
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	42	920	1162	643	69	9	1527	75	282	45	2	25	4802
22OCT	SE	40	251	604	176	34	9	1004	75	211	32	2	21	1233
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-133 REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.04
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.54
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-133 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-134 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	87	0	87
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	87	0	87
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-134 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-135 REGIONAL DENSITY (NO./1,000m3) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL- DENSITY	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
09JUL SE	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06AUG SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
16SEP SE	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	< 0.005
14OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.06
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-136 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		0	5	0	0	0	0	0	0	0	0	0	0	0	5
09JUL - SE		0	5	0	0	0	0	0	0	0	0	0	0	0	5
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	0	0	0	3	0	0	0	0	0	0	0	0	3
16SEP - SE		0	0	0	0	3	0	0	0	0	0	0	0	0	3
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		0	0	0	0	0	0	0	0	0	8	0	0	0	8
14OCT - SE		0	0	0	0	0	0	0	0	0	8	0	0	0	8
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-137 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
17JUN	SE	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.01
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.02
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-138 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEBACK HERRING YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	4	0	0	0	0	0	0	0	4
17JUN	SE	0	0	0	0	4	0	0	0	0	0	0	0	4
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	1	0	0	1
15JUL	SE	0	0	0	0	0	0	0	0	0	1	0	0	1
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	1	0	0	0	0	0	1
07OCT	SE	0	0	0	0	0	0	1	0	0	0	0	0	1
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-139 REGIONAL DENSITY (NO./1,000m3) OF GIZZARD SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.02	0.00	0.00	0.00	0.01	0.36	0.05	0.00	0.00	0.00	0.00	0.00	0.03
12NOV	SE	0.00	0.02	0.00	0.00	0.00	0.01	0.11	0.03	0.00	0.00	0.00	0.00	0.00	0.12
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.07	0.01	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.01
03DEC	SE	0.00	0.00	0.00	0.00	0.04	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.05
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-140 REGIONAL STANDING CROP (IN THOUSANDS) OF GIZZARD SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	0	4	0	0	0	1	51	13	0	0	0	0	0	70
12NOV	SE	0	4	0	0	0	1	16	10	0	0	0	0	0	19
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	0	0	0	0	15	2	4	9	0	0	0	0	0	30
03DEC	SE	0	0	0	0	8	2	3	6	0	0	0	0	0	10
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-141 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF GIZZARD SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.01
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.13
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.11	0.00	0.00	0.03
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.11	0.00	0.00	0.23
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	2.80	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
27AUG	SE	0.00	0.00	0.00	2.13	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.83	0.60	0.00	0.00	0.00	0.00	0.00	0.12
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.83	0.60	0.00	0.00	0.00	0.00	0.00	1.03
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.09
24SEP	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.58
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.33	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.07
07OCT	SE	0.00	0.25	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.37
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
22OCT	SE	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-142 REGIONAL STANDING CROP (IN THOUSANDS) OF GIZZARD SHAD YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
15JUL	SE	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	< 0.5	0	2	0	0	2
13AUG	SE	0	0	0	0	0	0	0	< 0.5	0	2	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	26	1	0	0	0	0	0	0	0	26
27AUG	SE	0	0	0	20	1	0	0	0	0	0	0	0	20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	9	4	0	0	0	0	0	13
10SEP	SE	0	0	0	0	0	9	4	0	0	0	0	0	10
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	2	0	0	0	0	0	0	0	18	0	0	19
24SEP	SE	0	2	0	0	0	0	0	0	0	10	0	0	10
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	15	0	0	1	0	0	0	0	0	0	4	20
07OCT	SE	0	11	0	0	1	0	0	0	0	0	0	3	12
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	7	0	0	0	0	0	0	0	0	7
22OCT	SE	0	0	0	5	0	0	0	0	0	0	0	0	5
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-143 REGIONAL DENSITY (NO./1,000m3) OF GIZZARD SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
29OCT	SE	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	< 0.005
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.02
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.00	0.00	0.14	0.18	0.02	0.09	0.05	0.01	0.00	0.00	0.00	0.00	0.04
03DEC	SE	0.00	0.00	0.00	0.08	0.07	0.01	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.12
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-144 REGIONAL STANDING CROP (IN THOUSANDS) OF GIZZARD SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
16SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
14OCT - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT - ST. CROP		0	0	0	0	4	0	0	0	0	0	0	0	0
29OCT - SE		0	0	0	0	4	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV - ST. CROP		0	0	0	0	0	0	3	4	0	0	0	0	0
12NOV - SE		0	0	0	0	0	0	3	4	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV - ST. CROP		0	0	0	21	38	3	12	14	2	0	0	0	0
03DEC - SE		0	0	0	11	14	2	5	10	2	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-145 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF GIZZARD SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.02
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.25
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.17	2.00	0.00	0.00	0.89	0.40	0.29	0.31
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.17	1.76	0.00	0.00	0.51	0.40	0.29	1.91
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.08	0.00	0.40	0.00	0.67	0.00	0.00	0.00	0.11	0.30	0.00	0.13
27AUG	SE	0.00	0.08	0.00	0.24	0.00	0.49	0.00	0.00	0.00	0.11	0.21	0.00	0.61
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.20	0.33	0.00	0.00	0.00	0.00	0.10	2.00	0.22
10SEP	SE	0.00	0.00	0.00	0.00	0.20	0.33	0.00	0.00	0.00	0.00	0.10	1.69	1.74
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.60	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.09
24SEP	SE	0.00	0.00	0.00	0.00	0.60	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.78
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.20	0.00	1.80	0.00	0.00	0.44	0.00	0.43	0.24
07OCT	SE	0.00	0.00	0.00	0.00	0.20	0.00	1.56	0.00	0.00	0.29	0.00	0.30	1.63
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	1.80	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.18
22OCT	SE	0.00	0.00	0.00	1.80	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.00	1.82
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-146 REGIONAL STANDING CROP (IN THOUSANDS) OF GIZZARD SHAD YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
15JUL	SE	0	0	0	0	0	0	0	< 0.5	0	0	0	0	< 0.5
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	2	14	0	0	16	8	4	43
13AUG	SE	0	0	0	0	0	2	12	0	0	9	8	4	18
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	4	0	4	0	7	0	0	0	2	6	0	22
27AUG	SE	0	4	0	2	0	5	0	0	0	2	4	0	8
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	1	4	0	0	0	0	2	27	33
10SEP	SE	0	0	0	0	1	4	0	0	0	0	2	23	23
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	2	5	0	0	0	0	0	0	7
24SEP	SE	0	0	0	0	2	5	0	0	0	0	0	0	6
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	1	0	13	0	0	8	0	6	27
07OCT	SE	0	0	0	0	1	0	11	0	0	5	0	4	13
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	17	1	0	1	0	0	0	0	0	19
22OCT	SE	0	0	0	17	1	0	1	0	0	0	0	0	17
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-147 REGIONAL DENSITY (NO./1,000m3) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-147 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-148 REGIONAL STANDING CROP (IN THOUSANDS) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-148 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-149 REGIONAL DENSITY (NO./1,000m3) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - 09JUL	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - 23JUL	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - 06AUG	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - 20AUG	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - 03SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - 16SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - 30SEP	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - 14OCT	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - 29OCT	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - 12NOV	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - 03DEC	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-150 REGIONAL STANDING CROP (IN THOUSANDS) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
06AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
16SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
14OCT - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC - SE		0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-151 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-152 REGIONAL STANDING CROP (IN THOUSANDS) OF RAINBOW SMELT YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-153 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	631.93	5.39	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.06
04JUN	SE	631.93	5.39	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	631.96
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-153 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	157.29	1894.08	2275.83	27.28	45.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	338.47
11JUN	SE	55.80	1075.51	636.42	18.23	16.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1251.20
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	5510.58	2556.64	3.47	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	620.83
18JUN	SE	1390.31	2311.52	2.84	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2697.43
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	2740.44	44859.29	795.25	16.28	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3723.95
25JUN	SE	839.07	16233.09	307.49	15.11	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16257.67
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	2267.65	1414.70	0.00	0.00	0.04	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.27
02JUL	SE	966.99	542.08	0.00	0.00	0.04	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1108.57
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	1678.64	3539.53	311.95	41.92	7.23	0.00	0.00	0.00	NS	NS	NS	NS	NS	697.41
16JUL	SE	343.66	974.87	257.72	6.49	4.68	0.00	0.00	0.00						1065.34
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	34.89	231.84	68.81	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	41.94
29JUL	SE	14.62	63.96	33.57	0.00	0.00	0.00	0.00	0.00						73.70
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	1.84	71.95	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	9.22
12AUG	SE	1.84	47.69	0.00	0.00	0.00	0.00	0.00	0.00						47.72
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-154 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
16MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST.CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST.CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST.CROP	132082	1235	0	0	89	0	0	0	0	0	0	0	0	133406
04JUN	SE	132082	1235	0	0	89	0	0	0	0	0	0	0	0	132088
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-154 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER EGGS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN -	ST.CROP	32876	434540	732389	4030	9495	0	0	0	0	0	0	0	0	1213330
11JUN	SE	11662	246745	204807	2693	3511	0	0	0	0	0	0	0	0	320912
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN -	ST.CROP	1151781	586546	1118	0	0	24	0	0	0	0	0	0	0	1739469
18JUN	SE	290592	530311	912	0	0	24	0	0	0	0	0	0	0	604710
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN -	ST.CROP	572787	10291631	255921	2405	24	0	0	0	0	0	0	0	0	11122769
25JUN	SE	175377	3724200	98952	2233	24	0	0	0	0	0	0	0	0	3729640
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN -	ST.CROP	473967	324561	0	0	8	23	0	0	0	0	0	0	0	798558
02JUL	SE	202114	124364	0	0	8	23	0	0	0	0	0	0	0	237311
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL -	ST.CROP	350857	812040	100390	6193	1506	0	0	0	NS	NS	NS	NS	NS	1270985
16JUL	SE	71830	223655	82937	959	976	0	0	0						249121
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL -	ST.CROP	7292	53188	22145	0	0	0	0	0	NS	NS	NS	NS	NS	82626
29JUL	SE	3057	14673	10804	0	0	0	0	0						18476
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG -	ST.CROP	386	16506	0	0	0	0	0	0	NS	NS	NS	NS	NS	16892
12AUG	SE	386	10940	0	0	0	0	0	0						10947
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG -	ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP -	ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP -	ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT -	ST.CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-155 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-155 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.59	0.76	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.36	0.76	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	3.10	0.00	0.00	0.00	0.55	0.24	0.00	0.00	NS	NS	NS	NS	NS
16JUL	SE	3.10	0.00	0.00	0.00	0.55	0.24	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-156 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-156 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	191	113	9	0	0	0	0	0	0	0	0	312
11JUN	SE	0	0	117	113	9	0	0	0	0	0	0	0	0	163
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	98	0	0	0	0	0	0	0	0	0	0	98
18JUN	SE	0	0	98	0	0	0	0	0	0	0	0	0	0	98
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	648	0	0	0	114	49	0	0	NS	NS	NS	NS	NS	811
16JUL	SE	648	0	0	0	114	49	0	0						660
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-157 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-157 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.04
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.44
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.78	0.47	0.00	1.05	NS	NS	NS	NS	NS	0.29
16JUL	SE	0.00	0.00	0.00	0.00	0.65	0.34	0.00	0.27						0.78
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.88	26.12	0.79	NS	NS	NS	NS	NS	3.47
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.88	15.56	0.45						15.59
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-158 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-158 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER POST YOLK-SAC LARVAE IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	0	23	60	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	23	60	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	162	98	0	312	NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	135	70	0	81					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	182	3651	236	NS	NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	182	2175	136					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
10SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT	SE	0	0	0	0	0	0	0	0					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-159 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-159 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
8JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.23	0.91	0.27	NS	NS	NS	NS	NS	0.18
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.14	0.53	0.27						0.61
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.39	0.85	0.00	NS	NS	NS	NS	NS	0.16
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.39	0.67	0.00						0.77
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	1.88	6.61	1.83	NS	NS	NS	NS	NS	1.29
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.96	3.43	0.70						3.63
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.12	0.45	7.82	1.63	NS	NS	NS	NS	NS	1.25
10SEP	SE	0.00	0.00	0.00	0.00	0.12	0.18	2.14	0.79						2.30
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.24	0.86	0.00	NS	NS	NS	NS	NS	0.14
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.14	0.50	0.00						0.52
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	2.13	1.52	2.58	3.13	NS	NS	NS	NS	NS	1.17
07OCT	SE	0.00	0.00	0.00	0.00	1.30	0.86	1.25	1.26						2.37
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-160 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-160 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	ST. CROP	0	0	0	0	0	0	0		NS	NS	NS	NS	NS
16JUL	SE	0	0	0	0	0	0	0						
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	ST. CROP	0	0	0	0	0	48	128	80		NS	NS	NS	NS
29JUL	SE	0	0	0	0	0	28	74	80					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	ST. CROP	0	0	0	0	0	81	119	0		NS	NS	NS	NS
12AUG	SE	0	0	0	0	0	81	93	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	ST. CROP	0	0	0	0	0	389	924	546		NS	NS	NS	NS
26AUG	SE	0	0	0	0	0	199	479	209					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	ST. CROP	0	0	0	0	25	92	1094	485		NS	NS	NS	NS
10SEP	SE	0	0	0	0	25	38	300	237					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	ST. CROP	0	0	0	0	0	50	120	0		NS	NS	NS	NS
23SEP	SE	0	0	0	0	0	29	70	0					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	ST. CROP	0	0	0	0	443	316	361	934		NS	NS	NS	NS
07OCT	SE	0	0	0	0	272	179	175	375					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-161 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.00	0.64	0.41	0.09	0.04	0.52	0.99	0.00	0.00	0.00	0.00	0.21
06AUG	SE	0.00	0.00	0.00	0.64	0.38	0.04	0.03	0.19	0.38	0.00	0.00	0.00	0.00	0.86
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	1.24	2.02	0.78	0.10	0.00	0.00	0.00	0.10	0.33
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.69	0.89	0.55	0.06	0.00	0.00	0.00	0.10	1.26
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.23	0.00	0.10	0.24	1.28	0.57	0.40	0.00	0.48	0.22	0.00	0.27
03SEP	SE	0.00	0.00	0.23	0.00	0.09	0.12	0.63	0.18	0.20	0.00	0.48	0.11	0.00	0.89
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	7.37	1.58	0.23	0.00	0.00	0.00	0.18	0.72
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	5.54	0.38	0.12	0.00	0.00	0.00	0.18	5.55
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.12	0.14	2.26	1.47	0.30	4.26	0.20	0.00	0.00	0.67
30SEP	SE	0.00	0.00	0.00	0.00	0.03	0.07	1.00	0.38	0.16	2.09	0.13	0.00	0.00	2.36
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.00	0.00	0.27	1.27	0.24	1.75	0.19	0.00	0.00	0.00	0.00	0.00	0.29
14OCT	SE	0.00	0.00	0.00	0.27	0.64	0.24	1.08	0.19	0.00	0.00	0.00	0.00	0.00	1.32
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.00	0.02	0.73	4.35	0.37	6.44	0.67	3.07	3.21	0.94	0.00	0.06	1.53
29OCT	SE	0.00	0.00	0.02	0.43	1.61	0.16	0.98	0.35	0.83	0.91	0.43	0.00	0.06	2.36
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.00	0.00	2.80	3.55	0.85	8.32	0.03	0.92	0.00	0.00	0.00	0.00	1.27
12NOV	SE	0.00	0.00	0.00	0.77	0.90	0.59	2.04	0.03	0.79	0.00	0.00	0.00	0.00	2.56
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.00	0.00	1.33	2.18	0.04	1.44	0.65	0.31	0.00	0.00	0.00	0.00	0.46
03DEC	SE	0.00	0.00	0.00	0.78	0.50	0.04	0.61	0.30	0.13	0.00	0.00	0.00	0.00	1.16
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-162 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	0	0	0	0	0	0	5	0	0	0	0	0	0	5
23JUL	SE	0	0	0	0	0	0	5	0	0	0	0	0	0	5
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	0	0	0	95	86	18	5	156	164	0	0	0	0	524
06AUG	SE	0	0	0	95	78	9	4	58	62	0	0	0	0	150
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	0	0	0	0	0	258	282	231	16	0	0	0	7	794
20AUG	SE	0	0	0	0	0	143	124	163	11	0	0	0	7	250
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	0	0	73	0	21	50	179	171	67	0	85	36	0	682
03SEP	SE	0	0	73	0	20	26	87	54	34	0	85	18	0	160
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	0	0	0	0	0	0	1030	470	38	0	0	0	13	1551
16SEP	SE	0	0	0	0	0	0	774	113	19	0	0	0	13	783
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	0	0	0	0	25	30	315	437	49	602	36	0	0	1494
30SEP	SE	0	0	0	0	7	15	140	114	27	296	23	0	0	349
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	0	0	0	40	264	50	245	55	0	0	0	0	0	654
14OCT	SE	0	0	0	40	132	50	151	55	0	0	0	0	0	218
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	0	0	6	108	906	77	900	199	507	454	165	0	5	3327
29OCT	SE	0	0	6	64	336	34	137	103	137	128	76	0	5	434
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	0	0	0	413	739	176	1163	9	153	0	0	0	0	2653
12NOV	SE	0	0	0	114	187	123	285	9	131	0	0	0	0	402
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	0	0	0	196	454	8	202	193	51	0	0	0	0	1103
03DEC	SE	0	0	0	114	105	8	86	89	22	0	0	0	0	200
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-163 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	1.00	0.17	0.00	0.20	0.20	0.00	0.00	0.00	0.13
30JUL	SE	0.00	0.00	0.00	0.00	0.77	0.17	0.00	0.20	0.20	0.00	0.00	0.00	0.84
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.10
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.73
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.08	0.00	0.60	7.00	0.00	0.00	0.20	1.20	0.00	0.00	0.14	0.77
27AUG	SE	0.00	0.08	0.00	0.60	2.47	0.00	0.00	0.20	0.58	0.00	0.00	0.14	2.62
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.40	5.20	1.00	0.00	0.40	0.20	0.00	0.00	0.14	0.61
10SEP	SE	0.00	0.00	0.00	0.24	2.78	0.63	0.00	0.24	0.20	0.00	0.00	0.14	2.88
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.07	0.60	1.00	0.50	0.00	0.00	0.40	0.00	0.00	0.00	0.21
24SEP	SE	0.00	0.00	0.07	0.40	0.77	0.50	0.00	0.00	0.24	0.00	0.00	0.00	1.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	1.00	3.80	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.41
07OCT	SE	0.00	0.00	0.00	1.00	3.31	0.17	0.00	0.00	0.00	0.00	0.00	0.00	3.46
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
22OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-164 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	3	2	0	< 0.5	2	0	0	0	6
30JUL	SE	0	0	0	0	2	2	0	< 0.5	2	0	0	0	3
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	10	0	0	0	10
13AUG	SE	0	0	0	0	0	0	0	0	6	0	0	0	6
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	4	0	6	18	0	0	< 0.5	10	0	0	2	40
27AUG	SE	0	4	0	6	7	0	0	< 0.5	5	0	0	2	11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	4	14	11	0	< 0.5	2	0	0	2	32
10SEP	SE	0	0	0	2	7	7	0	< 0.5	2	0	0	2	11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	2	6	3	5	0	0	3	0	0	0	19
24SEP	SE	0	0	2	4	2	5	0	0	2	0	0	0	7
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	9	10	2	0	0	0	0	0	0	21
07OCT	SE	0	0	0	9	9	2	0	0	0	0	0	0	13
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	2	0	0	0	0	0	0	0	0	0	0	2
22OCT	SE	0	2	0	0	0	0	0	0	0	0	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-165 REGIONAL DENSITY (NO./1,000m³) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR -	DENSITY	0.00	0.00	0.28	0.00	1.62	0.42	0.22	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.28	0.00	1.62	0.26	0.22						
	NO. TOWS	10	10	11	11	10	10	12						
24MAR -	DENSITY	0.00	0.00	0.00	0.51	0.00	0.11	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.51	0.00	0.11	0.00						
	NO. TOWS	10	10	11	11	10	10	12						
30MAR -	DENSITY	0.00	0.45	0.51	0.26	1.32	0.00	0.53	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.45	0.51	0.26	0.73	0.00	0.53						
	NO. TOWS	10	10	11	11	10	10	12						
05APR -	DENSITY	0.00	0.00	0.63	0.21	1.37	0.11	0.00	0.30	0.50	1.20	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.63	0.21	0.93	0.11	0.00	0.30	0.50	0.48	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR -	DENSITY	0.00	1.24	1.32	1.74	2.93	0.98	6.08	3.83	0.98	2.24	0.34	0.00	0.00
16APR	SE	0.00	1.24	1.09	0.62	2.06	0.52	2.53	1.93	0.98	1.44	0.34	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR -	DENSITY	0.00	1.53	2.46	15.97	9.06	1.95	1.38	1.06	0.76	0.32	7.16	0.00	0.00
23APR	SE	0.00	1.53	1.14	4.68	4.19	0.73	0.89	1.06	0.44	0.32	5.87	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR -	DENSITY	0.00	7.38	4.36	21.03	8.08	0.38	1.36	0.58	0.31	0.00	0.50	0.52	0.00
30APR	SE	0.00	5.28	3.45	8.24	4.65	0.38	0.55	0.41	0.31	0.00	0.50	0.52	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY -	DENSITY	0.00	6.79	5.29	32.70	14.16	0.00	4.33	0.46	0.27	0.00	0.00	1.06	0.00
07MAY	SE	0.00	6.79	4.55	12.97	3.72	0.00	3.07	0.31	0.27	0.00	0.00	1.06	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY -	DENSITY	0.35	6.63	16.09	10.99	14.86	5.94	1.16	0.34	0.44	0.00	0.48	0.58	0.00
14MAY	SE	0.35	5.96	1.66	7.61	3.50	1.75	0.22	0.21	0.29	0.00	0.48	0.58	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY -	DENSITY	0.00	6.05	7.63	3.89	7.17	0.51	2.60	0.99	0.45	0.36	0.00	0.00	0.00
21MAY	SE	0.00	4.91	4.50	1.14	6.89	0.51	2.34	0.45	0.45	0.36	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY -	DENSITY	0.00	0.45	0.19	0.40	3.94	2.41	0.66	0.00	0.00	0.36	0.26	0.00	0.00
28MAY	SE	0.00	0.45	0.19	0.40	2.40	1.94	0.43	0.00	0.00	0.36	0.26	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN -	DENSITY	1.46	1.06	0.66	1.95	0.33	0.25	1.06	0.53	0.00	0.58	0.74	0.00	0.00
04JUN	SE	0.54	0.76	0.66	0.81	0.17	0.25	0.61	0.33	0.00	0.33	0.49	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-165 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.33	0.25	0.86	0.00	0.30	0.21	0.73	0.29	0.31	0.00	0.00	0.25
11JUN	SE	0.00	0.00	0.33	0.25	0.24	0.00	0.30	0.21	0.40	0.29	0.31	0.00	0.00	0.83
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	4.98	7.36	0.61	0.52	0.00	0.52	0.19	0.00	0.00	0.00	0.00	0.00	0.00	1.09
18JUN	SE	4.36	7.00	0.61	0.33	0.00	0.52	0.14	0.00	0.00	0.00	0.00	0.00	0.00	8.29
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.77	0.00	0.00	0.00	0.00	0.15	0.00	0.14	0.29	0.00	0.00	0.00	0.10
25JUN	SE	0.00	0.77	0.00	0.00	0.00	0.00	0.15	0.00	0.14	0.29	0.00	0.00	0.00	0.84
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	13.60	0.00	0.00	0.04	0.00	0.05	0.19	0.00	0.00	0.88	0.00	0.00	1.14
02JUL	SE	0.00	11.60	0.00	0.00	0.04	0.00	0.05	0.19	0.00	0.00	0.88	0.00	0.00	11.63
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	3.66	0.00	0.72	0.06	0.00	0.00	0.24	NS	NS	NS	NS	NS	0.58
16JUL	SE	0.00	2.14	0.00	0.72	0.06	0.00	0.00	0.24						2.27
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.12	0.35	0.52	NS	NS	NS	NS	NS	0.12
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.12	0.31	0.52						0.62
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	1.02	2.95	0.00	NS	NS	NS	NS	NS	0.50
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.37	1.43	0.00						1.48
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.37	1.20	0.00	NS	NS	NS	NS	NS	0.20
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.37	0.60	0.00						0.71
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	1.27	0.00	0.00	0.00	1.17	28.28	0.00	NS	NS	NS	NS	NS	3.84
10SEP	SE	0.00	1.27	0.00	0.00	0.00	0.34	13.30	0.00						13.37
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	1.58	0.00	0.00	0.00	0.59	1.41	0.00	NS	NS	NS	NS	NS	0.45
23SEP	SE	0.00	1.58	0.00	0.00	0.00	0.29	0.56	0.00						1.71
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.70	5.48	7.90	6.83	7.05	2.31	NS	NS	NS	NS	NS	3.79
07OCT	SE	0.00	0.00	0.70	0.99	3.99	3.44	1.97	1.28						5.90
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-166 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	90	0	338	87	31	NS	NS	NS	NS	NS	NS	546
18MAR	SE	0	0	90	0	338	53	31							355
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	75	0	22	0	NS	NS	NS	NS	NS	NS	97
26MAR	SE	0	0	0	75	0	22	0							78
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	102	166	38	275	0	74	NS	NS	NS	NS	NS	NS	654
02APR	SE	0	102	166	38	152	0	74							261
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	201	31	286	22	0	90	83	170	0	0	0	883
08APR	SE	0	0	201	31	194	22	0	90	83	68	0	0	0	315
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	284	425	257	611	204	850	1141	163	317	59	0	0	4312
16APR	SE	0	284	351	92	429	107	354	577	163	203	59	0	0	968
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	350	791	2359	1887	405	193	315	126	45	1262	0	0	7735
23APR	SE	0	350	367	691	872	152	124	315	73	45	1034	0	0	1646
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	1693	1404	3107	1684	79	190	172	52	0	88	84	0	8554
30APR	SE	0	1212	1109	1218	968	79	77	121	52	0	88	84	0	2272
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	1558	1702	4831	2951	0	605	138	45	0	0	170	0	11999
07MAY	SE	0	1558	1463	1916	774	0	429	92	45	0	0	170	0	3010
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	73	1521	5177	1624	3096	1232	162	101	72	0	84	93	0	13235
14MAY	SE	73	1366	533	1124	728	362	31	62	48	0	84	93	0	2026
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	1388	2456	574	1493	106	364	295	74	51	0	0	0	6802
21MAY	SE	0	1127	1447	169	1434	106	326	133	74	51	0	0	0	2365
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	104	62	59	820	500	93	0	0	50	46	0	0	1734
28MAY	SE	0	104	62	59	499	402	60	0	0	50	46	0	0	661
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	306	243	213	289	69	51	148	158	0	82	130	0	0	1688
04JUN	SE	112	174	213	120	34	51	85	100	0	47	87	0	0	365
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-166 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	0	0	107	36	178	0	42	62	121	41	54	0	0	641
11JUN	SE	0	0	107	36	50	0	42	62	66	41	54	0	0	173
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	1040	1688	197	77	0	109	27	0	0	0	0	0	0	3138
18JUN	SE	911	1606	197	49	0	109	19	0	0	0	0	0	0	1861
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	176	0	0	0	0	21	0	23	41	0	0	0	261
25JUN	SE	0	176	0	0	0	0	21	0	23	41	0	0	0	183
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	3121	0	0	7	0	7	57	0	0	156	0	0	3348
02JUL	SE	0	2660	0	0	7	0	7	57	0	0	156	0	0	2666
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	839	0	106	13	0	0	72	NS	NS	NS	NS	NS	1030
16JUL	SE	0	491	0	106	13	0	0	72						507
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	24	49	157	NS	NS	NS	NS	NS	229
29JUL	SE	0	0	0	0	0	24	43	157						164
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	211	413	0	NS	NS	NS	NS	NS	624
12AUG	SE	0	0	0	0	0	77	201	0						215
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	77	168	0	NS	NS	NS	NS	NS	245
26AUG	SE	0	0	0	0	0	77	84	0						114
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	292	0	0	0	242	3953	0	NS	NS	NS	NS	NS	4487
10SEP	SE	0	292	0	0	0	70	1860	0						1884
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	363	0	0	0	122	196	0	NS	NS	NS	NS	NS	682
23SEP	SE	0	363	0	0	0	60	78	0						377
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	226	810	1647	1418	985	689	NS	NS	NS	NS	NS	5774
07OCT	SE	0	0	226	146	832	714	276	381						1223
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-167 REGIONAL DENSITY (NO./1,000m3) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - 09JUL	DENSITY	0.70	11.77	16.04	4.49	1.43	0.29	0.07	0.17	0.19	0.52	0.39	0.23	0.21	2.81
	SE	0.29	6.84	3.71	1.57	0.54	0.22	0.04	0.06	0.10	0.36	0.25	0.23	0.21	7.99
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - 23JUL	DENSITY	3.68	19.20	16.50	4.19	3.67	0.70	1.58	0.63	0.70	2.84	1.17	0.38	0.44	4.28
	SE	0.99	6.19	4.44	1.08	1.56	0.15	0.49	0.20	0.16	1.36	0.60	0.22	0.18	8.07
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - 06AUG	DENSITY	0.21	4.50	12.80	3.46	0.45	2.75	9.80	4.45	1.44	0.53	0.31	0.32	2.31	3.33
	SE	0.12	2.65	5.07	0.77	0.19	1.21	3.83	1.48	0.38	0.53	0.19	0.32	1.53	7.39
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - 20AUG	DENSITY	0.53	21.61	21.34	2.54	5.88	4.91	9.43	7.68	2.99	2.82	0.38	1.85	0.18	6.32
	SE	0.35	10.15	8.65	0.41	1.45	2.01	2.15	2.70	0.41	1.54	0.20	1.85	0.18	14.22
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - 03SEP	DENSITY	1.25	9.45	8.28	2.20	2.64	4.52	26.61	6.82	5.11	9.90	4.21	1.11	1.32	6.42
	SE	0.58	4.77	3.14	1.13	0.80	1.59	5.97	2.86	1.24	1.38	1.35	1.11	0.52	9.38
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - 16SEP	DENSITY	1.13	1.61	13.78	4.84	5.20	11.77	10.28	6.40	3.65	2.77	0.92	0.45	1.78	4.97
	SE	0.37	1.07	2.30	2.32	2.49	5.31	3.19	2.24	1.24	1.01	0.67	0.31	1.23	8.13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - 30SEP	DENSITY	2.89	3.47	3.41	0.41	5.63	3.50	14.19	8.10	4.67	8.51	0.13	0.12	3.56	4.51
	SE	0.45	1.51	3.05	0.16	4.47	0.93	5.60	1.67	1.64	4.97	0.13	0.12	1.69	9.85
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - 14OCT	DENSITY	0.18	2.72	6.08	39.53	15.81	8.86	23.65	4.37	9.87	5.05	0.64	0.25	0.09	9.01
	SE	0.08	1.79	1.73	11.55	3.46	1.48	5.10	1.30	0.75	2.09	0.36	0.25	0.09	13.66
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - 29OCT	DENSITY	0.58	2.93	4.51	12.05	30.32	14.58	20.25	5.03	6.95	10.80	4.13	0.00	0.06	8.63
	SE	0.32	0.80	0.54	4.18	9.11	3.08	5.03	0.96	1.10	1.68	1.00	0.00	0.06	11.93
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - 12NOV	DENSITY	0.15	0.27	4.68	8.62	7.73	2.44	11.38	0.91	3.51	2.37	0.22	0.00	0.00	3.25
	SE	0.11	0.22	2.12	2.47	2.23	0.90	3.18	0.45	1.25	1.14	0.12	0.00	0.00	5.44
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - 03DEC	DENSITY	0.11	0.20	1.68	4.95	6.07	5.61	1.36	1.14	1.22	0.51	0.20	0.00	0.00	1.77
	SE	0.06	0.07	0.75	1.62	1.67	1.39	0.40	0.29	0.45	0.29	0.14	0.00	0.00	2.91
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-168 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	ST. CROP	147	2701	5162	663	298	61	10	51	31	73	69	37	15	9317
09JUL	SE	61	1570	1194	232	114	46	6	17	16	51	43	37	15	1992
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	769	4405	5309	619	765	145	220	188	116	402	206	61	31	13236
23JUL	SE	207	1419	1428	160	326	31	68	59	27	192	105	36	13	2070
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	45	1032	4119	512	94	571	1370	1328	238	75	55	52	164	9653
06AUG	SE	24	607	1631	114	40	252	536	442	63	75	33	52	109	1902
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	111	4957	6867	375	1224	1018	1319	2290	495	399	67	297	13	19432
20AUG	SE	72	2328	2785	61	303	416	301	805	68	217	36	297	13	3785
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	261	2169	2665	325	549	939	3719	2035	846	1401	742	178	94	15922
03SEP	SE	120	1094	1010	166	166	330	835	851	205	196	238	178	37	1997
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	237	369	4433	716	1083	2441	1438	1909	604	391	162	73	127	13982
16SEP	SE	76	246	740	343	519	1101	446	667	205	143	118	50	88	1716
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	604	796	1097	61	1174	726	1983	2414	772	1204	24	20	253	11128
30SEP	SE	94	347	983	24	931	192	783	498	272	703	24	20	120	1855
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	37	624	1956	5841	3293	1838	3306	1304	1634	714	113	40	6	20708
14OCT	SE	17	411	557	1707	720	306	713	389	125	295	64	40	6	2185
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	121	672	1450	1780	6317	3026	2831	1501	1150	1528	728	0	4	21107
29OCT	SE	67	183	174	617	1898	639	703	286	183	237	177	0	4	2271
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	31	61	1506	1274	1610	507	1591	272	581	335	39	0	0	7806
12NOV	SE	22	51	681	365	464	186	445	135	206	161	22	0	0	1066
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	22	45	540	732	1264	1165	189	339	202	72	35	0	0	4605
03DEC	SE	13	16	242	239	347	289	56	86	74	41	26	0	0	582
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-169 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN -	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	< 0.005
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN -	CPUE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
01JUL	SE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL -	CPUE	0.00	0.00	0.14	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.21	0.00	0.04
15JUL	SE	0.00	0.00	0.14	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.12	0.00	0.23
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL -	CPUE	0.00	0.04	0.14	0.60	0.80	0.00	0.00	0.20	0.20	0.00	0.00	0.14	0.18
30JUL	SE	0.00	0.04	0.14	0.40	0.49	0.00	0.00	0.20	0.20	0.00	0.00	0.14	0.72
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG -	CPUE	0.00	0.04	0.14	0.00	2.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.19
13AUG	SE	0.00	0.04	0.10	0.00	2.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	2.01
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG -	CPUE	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
27AUG	SE	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.62
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP -	CPUE	0.40	0.04	0.00	0.80	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.12
10SEP	SE	0.24	0.04	0.00	0.58	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.66
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP -	CPUE	0.00	0.04	0.14	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
24SEP	SE	0.00	0.04	0.10	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT -	CPUE	0.20	0.00	0.00	0.40	0.20	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.08
07OCT	SE	0.20	0.00	0.00	0.40	0.20	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.52
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT -	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-170 REGIONAL STANDING CROP (IN THOUSANDS) OF HOGCHOKER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	1	0	1
17JUN	SE	0	0	0	0	0	0	0	0	0	0	1	0	1
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	1	0	0	0	0	0	0	0	1
01JUL	SE	0	0	0	0	1	0	0	0	0	0	0	0	1
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	4	0	0	0	1	0	0	0	4	0	9
15JUL	SE	0	0	4	0	0	0	1	0	0	0	2	0	5
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	2	4	6	2	0	0	< 0.5	2	0	0	2	17
30JUL	SE	0	2	4	4	1	0	0	< 0.5	2	0	0	2	6
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	2	4	0	5	0	0	0	0	2	0	0	13
13AUG	SE	0	2	3	0	5	0	0	0	0	2	0	0	6
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	2	0	0	0	0	0	0	2	4
27AUG	SE	0	0	0	0	2	0	0	0	0	0	0	2	3
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	3	2	0	7	0	2	0	0	0	0	0	0	14
10SEP	SE	2	2	0	5	0	2	0	0	0	0	0	0	6
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	2	4	26	0	0	0	0	0	0	0	0	32
24SEP	SE	0	2	3	17	0	0	0	0	0	0	0	0	17
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	2	0	0	4	1	2	0	0	0	0	0	0	7
07OCT	SE	2	0	0	4	1	2	0	0	0	0	0	0	4
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-171 REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-171 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-172 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-172 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-173 REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.01
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.01
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.12	1.55	0.13
14OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.12	0.90	0.91
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04	0.00	0.01
29OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.04
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.22	0.01	0.56	0.61	0.69	0.11	0.00	0.17
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.01	0.25	0.29	0.26	0.11	0.00	0.49
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00	0.01
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00	0.05
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-174 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	23	0	0	23
06AUG	SE	0	0	0	0	0	0	0	0	0	0	13	0	0	13
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16SEP	SE	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	7	7
30SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	7	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	0	0	0	0	0	0	4	3	0	0	20	111	137
14OCT	SE	0	0	0	0	0	0	0	4	3	0	0	20	64	67
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	0	0	0	0	0	0	10	0	0	0	6	0	16
29OCT	SE	0	0	0	0	0	0	0	7	0	0	0	6	0	9
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	0	0	3	30	4	92	86	122	18	0	355
12NOV	SE	0	0	0	0	0	2	15	4	41	42	45	18	0	78
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	5	0	5	0	11
03DEC	SE	0	0	0	0	0	0	0	0	0	5	0	5	0	8
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-175 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.50	2.13	1.00	0.47	1.11	3.25	0.70
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.57	0.63	0.17	0.49	2.09	2.78
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN	CPUE	0.00	0.00	0.43	0.00	3.33	4.67	8.00	29.50	29.25	28.33	14.68	26.00	12.02
01JUL	SE	0.00	0.00	0.43	0.00	2.40	4.67	5.05	16.38	8.80	9.45	3.55	21.01	30.70
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL	CPUE	0.00	0.00	0.14	0.00	0.00	3.33	5.13	83.50	35.25	32.87	55.42	4.58	18.35
15JUL	SE	0.00	0.00	0.14	0.00	0.00	3.33	3.12	36.69	16.52	12.09	37.45	2.36	56.51
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL	CPUE	0.00	0.00	0.21	0.20	0.00	5.00	79.40	60.00	6.00	40.78	34.60	18.29	20.37
30JUL	SE	0.00	0.00	0.15	0.20	0.00	3.08	72.96	26.40	2.88	18.99	19.85	9.87	83.01
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG	CPUE	0.00	0.00	0.00	0.00	0.40	4.67	15.60	67.20	1.40	71.89	26.30	69.71	21.43
13AUG	SE	0.00	0.00	0.00	0.00	0.40	4.67	14.36	29.26	0.98	23.25	25.75	39.38	61.97
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG	CPUE	0.00	0.00	0.00	9.80	0.00	1.50	16.00	48.20	7.60	29.56	23.30	23.71	13.31
27AUG	SE	0.00	0.00	0.00	9.80	0.00	1.50	7.01	27.42	3.26	9.73	11.72	11.51	35.70
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP	CPUE	0.00	0.00	0.00	0.40	0.20	3.00	26.00	36.20	7.00	49.56	19.80	68.00	17.51
10SEP	SE	0.00	0.00	0.00	0.24	0.20	1.91	16.51	15.73	4.73	15.17	13.36	37.79	48.81
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP	CPUE	0.00	0.00	0.00	0.00	0.00	8.17	11.80	92.80	10.40	27.22	23.80	22.57	16.40
24SEP	SE	0.00	0.00	0.00	0.00	0.00	8.17	11.55	30.74	6.04	8.46	13.76	14.15	40.53
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT	CPUE	0.00	0.00	0.21	0.00	1.80	3.67	19.20	21.00	19.00	36.89	25.00	27.43	12.85
07OCT	SE	0.00	0.00	0.21	0.00	0.92	2.22	3.99	11.41	5.81	6.93	12.72	9.37	21.99
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT	CPUE	0.00	0.00	0.00	0.20	0.20	1.17	3.20	52.40	4.80	14.44	0.40	15.00	7.65
22OCT	SE	0.00	0.00	0.00	0.20	0.20	1.17	1.53	19.21	2.31	4.05	0.31	9.02	21.82
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-176 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	4	3	9	8	22	44	89
17JUN	SE	0	0	0	0	0	0	4	2	5	3	10	28	31
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	12	0	9	50	57	37	252	497	289	353	1555
01JUL	SE	0	0	12	0	6	50	36	20	76	166	70	285	352
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	4	0	0	36	36	104	303	577	1090	62	2212
15JUL	SE	0	0	4	0	0	36	22	45	142	212	737	32	783
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	6	2	0	53	563	74	52	716	681	248	2395
30JUL	SE	0	0	4	2	0	33	518	33	25	333	390	134	743
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	1	50	111	83	12	1262	517	947	2984
13AUG	SE	0	0	0	0	1	50	102	36	8	408	507	535	851
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	90	0	16	114	60	65	519	458	322	1645
27AUG	SE	0	0	0	90	0	16	50	34	28	171	231	156	346
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	4	1	32	184	45	60	870	390	924	2509
10SEP	SE	0	0	0	2	1	20	117	20	41	266	263	513	648
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	87	84	115	90	478	468	307	1628
24SEP	SE	0	0	0	0	0	87	82	38	52	149	271	192	388
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	6	0	5	39	136	26	164	648	492	373	1888
07OCT	SE	0	0	6	0	2	24	28	14	50	122	250	127	313
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	2	1	12	23	65	41	254	8	204	609
22OCT	SE	0	0	0	2	1	12	11	24	20	71	6	123	146
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-177 REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.21	0.21	NS	NS	NS	NS	NS	NS	0.06
	SE	0.00	0.00	0.00	0.00	0.00	0.21	0.21							0.29
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.23	0.00	0.00	0.00	0.14
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.71	0.00	0.00	0.00	0.89
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.31	0.00	0.00	0.00	0.05
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.31	0.00	0.00	0.00	0.43
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.67	0.00	0.00	0.06
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.67	0.00	0.00	0.68
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.03
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.41	0.00	0.00	0.00	0.04
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.41	0.00	0.00	0.00	0.43
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.31	0.00	0.00	0.63	0.09
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.31	0.00	0.00	0.63	0.73
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.25	0.00	0.00	0.09
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.25	0.00	0.00	0.38
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-177 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010															
		ALL REGIONS													
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.14	0.00	0.00	0.56	0.61	0.12
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.14	0.00	0.00	0.56	0.61	0.86
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.05
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	NS	NS	NS	NS	NS	0.01
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00						0.05
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-178 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	43	29	NS	NS	NS	NS	NS	NS	72
18MAR	SE	0	0	0	0	0	43	29							52
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	88	174	0	0	0	262
08APR	SE	0	0	0	0	0	0	0	0	88	100	0	0	0	134
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	88	0	44	0	0	0	132
16APR	SE	0	0	0	0	0	0	0	88	0	44	0	0	0	98
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	6	0	0	0	119	0	0	125
23APR	SE	0	0	0	0	0	0	6	0	0	0	119	0	0	119
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	28	28
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	28	28
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	23	57	0	0	0	81
14MAY	SE	0	0	0	0	0	0	0	0	23	57	0	0	0	62
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	31	44	0	0	45	120
28MAY	SE	0	0	0	0	0	0	0	0	31	44	0	0	45	70
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	121	43	0	0	165
04JUN	SE	0	0	0	0	0	0	0	0	0	41	43	0	0	59
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-178 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	37	0	23	0	0	90	44	193
18JUN	SE	0	0	0	0	0	0	26	0	23	0	0	90	44	106
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	45	45
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	45	45
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	7	0	NS	NS	NS	NS	NS	7
07OCT	SE	0	0	0	0	0	0	7	0						7
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-179 REGIONAL DENSITY (NO./1,000m3) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.07	0.00	0.00	0.00	0.01
09JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.07	0.00	0.00	0.00	0.07
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01
23JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.09	0.02
06AUG SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.09	0.14
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.02
20AUG SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.11	0.00	0.01
03SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.11	0.00	0.11
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	< 0.005
16SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.08	0.97	2.71	0.29
14OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.08	0.64	1.36	1.50
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.03	0.00	0.00	0.00	0.11	0.00	0.02
29OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.00	0.00	0.00	0.11	0.00	0.13
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.40	0.00	0.55	1.82	1.06	0.18	0.23	0.33
12NOV SE	0.00	0.00	0.00	0.00	0.00	0.01	0.14	0.00	0.25	0.69	0.40	0.10	0.12	0.86
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.07	0.10	0.03	0.00	0.02
03DEC SE	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.05	0.03	0.00	0.08
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-180 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL	
														REGIONS	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	COMBINED
06JUL - ST. CROP		0	0	0	0	0	0	1	0	3	9	0	0	0	13
09JUL - SE		0	0	0	0	0	0	1	0	3	9	0	0	0	10
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	7	7
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	7	7
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	17	7	24
06AUG - SE		0	0	0	0	0	0	0	0	0	0	0	17	7	19
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	14	14
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	14	14
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	0	0	0	0	0	0	0	3	0	0	18	0	20
03SEP - SE		0	0	0	0	0	0	0	0	3	0	0	18	0	18
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	0	0	0	0	0	0	0	9	0	0	0	0	9
16SEP - SE		0	0	0	0	0	0	0	0	5	0	0	0	0	5
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		0	0	0	0	0	0	0	0	7	0	14	155	193	369
14OCT - SE		0	0	0	0	0	0	0	0	4	0	14	103	97	142
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		0	0	0	0	0	0	14	10	0	0	0	18	0	42
29OCT - SE		0	0	0	0	0	0	8	7	0	0	0	18	0	21
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		0	0	0	0	0	1	56	0	91	258	188	30	16	639
12NOV - SE		0	0	0	0	0	1	20	0	41	97	70	16	9	130
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		0	0	0	0	0	0	2	0	0	10	17	5	0	34
03DEC - SE		0	0	0	0	0	0	2	0	0	7	9	5	0	12
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-181 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.14	0.33	0.00	0.33	1.13	4.50	0.88	0.07	0.47	0.00	0.65
17JUN	SE	0.00	0.00	0.14	0.33	0.00	0.33	0.40	2.11	0.64	0.07	0.18	0.00	2.30
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	1.71	2.67	0.33	2.00	1.75	2.13	1.25	2.87	4.37	0.58	1.64
01JUL	SE	0.00	0.00	1.13	2.67	0.33	1.53	1.28	0.83	0.86	1.67	1.89	0.58	4.54
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.57	0.00	0.33	5.00	1.38	3.25	0.75	0.40	0.68	0.00	1.03
15JUL	SE	0.00	0.00	0.43	0.00	0.33	5.00	0.98	2.18	0.41	0.27	0.46	0.00	5.61
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.64	1.20	0.00	3.33	12.00	3.80	0.00	0.44	0.70	0.14	1.86
30JUL	SE	0.00	0.00	0.57	1.20	0.00	3.33	7.13	0.86	0.00	0.24	0.33	0.14	8.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.07	0.00	0.00	2.50	2.40	10.20	0.00	0.22	0.60	2.14	1.51
13AUG	SE	0.00	0.00	0.07	0.00	0.00	2.50	2.40	5.31	0.00	0.15	0.40	1.50	6.53
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.07	7.20	0.00	0.00	1.80	0.40	0.80	8.11	8.40	8.57	2.95
27AUG	SE	0.00	0.00	0.07	5.25	0.00	0.00	0.58	0.40	0.49	2.83	3.00	3.50	7.59
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.64	0.00	0.40	2.33	9.40	1.00	0.00	0.44	0.30	0.43	1.25
10SEP	SE	0.00	0.00	0.51	0.00	0.40	2.33	4.02	1.00	0.00	0.34	0.21	0.30	4.82
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.21	0.00	0.40	1.67	2.80	2.40	1.60	5.56	8.50	0.57	1.98
24SEP	SE	0.00	0.00	0.21	0.00	0.40	1.67	2.56	1.60	0.81	2.56	4.51	0.57	6.32
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.36	0.80	3.20	2.17	2.00	3.00	4.60	7.22	5.30	4.71	2.78
07OCT	SE	0.00	0.00	0.36	0.58	1.59	0.91	0.63	1.45	0.40	1.56	2.34	1.57	4.11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.20	0.60	0.50	3.00	18.80	2.20	8.67	1.10	4.14	3.27
22OCT	SE	0.00	0.00	0.00	0.20	0.40	0.34	1.76	7.14	0.92	2.00	0.82	1.90	7.97
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-182 REGIONAL STANDING CROP (IN THOUSANDS) OF SPOTTAIL SHINER YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	4	3	0	4	8	6	8	1	9	0	42
17JUN	SE	0	0	4	3	0	4	3	3	6	1	3	0	10
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	46	25	1	21	12	3	11	50	86	8	263
01JUL	SE	0	0	30	25	1	16	9	1	7	29	37	8	65
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	15	0	1	53	10	4	6	7	13	0	110
15JUL	SE	0	0	12	0	1	53	7	3	4	5	9	0	56
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	17	11	0	36	85	5	0	8	14	2	177
30JUL	SE	0	0	15	11	0	36	51	1	0	4	7	2	65
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	2	0	0	27	17	13	0	4	12	29	103
13AUG	SE	0	0	2	0	0	27	17	7	0	3	8	20	39
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	2	66	0	0	13	< 0.5	7	142	165	116	513
27AUG	SE	0	0	2	48	0	0	4	< 0.5	4	50	59	48	103
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	17	0	1	25	67	1	0	8	6	6	131
10SEP	SE	0	0	14	0	1	25	29	1	0	6	4	4	41
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	6	0	1	18	20	3	14	98	167	8	334
24SEP	SE	0	0	6	0	1	18	18	2	7	45	89	8	103
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	10	7	8	23	14	4	40	127	104	64	401
07OCT	SE	0	0	10	5	4	10	4	2	3	27	46	21	60
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	2	2	5	21	23	19	152	22	56	302
22OCT	SE	0	0	0	2	1	4	12	9	8	35	16	26	50
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-183 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-183 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	NS	NS	NS	NS	NS	0.01
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00						0.12
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-184 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	39	0	0	0	0	0	0	0	39
14MAY	SE	0	0	0	0	0	39	0	0	0	0	0	0	0	39
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-184 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	23	0	0	0	0	0	0	0	23
02JUL	SE	0	0	0	0	0	23	0	0	0	0	0	0	0	23
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	24	0	0	NS	NS	NS	NS	NS	24
10SEP	SE	0	0	0	0	0	24	0	0						24
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-185 REGIONAL DENSITY (NO./1,000m3) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	< 0.005
09JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.04
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.01
23JUL SE	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.06
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	< 0.005
06AUG SE	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20AUG SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03SEP SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- DENSITY	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
16SEP SE	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- DENSITY	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
30SEP SE	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
14OCT SE	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- DENSITY	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
29OCT SE	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-186 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		0	0	0	0	0	0	5	0	3	0	0	0	0	8
09JUL - SE		0	0	0	0	0	0	5	0	3	0	0	0	0	6
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		0	0	0	0	0	4	0	0	3	8	0	0	0	14
23JUL - SE		0	0	0	0	0	4	0	0	3	8	0	0	0	9
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		0	0	0	0	3	0	0	4	0	0	0	0	0	7
06AUG - SE		0	0	0	0	3	0	0	4	0	0	0	0	0	5
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
20AUG - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	0	0	0	0	1	0	0	0	0	0	0	0	1
03SEP - SE		0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	0	0	3	0	2	0	0	0	0	0	0	0	5
16SEP - SE		0	0	0	3	0	2	0	0	0	0	0	0	0	4
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	0	0	0	5	0	0	0	0	0	0	0	5
30SEP - SE		0	0	0	0	0	4	0	0	0	0	0	0	0	4
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		0	0	0	0	3	0	4	0	0	0	0	0	0	7
14OCT - SE		0	0	0	0	3	0	4	0	0	0	0	0	0	5
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		0	0	0	4	0	3	0	0	0	0	0	0	0	8
29OCT - SE		0	0	0	4	0	2	0	0	0	0	0	0	0	5
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-187 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-188 REGIONAL STANDING CROP (IN THOUSANDS) OF ATLANTIC STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-189 REGIONAL DENSITY (NO./1,000m3) OF SHORTRNOSE STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

															ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.03
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-189 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF SHORTRNOSE STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.04
26AUG	SE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00						0.33
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-190 REGIONAL STANDING CROP (IN THOUSANDS) OF SHORTRIVER STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	28	28
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	28	28
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-190 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF SHORTRIVER STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	69	0	0	0	NS	NS	NS	NS	NS	69
26AUG	SE	0	0	0	0	69	0	0	0						69
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-191 REGIONAL DENSITY (NO./1,000m3) OF SHORTRNOSE STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL- DENSITY	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	< 0.005
09JUL SE	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
06AUG SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- DENSITY	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	< 0.005
20AUG SE	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- DENSITY	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03SEP SE	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- DENSITY	0.00	0.03	0.00	0.02	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01
16SEP SE	0.00	0.03	0.00	0.02	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.05
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- DENSITY	0.00	0.00	0.00	0.00	0.06	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
30SEP SE	0.00	0.00	0.00	0.00	0.06	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.06
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- DENSITY	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
14OCT SE	0.00	0.00	0.05	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	< 0.005
29OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.04
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.01
12NOV SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.07
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03DEC SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-192 REGIONAL STANDING CROP (IN THOUSANDS) OF SHORTNOSE STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL - ST. CROP		0	0	0	0	3	0	0	0	3	0	0	0	0	6
09JUL - SE		0	0	0	0	3	0	0	0	3	0	0	0	0	4
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG - ST. CROP		0	0	0	0	0	2	0	0	0	0	0	0	0	2
06AUG - SE		0	0	0	0	0	2	0	0	0	0	0	0	0	2
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG - ST. CROP		0	5	0	0	0	0	0	4	0	0	0	0	0	10
20AUG - SE		0	5	0	0	0	0	0	4	0	0	0	0	0	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG - ST. CROP		0	0	0	0	6	0	0	0	0	0	0	0	0	6
03SEP - SE		0	0	0	0	6	0	0	0	0	0	0	0	0	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP - ST. CROP		0	7	0	3	0	3	4	0	0	0	0	0	0	18
16SEP - SE		0	7	0	3	0	2	4	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP - ST. CROP		0	0	0	0	12	2	0	4	0	0	0	0	0	18
30SEP - SE		0	0	0	0	12	2	0	4	0	0	0	0	0	13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT - ST. CROP		0	0	16	0	0	3	0	4	0	0	0	0	0	24
14OCT - SE		0	0	16	0	0	2	0	4	0	0	0	0	0	17
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT - ST. CROP		0	0	0	0	0	0	0	0	3	6	0	0	0	8
29OCT - SE		0	0	0	0	0	0	0	0	3	6	0	0	0	6
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV - ST. CROP		0	0	0	0	0	3	0	0	0	9	0	0	0	12
12NOV - SE		0	0	0	0	0	3	0	0	0	9	0	0	0	10
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV - ST. CROP		0	0	0	0	0	1	0	0	0	0	0	0	0	1
03DEC - SE		0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-193 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF SHORTRIVER STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-194 REGIONAL STANDING CROP (IN THOUSANDS) OF SHORTRNOSE STURGEON YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
													AL	
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-195 REGIONAL DENSITY (NO./1,000m3) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-18MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-26MAR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-02APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-08APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-16APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-23APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-30APR	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-07MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-14MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-21MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-28MAY	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-04JUN	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-195 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.05
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.04
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.56
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-196 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-196 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
														AL	COMBINED
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	43	43
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	43	43
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	90	0	90
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	90	0	90
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-197 REGIONAL DENSITY (NO./1,000m3) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.02
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.09	0.01
06AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.09	0.11
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.01
20AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.13	0.47	0.00	0.05
03SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.13	0.47	0.00	0.49
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01
16SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	< 0.005
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.06
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.03
14OCT	SE	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.26
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.00	0.00	0.14	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
29OCT	SE	0.00	0.00	0.00	0.09	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.09
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	< 0.005
03DEC	SE	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-198 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	21	21
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	21	21
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	8	0	0	7	15
06AUG	SE	0	0	0	0	0	0	0	0	0	8	0	0	7	11
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	13	13
20AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	8	8
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	0	0	0	0	0	0	4	4	0	23	76	0	107
03SEP	SE	0	0	0	0	0	0	0	4	4	0	23	76	0	79
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	6	6
16SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	6	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	9	0	0	0	9
30SEP	SE	0	0	0	0	0	0	0	0	0	9	0	0	0	9
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	0	0	0	1	0	0	115	0	0	0	0	0	116
14OCT	SE	0	0	0	0	1	0	0	77	0	0	0	0	0	77
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	0	0	21	3	2	3	0	0	0	0	0	0	28
29OCT	SE	0	0	0	13	3	2	3	0	0	0	0	0	0	13
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	2	0	2	5	0	0	0	0	0	9
03DEC	SE	0	0	0	0	2	0	2	5	0	0	0	0	0	6
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-199 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-200 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-201 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.49	0.72	0.00	0.00	0.00	0.31	0.00	0.61	0.16
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.49	0.56	0.00	0.00	0.00	0.31	0.00	0.61	1.01
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.33	0.00	0.00	0.04
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.33	0.00	0.00	0.37
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.03
25JUN	SE	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.32
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.29	1.09	0.00	0.11
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.29	1.09	0.00	1.13
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	NS	NS	NS	NS	NS	0.01
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00						0.05
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	1.36	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.17
29JUL	SE	0.00	0.00	0.00	1.36	0.00	0.00	0.00	0.00						1.36
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	NS	NS	NS	NS	NS	0.04
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00						0.33
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	NS	NS	NS	NS	NS	0.03
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00						0.27
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.09
07OCT	SE	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00						0.01
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-202 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	42	0	0	NS	NS	NS	NS	NS	NS	42
18MAR	SE	0	0	0	0	42	0	0							42
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	61	32	139	0	0	0	42	0	0	0	0	274
08APR	SE	0	0	61	32	139	0	0	0	42	0	0	0	0	161
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	56	0	41	45	0	0	0	57	0	0	198
16APR	SE	0	0	0	39	0	41	45	0	0	0	57	0	0	92
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	22	0	0	0	0	0	0	0	0	0	0	0	22
23APR	SE	0	22	0	0	0	0	0	0	0	0	0	0	0	22
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	52	30	165	0	163	0	0	0	0	0	29	439
30APR	SE	0	0	52	30	165	0	38	0	0	0	0	0	29	182
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	27	154	0	0	142	0	0	0	85	0	408
07MAY	SE	0	0	0	27	30	0	0	58	0	0	0	85	0	110
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	32	96	24	0	0	0	0	151
14MAY	SE	0	0	0	0	0	0	32	96	24	0	0	0	0	104
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	34	125	152	0	0	0	117	0	429
21MAY	SE	0	0	0	0	0	34	72	96	0	0	0	117	0	172
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	58	42	0	0	0	100
28MAY	SE	0	0	0	0	0	0	0	0	58	42	0	0	0	72
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	0	0	0	34	278	0	123	0	0	126	560
04JUN	SE	0	0	0	0	0	0	34	142	0	41	0	0	71	167
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-202 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	ST. CROP	0	0	0	0	0	102	101	0	0	0	55	0	43	302
11JUN	SE	0	0	0	0	0	102	78	0	0	0	55	0	43	147
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	54	0	0	58	0	0	111
18JUN	SE	0	0	0	0	0	0	0	54	0	0	58	0	0	79
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	23	0	0	0	0	0	54	0	0	77
25JUN	SE	0	0	0	0	23	0	0	0	0	0	54	0	0	58
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	7	0	0	0	52	174	0	233
02JUL	SE	0	0	0	0	0	0	7	0	0	0	52	174	0	182
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	6	0	NS	NS	NS	NS	NS	6
16JUL	SE	0	0	0	0	0	0	6	0						6
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	201	0	0	0	0	NS	NS	NS	NS	NS	201
29JUL	SE	0	0	0	201	0	0	0	0						201
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
26AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	46	0	NS	NS	NS	NS	NS	46
10SEP	SE	0	0	0	0	0	0	46	0						46
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	38	0	NS	NS	NS	NS	NS	38
23SEP	SE	0	0	0	0	0	0	38	0						38
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	108	0	0	0	0	NS	NS	NS	NS	NS	108
07OCT	SE	0	0	0	2	0	0	0	0						2
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-203 REGIONAL DENSITY (NO./1,000m3) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.11	0.00	0.01
09JUL	SE	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.11	0.00	0.12
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.00	0.00	0.02	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.54	0.05
23JUL	SE	0.00	0.00	0.00	0.00	0.02	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.20	0.22
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.00	0.00	0.17	0.00	0.01	0.12	0.02	0.00	0.06	0.00	0.00	0.00	0.03
06AUG	SE	0.00	0.00	0.00	0.11	0.00	0.01	0.05	0.02	0.00	0.06	0.00	0.00	0.00	0.14
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.00	0.03	0.00	0.02	0.00	0.04	0.01	0.04	0.06	0.00	0.00	0.09	0.02
20AUG	SE	0.00	0.00	0.03	0.00	0.02	0.00	0.04	0.01	0.02	0.06	0.00	0.00	0.09	0.12
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.00	0.00	0.00	0.09	0.15	0.01	0.01	0.01	0.00	0.28	0.07	0.00	0.00	0.05
03SEP	SE	0.00	0.00	0.00	0.05	0.06	0.01	0.01	0.01	0.00	0.28	0.07	0.00	0.00	0.30
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.00	0.00	0.02	0.03	0.04	0.02	0.03	0.04	0.00	0.00	0.14	0.00	0.18	0.04
16SEP	SE	0.00	0.00	0.02	0.03	0.03	0.01	0.03	0.04	0.00	0.00	0.14	0.00	0.18	0.23
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.06	0.04	0.02	0.03	0.06	0.00	0.00	0.00	0.00	0.09	0.02
30SEP	SE	0.00	0.00	0.00	0.04	0.02	0.02	0.03	0.02	0.00	0.00	0.00	0.00	0.09	0.11
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.00	0.00	0.17	0.11	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
14OCT	SE	0.00	0.00	0.08	0.11	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.00	0.00	0.10	0.20	0.05	0.00	0.00	0.00	0.02	0.00	0.06	0.00	0.00	0.03
29OCT	SE	0.00	0.00	0.07	0.15	0.03	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.00	0.17
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.03	0.06	0.13	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02
12NOV	SE	0.00	0.02	0.06	0.13	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.15
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.10	0.16	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
03DEC	SE	0.00	0.06	0.12	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-204 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
06JUL-	ST. CROP	0	0	0	0	9	0	2	0	0	0	0	18	0
09JUL	SE	0	0	0	0	9	0	2	0	0	0	0	18	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8
20JUL-	ST. CROP	0	0	0	0	4	0	9	0	3	0	0	0	38
23JUL	SE	0	0	0	0	4	0	9	0	3	0	0	0	15
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8
03AUG-	ST. CROP	0	0	0	25	0	3	16	5	0	8	0	0	0
06AUG	SE	0	0	0	16	0	3	8	5	0	8	0	0	0
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8
17AUG-	ST. CROP	0	0	10	0	5	0	6	4	6	9	0	0	6
20AUG	SE	0	0	10	0	4	0	5	4	4	9	0	0	6
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
31AUG-	ST. CROP	0	0	0	13	31	2	2	4	0	40	11	0	0
03SEP	SE	0	0	0	7	13	2	2	4	0	40	11	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
13SEP-	ST. CROP	0	0	8	4	9	4	4	11	0	0	24	0	13
16SEP	SE	0	0	8	4	6	3	4	11	0	0	24	0	13
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
27SEP-	ST. CROP	0	0	0	9	9	5	4	18	0	0	0	0	7
30SEP	SE	0	0	0	6	5	4	4	7	0	0	0	0	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8
11OCT-	ST. CROP	0	0	56	17	1	2	0	0	0	0	0	0	0
14OCT	SE	0	0	24	17	1	2	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7
25OCT-	ST. CROP	0	0	32	29	10	0	0	0	3	0	10	0	0
29OCT	SE	0	0	22	22	6	0	0	0	3	0	7	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8
08NOV-	ST. CROP	0	7	18	20	2	0	0	0	2	0	0	0	0
12NOV	SE	0	5	18	20	2	0	0	0	2	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8
29NOV-	ST. CROP	0	24	50	16	11	0	0	0	0	0	0	0	0
03DEC	SE	0	13	39	10	6	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8

TABLE E-205 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	< 0.005
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
30JUL	SE	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
07OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-206 REGIONAL STANDING CROP (IN THOUSANDS) OF WHITE CATFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	1	0	1
17JUN	SE	0	0	0	0	0	0	0	0	0	0	1	0	1
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	11	0	0	0	0	0	0	0	0	11
30JUL	SE	0	0	0	11	0	0	0	0	0	0	0	0	11
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	2	0	0	0	0	0	0	0	0	0	0	2
07OCT	SE	0	2	0	0	0	0	0	0	0	0	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-207 REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-207 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.68	0.12	0.00	0.00	NS	NS	NS	NS	NS
29JUL	SE	0.00	0.00	0.00	0.00	0.68	0.12	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
26AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
08SEP-	DENSITY	2.24	0.00	0.00	0.00	0.00	0.10	0.00	0.00	NS	NS	NS	NS	NS
10SEP	SE	2.24	0.00	0.00	0.00	0.00	0.10	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	5					
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	NS	NS	NS	NS	NS
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	10	6					
04OCT-	DENSITY	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS
07OCT	SE	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00					
	NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-208 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR - ST. CROP		0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR - SE		0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN - ST. CROP		0	0	0	0	0	0	0	0	0	0	0	0	0	0
04JUN - SE		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-208 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED													
DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN- ST. CROP	0	0	0	0	0	0	20	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	20	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL- ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
16JUL SE	0	0	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
27JUL- ST. CROP	0	0	0	0	142	24	0	0	NS	NS	NS	NS	NS
29JUL SE	0	0	0	0	142	24	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
10AUG- ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
12AUG SE	0	0	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
24AUG- ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
26AUG SE	0	0	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
08SEP- ST. CROP	468	0	0	0	0	21	0	0	NS	NS	NS	NS	NS
10SEP SE	468	0	0	0	0	21	0	0					
NO. TOWS	6	11	13	14	13	8	10	5					
21SEP- ST. CROP	0	0	0	0	0	24	0	0	NS	NS	NS	NS	NS
23SEP SE	0	0	0	0	0	24	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
04OCT- ST. CROP	0	383	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT SE	0	383	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-209 REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	DENSITY	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
23JUL	SE	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	DENSITY	0.00	0.06	0.09	0.07	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02
06AUG	SE	0.00	0.06	0.06	0.07	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.11
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	DENSITY	0.00	0.12	0.15	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
20AUG	SE	0.00	0.07	0.10	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	DENSITY	0.43	0.13	0.05	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
03SEP	SE	0.27	0.06	0.05	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	DENSITY	0.17	0.15	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
16SEP	SE	0.09	0.05	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	DENSITY	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
30SEP	SE	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	DENSITY	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
14OCT	SE	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	DENSITY	0.11	0.15	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
29OCT	SE	0.11	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	DENSITY	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
12NOV	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-210 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	ST. CROP	0	0	7	0	6	0	0	0	0	0	0	0	0	14
23JUL	SE	0	0	7	0	6	0	0	0	0	0	0	0	0	10
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	ST. CROP	0	13	29	10	0	3	0	0	3	0	0	0	0	58
06AUG	SE	0	13	21	10	0	3	0	0	3	0	0	0	0	27
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	ST. CROP	0	27	49	0	0	2	0	0	0	0	0	0	0	78
20AUG	SE	0	16	32	0	0	2	0	0	0	0	0	0	0	36
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	ST. CROP	90	30	16	4	14	0	0	0	0	0	0	0	0	153
03SEP	SE	56	14	16	4	14	0	0	0	0	0	0	0	0	61
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	ST. CROP	35	34	0	3	7	0	0	0	0	0	0	0	0	79
16SEP	SE	19	12	0	3	7	0	0	0	0	0	0	0	0	23
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	ST. CROP	0	0	0	0	10	2	0	0	0	0	0	0	0	11
30SEP	SE	0	0	0	0	7	2	0	0	0	0	0	0	0	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	ST. CROP	17	19	0	0	0	0	0	0	0	0	0	0	0	36
14OCT	SE	11	9	0	0	0	0	0	0	0	0	0	0	0	14
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	ST. CROP	22	33	6	0	0	0	0	0	0	0	0	0	0	62
29OCT	SE	22	18	6	0	0	0	0	0	0	0	0	0	0	29
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	ST. CROP	0	11	0	0	0	0	0	0	0	0	0	0	0	11
12NOV	SE	0	8	0	0	0	0	0	0	0	0	0	0	0	8
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-211 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
22OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-212 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	2	0	0	0	0	0	0	0	0	0	0	2
22OCT	SE	0	2	0	0	0	0	0	0	0	0	0	0	2
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-213 REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-213 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
08JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
16JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
29JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.04
26AUG	SE	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00						0.33
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-214 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

SURVEY, 2010														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR-	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN-	ST. CROP	76	0	0	0	0	0	0	0	0	0	0	0	0	76
04JUN	SE	76	0	0	0	0	0	0	0	0	0	0	0	0	76
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-214 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
08JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
16JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
29JUL	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
12AUG	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	ST. CROP	0	0	0	0	69	0	0	0	NS	NS	NS	NS	NS	69
26AUG	SE	0	0	0	0	69	0	0	0						69
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
10SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
23SEP	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	0
07OCT	SE	0	0	0	0	0	0	0	0						0
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-215 REGIONAL DENSITY (NO./1,000m3) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
06JUL- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL- DENSITY	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
23JUL SE	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG- DENSITY	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
06AUG SE	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG- DENSITY	0.03	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
20AUG SE	0.03	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG- DENSITY	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
03SEP SE	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP- DENSITY	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
16SEP SE	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30SEP SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14OCT SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT- DENSITY	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
29OCT SE	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV- DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-216 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	15	0	0	0	0	0	0	0	0	0	0	0	15
23JUL	SE	0	10	0	0	0	0	0	0	0	0	0	0	0	10
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	6	0	0	0	0	0	0	0	0	0	0	0	6
06AUG	SE	0	6	0	0	0	0	0	0	0	0	0	0	0	6
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	6	5	0	0	3	0	0	0	0	0	0	0	0	14
20AUG	SE	6	5	0	0	3	0	0	0	0	0	0	0	0	8
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	7	0	0	0	0	0	0	0	0	0	0	0	0	7
03SEP	SE	7	0	0	0	0	0	0	0	0	0	0	0	0	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	7	0	0	0	0	0	0	0	0	0	0	0	7
16SEP	SE	0	7	0	0	0	0	0	0	0	0	0	0	0	7
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	4	9	0	0	0	0	0	0	0	0	0	0	0	13
29OCT	SE	4	6	0	0	0	0	0	0	0	0	0	0	0	7
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-217 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27AUG	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-218 REGIONAL STANDING CROP (IN THOUSANDS) OF WEAKFISH YEARLING AND OLDER IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUN	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
01JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
15JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
30JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
13AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
27AUG	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
10SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
24SEP	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
07OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
22OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-219 REGIONAL DENSITY (NO./1,000m3) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

														ALL REGIONS COMBINED
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
16MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
18MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
24MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
26MAR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
30MAR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	NS
02APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	10	10	11	11	10	10	12						74
05APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
13APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
20APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9
27APR-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30APR	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
04MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
11MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10
18MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
25MAY-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28MAY	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6
01JUN-	DENSITY	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04JUN	SE	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6

TABLE E-219 (CONT.) REGIONAL DENSITY (NO./1,000m3) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	ALL REGIONS COMBINED
08JUN-	DENSITY	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
11JUN	SE	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
15JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
21JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25JUN	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
29JUN-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
02JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6	123
14JUL-	DENSITY	0.00	0.00	0.72	0.00	0.00	0.12	0.00	0.00	NS	NS	NS	NS	NS	0.10
16JUL	SE	0.00	0.00	0.72	0.00	0.00	0.12	0.00	0.00						0.73
	NO. TOWS	6	11	13	14	13	8	10	6						81
27JUL-	DENSITY	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.03
29JUL	SE	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00						0.22
	NO. TOWS	6	11	13	14	13	8	10	6						81
10AUG-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	NS	NS	NS	NS	NS	0.09
12AUG	SE	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00						0.73
	NO. TOWS	6	11	13	14	13	8	10	6						81
24AUG-	DENSITY	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.10
26AUG	SE	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00						0.82
	NO. TOWS	6	11	13	14	13	8	10	6						81
08SEP-	DENSITY	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	NS	NS	NS	NS	NS	< 0.005
10SEP	SE	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00						0.03
	NO. TOWS	6	11	13	14	13	8	10	5						80
21SEP-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
23SEP	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	10	6						81
04OCT-	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NS	NS	NS	NS	NS	0.00
07OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
	NO. TOWS	6	11	13	14	13	8	9	6						80

TABLE E-220 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED															
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
16MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
18MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
24MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
26MAR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
30MAR -	ST. CROP	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	0
02APR	SE	0	0	0	0	0	0	0							0
	NO. TOWS	10	10	11	11	10	10	12							74
05APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
13APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
20APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	7	13	15	15	12	10	11	6	7	7	7	7	9	126
27APR -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30APR	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
04MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
11MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	6	13	15	15	12	6	14	10	11	7	8	8	10	135
18MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
25MAY -	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28MAY	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126
01JUN -	ST. CROP	0	0	0	30	0	0	0	0	0	0	0	0	0	30
04JUN	SE	0	0	0	30	0	0	0	0	0	0	0	0	0	30
	NO. TOWS	8	10	14	14	13	7	14	10	9	7	8	6	6	126

TABLE E-220 (CONT.) REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2010

ALL REGIONS COMBINED													
DATE	BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
08JUN- ST. CROP	0	0	0	109	0	0	0	0	0	0	0	0	0
11JUN SE	0	0	0	63	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
15JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
18JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
21JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUN SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
29JUN- ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0
02JUL SE	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. TOWS	7	11	14	11	13	9	16	7	10	7	6	6	6
14JUL- ST. CROP	0	0	231	0	0	25	0	0	NS	NS	NS	NS	NS
16JUL SE	0	0	231	0	0	25	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
27JUL- ST. CROP	0	0	0	0	45	0	0	0	NS	NS	NS	NS	NS
29JUL SE	0	0	0	0	45	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
10AUG- ST. CROP	0	0	0	0	0	151	0	0	NS	NS	NS	NS	NS
12AUG SE	0	0	0	0	0	151	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
24AUG- ST. CROP	0	0	0	121	0	0	0	0	NS	NS	NS	NS	NS
26AUG SE	0	0	0	121	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
08SEP- ST. CROP	0	0	0	0	7	0	0	0	NS	NS	NS	NS	NS
10SEP SE	0	0	0	0	7	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	5					
21SEP- ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
23SEP SE	0	0	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	10	6					
04OCT- ST. CROP	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS
07OCT SE	0	0	0	0	0	0	0	0					
NO. TOWS	6	11	13	14	13	8	9	6					

TABLE E-221 REGIONAL DENSITY (NO./1,000m3) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

														ALL REGIONS COMBINED	
DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	
06JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23JUL	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG -	DENSITY	0.00	0.00	0.06	0.03	0.00	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.01
06AUG	SE	0.00	0.00	0.05	0.03	0.00	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.06
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG -	DENSITY	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
20AUG	SE	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG -	DENSITY	0.00	0.03	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
03SEP	SE	0.00	0.03	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP -	DENSITY	0.00	0.06	0.07	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
16SEP	SE	0.00	0.04	0.05	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
30SEP	SE	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT -	DENSITY	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 0.005
14OCT	SE	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29OCT	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12NOV	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV -	DENSITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03DEC	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-222 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM FALL JUVENILE SURVEY, 2010

DATE		BT	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS COMBINED	
														AL	
06JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	14	18	24	21	23	22	22	22	14	10	6	6	8	210
20JUL-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23JUL	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	15	17	24	22	21	23	22	22	14	10	6	6	8	210
03AUG-	ST. CROP	0	0	21	5	0	0	1	0	0	0	0	0	0	26
06AUG	SE	0	0	15	5	0	0	1	0	0	0	0	0	0	15
	NO. TOWS	14	18	24	22	21	23	22	22	14	10	6	6	8	210
17AUG-	ST. CROP	11	5	0	0	0	0	0	0	0	0	0	0	0	17
20AUG	SE	7	5	0	0	0	0	0	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
31AUG-	ST. CROP	0	7	43	11	0	0	0	0	0	0	0	0	0	61
03SEP	SE	0	7	19	11	0	0	0	0	0	0	0	0	0	23
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
13SEP-	ST. CROP	0	13	24	7	3	0	0	0	0	0	0	0	0	47
16SEP	SE	0	9	16	5	3	0	0	0	0	0	0	0	0	20
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
27SEP-	ST. CROP	0	0	0	0	0	2	0	0	0	0	0	0	0	2
30SEP	SE	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	NO. TOWS	14	18	24	22	22	22	22	22	14	10	6	6	8	210
11OCT-	ST. CROP	0	13	0	0	0	0	0	0	0	0	0	0	0	13
14OCT	SE	0	9	0	0	0	0	0	0	0	0	0	0	0	9
	NO. TOWS	14	18	24	23	22	22	22	22	14	10	6	6	7	210
25OCT-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29OCT	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	11	16	13	11	15	12	15	10	10	8	10	11	8	150
08NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12NOV	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	17	13	11	15	12	15	10	10	8	10	9	8	150
29NOV-	ST. CROP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03DEC	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NO. TOWS	12	16	13	11	15	11	16	10	10	8	10	10	8	150

TABLE E-223 REGIONAL CATCH-PER-UNIT-EFFORT (CPUE) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	CPUE	1.33	0.27	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
17JUN	SE	0.67	0.14	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	CPUE	0.67	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
01JUL	SE	0.67	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	CPUE	0.00	0.73	0.86	0.67	1.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.33
15JUL	SE	0.00	0.43	0.55	0.67	0.58	0.67	0.00	0.00	0.00	0.00	0.00	0.00	1.31
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	CPUE	1.60	0.63	1.14	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
30JUL	SE	1.17	0.27	0.48	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	CPUE	1.80	2.96	3.14	1.20	0.80	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.85
13AUG	SE	1.80	1.84	2.69	0.49	0.58	0.21	0.00	0.00	0.00	0.00	0.00	0.00	3.81
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	CPUE	1.20	2.04	2.43	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
27AUG	SE	0.97	0.96	1.19	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	CPUE	0.60	0.25	0.50	0.20	0.20	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.16
10SEP	SE	0.40	0.11	0.25	0.20	0.20	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.59
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	CPUE	0.00	1.21	1.14	0.40	0.80	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.31
24SEP	SE	0.00	0.42	0.81	0.24	0.58	0.17	0.00	0.00	0.00	0.00	0.00	0.00	1.12
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	CPUE	0.40	1.13	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
07OCT	SE	0.24	0.44	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	CPUE	0.00	0.04	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
22OCT	SE	0.00	0.04	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

TABLE E-224 REGIONAL STANDING CROP (IN THOUSANDS) OF BLUEFISH YOUNG-OF-YEAR IN HUDSON RIVER ESTUARY DETERMINED FROM
BEACH SEINE SURVEY, 2010

DATE		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	ALL REGIONS	
													AL	COMBINED
15JUN-	ST. CROP	10	12	8	0	0	0	0	0	0	0	0	0	30
17JUN	SE	5	6	5	0	0	0	0	0	0	0	0	0	10
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
28JUN-	ST. CROP	5	41	0	0	0	0	0	0	0	0	0	0	46
01JUL	SE	5	29	0	0	0	0	0	0	0	0	0	0	29
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
13JUL-	ST. CROP	0	33	23	6	3	7	0	0	0	0	0	0	72
15JUL	SE	0	19	15	6	2	7	0	0	0	0	0	0	26
	NO. TOWS	3	11	7	3	3	3	8	8	8	15	19	12	100
27JUL-	ST. CROP	12	28	31	0	1	0	0	0	0	0	0	0	72
30JUL	SE	9	12	13	0	1	0	0	0	0	0	0	0	20
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
10AUG-	ST. CROP	14	134	85	11	2	4	0	0	0	0	0	0	249
13AUG	SE	14	84	72	5	2	2	0	0	0	0	0	0	111
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
24AUG-	ST. CROP	9	93	65	7	2	0	0	0	0	0	0	0	177
27AUG	SE	7	44	32	5	2	0	0	0	0	0	0	0	55
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
07SEP-	ST. CROP	5	11	13	2	1	2	0	0	0	0	0	0	33
10SEP	SE	3	5	7	2	1	2	0	0	0	0	0	0	9
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
21SEP-	ST. CROP	0	55	31	4	2	2	0	0	0	0	0	0	93
24SEP	SE	0	19	22	2	2	2	0	0	0	0	0	0	29
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
04OCT-	ST. CROP	3	51	25	0	0	0	0	0	0	0	0	0	79
07OCT	SE	2	20	10	0	0	0	0	0	0	0	0	0	22
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100
18OCT-	ST. CROP	0	2	4	0	0	0	0	0	0	0	0	0	6
22OCT	SE	0	2	4	0	0	0	0	0	0	0	0	0	4
	NO. TOWS	5	24	14	5	5	6	5	5	5	9	10	7	100

Appendix F

Length Frequency Distribution

APPENDIX F
LIST OF TABLES

<u>Number</u>	<u>Title</u>
F-1	Length frequency distribution of larval and young-of-year striped bass in Hudson River estuary determined from Long River Survey, 2010.
F-2	Length frequency distribution of young-of-year striped bass in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-3	Length frequency distribution of young-of-year striped bass in Hudson River estuary determined from Beach Seine Survey, 2010.
F-4	Length frequency distribution of larval and young-of-year white perch in Hudson River estuary determined from Long River Survey, 2010.
F-5	Length frequency distribution of young-of-year white perch in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-6	Length frequency distribution of young-of-year white perch in Hudson River estuary determined from Beach Seine Survey, 2010.
F-7	Length frequency distribution of larval and young-of-year Atlantic tomcod in Hudson River estuary determined from Long River Survey, 2010.
F-8	Length frequency distribution of young-of-year Atlantic tomcod in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-9	Length frequency distribution of young-of-year Atlantic tomcod in Hudson River estuary determined from Beach Seine Survey, 2010.
F-10	Length frequency distribution of larval and young-of-year bay anchovy in Hudson River estuary determined from Long River Survey, 2010.
F-11	Length frequency distribution of young-of-year bay anchovy in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-12	Length frequency distribution of young-of-year bay anchovy in Hudson River estuary determined from Beach Seine Survey, 2010.
F-13	Length frequency distribution of larval and young-of-year American shad in Hudson River estuary determined from Long River Survey, 2010.
F-14	Length frequency distribution of young-of-year American shad in Hudson River estuary determined from Fall Juvenile Survey, 2010.

APPENDIX F

LIST OF TABLES (CONTINUED)

<u>Number</u>	<u>Title</u>
F-15	Length frequency distribution of young-of-year American shad in Hudson River estuary determined from Beach Seine Survey, 2010.
F-16	Length frequency distribution of young-of-year alewife in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-17	Length frequency distribution of young-of-year alewife in Hudson River estuary determined from Beach Seine Survey, 2010.
F-18	Length frequency distribution of young-of-year blueback herring in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-19	Length frequency distribution of young-of-year blueback herring in Hudson River estuary determined from Beach Seine Survey, 2010.
F-20	Length frequency distribution of young-of-year spottail shiner in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-21	Length frequency distribution of young-of-year spottail shiner in Hudson River estuary determined from Beach Seine Survey, 2010.
F-22	Length frequency distribution of young-of-year white catfish in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-23	Length frequency distribution of young-of-year white catfish in Hudson River estuary determined from Beach Seine Survey, 2010.
F-24	Length frequency distribution of young-of-year weakfish in Hudson River estuary determined from Fall Juvenile Survey, 2010.
F-25	Length frequency distribution of young-of-year weakfish in Hudson River estuary determined from Beach Seine Survey, 2010.

Table F-1 Length Frequency Distribution of Larval and Young-of-Year Striped Bass in Hudson River Estuary Determined from Long River Survey, 2010

	0.0- 1.9	2.0- 3.9	4.0- 5.9	6.0- 7.9	8.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- 17.9	18.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9
DATES																		
16MAR - 18MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24MAR - 26MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30MAR - 02APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05APR - 08APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13APR - 16APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20APR - 23APR	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27APR - 30APR	0	133	399	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04MAY - 07MAY	0	277	509	404	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11MAY - 14MAY	0	160	510	992	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18MAY - 21MAY	0	95	969	951	81	0	0	0	0	0	0	0	0	0	0	0	0	0
25MAY - 28MAY	0	41	533	1533	187	19	0	0	0	0	0	0	0	0	0	0	0	0
01JUN - 04JUN	0	35	430	1384	690	128	24	7	0	0	0	0	0	0	0	0	0	0
08JUN - 11JUN	0	4	110	535	657	468	180	72	40	19	8	0	0	0	0	0	0	0
15JUN - 18JUN	0	1	136	387	820	710	270	104	56	34	39	35	6	2	1	0	0	0
21JUN - 25JUN	0	0	66	271	313	328	162	101	52	47	53	77	45	36	7	1	0	0
29JUN - 02JUL	0	0	4	38	145	149	59	49	62	45	67	45	58	40	22	10	8	0
14JUL - 16JUL	0	0	0	0	0	6	13	21	20	16	10	12	12	13	9	6	7	3
27JUL - 29JUL	0	0	0	0	0	0	0	0	0	1	0	5	7	2	4	3	12	9
10AUG - 12AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
24AUG - 26AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08SEP - 10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
21SEP - 23SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT - 07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	746	3668	6519	2895	1808	708	354	230	162	177	174	128	93	44	20	29	20
DATES	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9+	N	MEAN	MIN	MED	MAX	SD	
16MAR - 18MAR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24MAR - 26MAR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
30MAR - 02APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
05APR - 08APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
13APR - 16APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20APR - 23APR	0	0	0	0	0	0	0	0	0	0	0	3	5.6	5.2	5.7	6.0	0.4	
27APR - 30APR	0	0	0	0	0	0	0	0	0	0	0	555	4.6	2.4	4.6	6.7	0.9	
04MAY - 07MAY	0	0	0	0	0	0	0	0	0	0	0	1190	5.2	2.4	5.5	7.5	1.2	
11MAY - 14MAY	0	0	0	0	0	0	0	0	0	0	0	1664	5.9	2.4	6.2	8.4	1.2	
18MAY - 21MAY	0	0	0	0	0	0	0	0	0	0	0	2096	5.9	2.9	5.9	9.7	1.2	
25MAY - 28MAY	0	0	0	0	0	0	0	0	0	0	0	2313	6.4	2.5	6.4	11.0	1.1	
01JUN - 04JUN	0	0	0	0	0	0	0	0	0	0	0	2698	7.3	2.5	7.2	15.5	1.6	
08JUN - 11JUN	0	0	0	0	0	0	0	0	0	0	0	2093	9.5	3.2	9.2	23.7	2.7	
15JUN - 18JUN	0	0	0	0	0	0	0	0	0	0	0	2601	10.5	3.9	9.8	40.0	3.8	
21JUN - 25JUN	0	0	0	0	0	0	0	0	0	0	0	1559	13.0	4.0	10.5	46.0	7.4	
29JUN - 02JUL	0	0	0	0	0	0	0	0	0	0	0	801	18.0	4.4	14.3	54.0	10.4	
14JUL - 16JUL	2	0	1	0	0	0	0	0	0	0	0	152	26.6	10.0	19.9	70.0	13.9	
27JUL - 29JUL	6	2	2	0	0	0	0	0	0	0	0	53	48.0	18.3	52.0	71.0	13.4	
10AUG - 12AUG	1	1	8	2	1	2	0	0	0	0	0	18	71.3	53.0	71.5	88.0	9.3	
24AUG - 26AUG	0	2	2	1	3	0	2	0	0	0	0	13	71.8	41.0	73.0	92.0	14.9	
08SEP - 10SEP	3	7	5	5	7	1	1	1	1	0	0	36	73.4	55.0	73.0	101.0	11.1	
21SEP - 23SEP	0	1	3	1	5	5	4	1	0	2	0	22	85.7	69.0	86.0	109.0	10.7	
04OCT - 07OCT	2	2	6	3	10	6	7	3	0	1	0	40	82.6	63.0	81.5	107.0	10.2	
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====						
	14	15	27	12	26	14	14	5	1	3	0	17907						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-2 Length Frequency Distribution of Young-of-Year Striped Bass in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9
06JUL-09JUL	53	16	6	2	2	1	2	2	4	1	4	1	0	0	0	0	0
20JUL-23JUL	0	0	5	4	3	4	6	7	10	8	4	3	0	0	0	0	0
03AUG-06AUG	0	0	0	1	4	4	7	9	12	12	13	23	24	10	9	4	2
17AUG-20AUG	0	0	0	0	1	1	1	4	8	10	15	25	23	15	14	15	6
31AUG-03SEP	0	0	0	0	0	0	0	0	2	6	12	12	25	14	27	11	16
13SEP-16SEP	0	0	0	1	0	0	0	1	2	2	9	13	14	14	17	20	17
27SEP-30SEP	0	0	0	0	0	0	0	0	0	2	2	7	6	23	6	24	12
11OCT-14OCT	0	0	0	0	0	0	0	0	0	0	9	15	22	13	14	11	15
25OCT-29OCT	0	0	0	0	0	0	0	0	0	2	0	2	1	2	8	6	7
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	3	4	5	5	6	9
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	53	16	11	8	10	10	16	23	38	43	68	104	119	96	101	101	87
DATES	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9	135.0- 139.9	140.0- 144.9	145.0- 149.9+	N	MEAN	MIN	MED	MAX	SD
06JUL-09JUL	0	0	0	0	0	0	0	0	0	0	0	105	20.4	8.0	14.0	66.0	15.7
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	0	57	46.1	20.0	48.0	67.0	13.3
03AUG-06AUG	0	1	0	0	0	0	0	0	0	0	0	141	63.2	28.0	65.0	102.0	14.4
17AUG-20AUG	4	4	0	0	0	0	0	0	0	0	0	152	71.3	32.0	70.0	102.0	13.5
31AUG-03SEP	3	6	7	1	0	0	0	0	0	0	0	142	79.1	50.0	79.5	110.0	13.4
13SEP-16SEP	11	6	4	6	2	0	0	0	0	0	0	141	82.3	28.0	82.0	116.0	15.4
27SEP-30SEP	14	8	5	2	2	2	1	0	0	0	0	116	87.1	57.0	88.0	126.0	13.7
11OCT-14OCT	11	9	12	9	1	3	1	2	0	2	0	150	87.3	60.0	85.0	142.0	18.2
25OCT-29OCT	9	6	7	2	1	2	1	0	0	0	0	56	93.5	58.0	94.5	128.0	15.0
08NOV-12NOV	4	5	2	7	1	7	3	0	2	2	1	66	99.8	66.0	98.0	147.0	20.7
29NOV-03DEC	4	4	2	3	6	3	5	2	0	1	0	38	109.1	83.0	110.0	140.0	15.6
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	60	49	39	30	13	17	11	4	2	5	1	1164					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-3 Length Frequency Distribution of Young-of-Year Striped Bass in Hudson River Estuary Determined from Beach Seine Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9
15JUN-17JUN	0	2	6	8	9	5	4	0	0	0	0	0	0	0	0	0
28JUN-01JUL	1	5	26	25	31	31	17	12	7	0	0	0	0	0	0	0
13JUL-15JUL	0	1	4	5	11	17	16	23	16	23	21	16	9	0	0	0
27JUL-30JUL	0	0	0	2	6	4	13	19	17	24	18	18	17	10	2	1
10AUG-13AUG	0	0	0	0	0	1	2	3	15	14	24	30	25	17	10	4
24AUG-27AUG	0	0	0	0	0	0	1	4	4	9	21	23	22	18	23	9
07SEP-10SEP	0	0	0	0	0	0	0	0	3	6	14	28	22	17	26	16
21SEP-24SEP	0	0	0	0	0	0	0	0	1	2	2	19	20	16	20	13
04OCT-07OCT	0	0	0	0	0	0	0	0	0	2	6	9	7	24	14	21
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	2	0	7	8	11	9
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	1	8	36	40	57	58	53	61	63	80	108	143	129	110	106	73
DATES	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9+	N	MEAN	MIN	MED	MAX		SD
15JUN-17JUN	0	0	0	0	0	0	0	0	0	34	29.6	15.0	30.0	40.0		6.7
28JUN-01JUL	0	0	0	0	0	0	0	0	0	155	33.0	12.0	32.0	53.0		8.9
13JUL-15JUL	0	0	0	0	0	0	0	0	0	165	50.2	17.0	51.0	73.0		13.0
27JUL-30JUL	0	0	0	0	0	0	0	0	0	158	57.4	26.0	59.0	85.0		12.5
10AUG-13AUG	2	1	0	0	0	0	0	0	0	151	66.6	38.0	67.0	99.0		10.5
24AUG-27AUG	7	4	3	1	0	0	0	0	0	153	72.5	43.0	71.0	105.0		12.4
07SEP-10SEP	13	5	4	3	0	0	0	0	0	159	76.5	52.0	76.0	107.0		11.9
21SEP-24SEP	13	9	6	8	4	1	0	0	0	135	82.4	54.0	81.0	115.0		13.7
04OCT-07OCT	20	12	6	11	4	5	1	2	1	146	87.5	55.0	86.0	130.0		15.4
18OCT-22OCT	6	11	0	4	4	3	0	0	2	67	89.8	63.0	87.0	134.0		15.4
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====						
	61	42	19	27	12	9	1	2	3	1323						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-4 Length Frequency Distribution of Larval and Young-of-Year White Perch in Hudson River Estuary Determined from Long River Survey, 2010

DATES	0.0- 1.9	2.0- 3.9	4.0- 5.9	6.0- 7.9	8.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- 17.9	18.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9
16MAR - 18MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24MAR - 26MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30MAR - 02APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05APR - 08APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13APR - 16APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20APR - 23APR	0	93	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27APR - 30APR	0	629	326	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04MAY - 07MAY	0	566	711	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11MAY - 14MAY	0	682	1101	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18MAY - 21MAY	0	306	1012	231	9	0	0	0	0	0	0	0	0	0	0	0	0	0
25MAY - 28MAY	0	317	857	485	46	1	0	0	0	0	0	0	0	0	0	0	0	0
01JUN - 04JUN	0	192	562	754	321	31	1	1	0	0	0	0	0	0	0	0	0	0
08JUN - 11JUN	0	48	274	661	513	49	5	1	0	0	1	0	0	0	0	0	0	0
15JUN - 18JUN	0	16	158	535	622	135	33	13	6	3	2	4	5	3	0	0	0	0
21JUN - 25JUN	0	3	63	267	406	170	39	11	0	1	2	1	0	0	0	0	0	0
29JUN - 02JUL	0	1	12	35	145	146	69	27	7	4	2	0	0	0	0	0	0	0
14JUL - 16JUL	0	0	0	0	0	0	8	8	17	7	5	1	0	1	1	1	1	0
27JUL - 29JUL	0	0	0	0	0	0	0	0	2	0	6	5	5	0	2	0	1	4
10AUG - 12AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
24AUG - 26AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08SEP - 10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
21SEP - 23SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT - 07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	2853	5087	2994	2062	532	155	61	32	15	18	11	10	4	4	2	3	10
DATES	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9+	N	MEAN	MIN	MED	MAX	SD	
16MAR - 18MAR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24MAR - 26MAR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
30MAR - 02APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
05APR - 08APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
13APR - 16APR	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20APR - 23APR	0	0	0	0	0	0	0	0	0	0	0	106	3.5	2.6	3.4	7.0	0.6	
27APR - 30APR	0	0	0	0	0	0	0	0	0	0	0	956	3.8	2.2	3.8	6.3	0.4	
04MAY - 07MAY	0	0	0	0	0	0	0	0	0	0	0	1291	3.9	2.1	4.0	7.6	0.6	
11MAY - 14MAY	0	0	0	0	0	0	0	0	0	0	0	1792	4.1	2.3	4.1	6.7	0.6	
18MAY - 21MAY	0	0	0	0	0	0	0	0	0	0	0	1558	4.8	2.3	4.5	8.5	1.1	
25MAY - 28MAY	0	0	0	0	0	0	0	0	0	0	0	1706	5.2	2.4	5.2	10.3	1.3	
01JUN - 04JUN	0	0	0	0	0	0	0	0	0	0	0	1862	6.3	2.2	6.4	14.5	1.8	
08JUN - 11JUN	0	0	0	0	0	0	0	0	0	0	0	1552	7.3	2.5	7.3	22.1	1.7	
15JUN - 18JUN	0	0	0	0	0	0	0	0	0	0	0	1535	8.3	3.2	8.1	36.0	2.9	
21JUN - 25JUN	0	0	0	0	0	0	0	0	0	0	0	963	8.8	3.6	8.6	26.0	2.1	
29JUN - 02JUL	0	0	0	0	0	0	0	0	0	0	0	448	10.5	3.9	10.3	24.9	2.6	
14JUL - 16JUL	0	0	0	0	0	0	0	0	0	0	0	50	19.0	12.1	17.0	50.0	8.0	
27JUL - 29JUL	2	0	0	0	0	0	0	0	0	0	0	29	37.1	16.1	32.0	64.0	15.9	
10AUG - 12AUG	2	0	4	1	0	0	0	0	0	0	0	9	65.6	43.0	71.0	76.0	10.5	
24AUG - 26AUG	1	6	4	11	3	1	0	0	0	0	0	29	71.9	48.0	75.0	87.0	9.3	
08SEP - 10SEP	5	1	2	8	7	5	0	0	0	0	0	32	73.9	55.0	77.0	88.0	9.8	
21SEP - 23SEP	0	1	0	1	3	1	1	0	0	0	0	7	81.1	68.0	81.0	92.0	7.8	
04OCT - 07OCT	1	0	0	0	8	7	1	1	0	0	1	19	85.3	64.0	85.0	110.0	8.9	
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	11	8	10	21	21	14	2	1	0	0	1	13944						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-5 Length Frequency Distribution of Young-of-Year White Perch in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9
06JUL -09JUL	0	3	2	0	0	0	0	0	0	0	0	0	0
20JUL -23JUL	0	0	1	2	1	0	1	3	1	0	1	0	0
03AUG -06AUG	0	0	1	3	6	4	7	4	5	7	22	22	7
17AUG -20AUG	0	0	0	0	1	0	1	0	1	3	14	19	39
31AUG -03SEP	0	0	0	0	0	0	0	1	0	6	1	8	14
13SEP -16SEP	0	0	0	0	0	0	0	0	1	0	3	6	12
27SEP -30SEP	0	0	0	0	0	0	0	0	0	1	2	4	1
11OCT -14OCT	0	0	0	0	0	0	0	0	0	0	1	3	4
25OCT -29OCT	0	0	0	0	0	0	0	0	0	0	1	4	6
08NOV -12NOV	0	0	0	0	0	0	0	0	0	0	4	3	14
29NOV -03DEC	0	0	0	0	0	0	0	0	0	1	2	6	12
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	3	4	5	8	4	9	8	8	18	51	75	109

DATES	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9+	N	MEAN	MIN	MED	MAX	SD
06JUL -09JUL	0	0	0	0	0	0	7	14.6	5.0	17.0	21.0	6.8
20JUL -23JUL	0	0	0	0	0	0	10	40.8	24.0	43.5	62.0	12.5
03AUG -06AUG	0	0	0	0	0	0	91	56.1	20.0	62.0	73.0	13.4
17AUG -20AUG	15	3	0	0	0	0	98	69.0	31.0	70.0	83.0	7.7
31AUG -03SEP	25	28	11	1	0	0	95	76.3	47.0	78.0	90.0	8.5
13SEP -16SEP	19	29	16	2	0	0	89	78.2	54.0	80.0	91.0	7.6
27SEP -30SEP	14	19	26	14	1	0	82	82.5	58.0	84.5	95.0	7.5
11OCT -14OCT	15	39	58	24	1	0	145	84.2	64.0	85.0	95.0	5.6
25OCT -29OCT	20	31	47	24	4	0	137	83.9	62.0	85.0	97.0	6.8
08NOV -12NOV	21	35	53	31	7	1	170	83.6	60.0	85.0	100.0	7.9
29NOV -03DEC	24	57	46	33	7	0	188	83.3	56.0	84.0	97.0	7.3
	=====	=====	=====	=====	=====	=====	=====					
	153	241	257	129	20	1	1112					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-6 Length Frequency Distribution of Young-of-Year White Perch in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9
15JUN-17JUN	0	4	8	2	0	1	0	0	0	0	0	0
28JUN-01JUL	0	4	12	17	20	2	1	0	0	0	0	0
13JUL-15JUL	0	0	3	1	8	14	20	15	5	2	0	0
27JUL-30JUL	0	0	0	7	3	10	11	26	29	21	6	2
10AUG-13AUG	0	0	0	0	0	1	0	4	10	17	20	24
24AUG-27AUG	0	0	0	0	0	0	1	5	5	7	18	20
07SEP-10SEP	0	0	0	0	0	0	0	0	2	6	11	12
21SEP-24SEP	0	0	0	0	0	0	0	0	0	2	7	5
04OCT-07OCT	0	0	0	0	0	0	0	0	0	1	4	15
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	1	3
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	8	23	27	31	28	33	50	51	56	67	81
DATES	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	15	22.3	15.0	21.0	36.0	4.9
28JUN-01JUL	0	0	0	0	0	0	56	27.3	15.0	27.0	41.0	5.3
13JUL-15JUL	0	0	0	0	0	0	68	40.6	21.0	41.0	56.0	7.5
27JUL-30JUL	0	0	0	0	0	0	117	48.4	26.0	50.0	66.0	9.2
10AUG-13AUG	7	1	0	0	0	0	88	61.5	39.0	62.0	77.0	7.1
24AUG-27AUG	16	15	6	2	0	0	98	66.7	42.0	67.0	88.0	9.7
07SEP-10SEP	21	25	23	7	0	0	108	73.2	54.0	75.0	89.0	8.6
21SEP-24SEP	25	26	16	13	1	0	95	75.8	55.0	75.0	92.0	7.2
04OCT-07OCT	18	21	16	14	7	0	96	76.9	56.0	77.0	92.0	8.1
18OCT-22OCT	8	10	10	12	6	2	52	81.0	61.0	80.5	95.0	8.2
	=====	=====	=====	=====	=====	=====	=====					
	95	98	71	48	14	2	793					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-7 Length Frequency Distribution of Larval and Young-of-Year Atlantic Tomcod in Hudson River Estuary Determined from Long River Survey, 2010

	0.0- 1.9	2.0- 3.9	4.0- 5.9	6.0- 7.9	8.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- 17.9	18.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9
DATES																		
16MAR-18MAR	0	0	0	201	412	19	0	0	0	0	0	0	0	0	0	0	0	0
24MAR-26MAR	0	0	0	35	172	93	3	0	0	0	0	0	0	0	0	0	0	0
30MAR-02APR	0	0	0	1	32	181	79	5	1	0	0	0	0	0	0	0	0	0
05APR-08APR	0	0	0	0	1	9	56	104	33	7	0	0	0	0	0	0	0	0
13APR-16APR	0	0	0	0	0	0	3	16	97	241	438	6	0	0	0	0	0	0
20APR-23APR	0	0	0	0	0	1	2	8	23	60	402	181	11	0	0	0	0	0
27APR-30APR	0	0	0	0	0	0	0	0	0	1	33	223	440	142	13	0	0	0
04MAY-07MAY	0	0	0	0	0	0	0	0	0	0	4	37	260	295	112	11	1	0
11MAY-14MAY	0	0	0	0	0	0	0	0	0	0	1	2	26	163	279	162	69	14
18MAY-21MAY	0	0	0	0	0	0	0	0	0	0	0	2	5	49	164	205	149	110
25MAY-28MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	5	34	114	216	147
01JUN-04JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	34	81	114
08JUN-11JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	35	95
15JUN-18JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17
21JUN-25JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	46
29JUN-02JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	16
14JUL-16JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
27JUL-29JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10AUG-12AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24AUG-26AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21SEP-23SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	237	617	303	143	133	154	309	878	451	742	654	606	531	562	563
DATES	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9+	N	MEAN	MIN	MED	MAX	SD	
16MAR-18MAR	0	0	0	0	0	0	0	0	0	0	0	632	8.3	6.1	8.2	11.0	0.7	
24MAR-26MAR	0	0	0	0	0	0	0	0	0	0	0	303	9.4	7.0	9.4	13.2	1.1	
30MAR-02APR	0	0	0	0	0	0	0	0	0	0	0	299	11.3	7.6	11.2	16.0	1.2	
05APR-08APR	0	0	0	0	0	0	0	0	0	0	0	210	14.5	9.6	14.4	19.4	1.6	
13APR-16APR	0	0	0	0	0	0	0	0	0	0	0	801	20.1	12.0	20.2	26.2	2.2	
20APR-23APR	0	0	0	0	0	0	0	0	0	0	0	688	23.0	11.0	23.0	32.0	3.0	
27APR-30APR	0	0	0	0	0	0	0	0	0	0	0	852	31.3	18.9	31.0	43.0	3.6	
04MAY-07MAY	0	0	0	0	0	0	0	0	0	0	0	720	35.5	20.4	35.0	52.0	4.2	
11MAY-14MAY	1	1	0	0	0	0	0	0	0	0	0	720	42.9	22.2	42.5	66.0	5.5	
18MAY-21MAY	25	14	0	0	0	0	0	0	0	0	0	737	48.6	26.0	48.0	69.0	7.0	
25MAY-28MAY	78	47	25	11	1	0	0	0	0	0	0	710	55.3	38.0	54.0	80.0	7.5	
01JUN-04JUN	55	66	56	33	10	4	0	0	0	0	0	482	61.3	40.0	60.0	89.0	9.2	
08JUN-11JUN	66	71	54	34	22	7	6	0	0	0	0	416	65.0	45.0	63.0	92.0	9.2	
15JUN-18JUN	42	54	49	45	36	21	12	2	0	1	0	290	72.3	53.0	71.0	106.0	9.6	
21JUN-25JUN	63	84	65	36	24	25	10	9	0	0	0	388	69.6	47.0	68.0	99.0	10.3	
29JUN-02JUL	25	27	17	22	22	9	3	6	3	0	0	159	72.0	43.0	70.0	102.0	11.4	
14JUL-16JUL	7	9	5	2	3	4	0	2	0	0	0	40	70.6	56.0	68.0	96.0	11.1	
27JUL-29JUL	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10AUG-12AUG	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24AUG-26AUG	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
08SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
21SEP-23SEP	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
04OCT-07OCT	0	0	0	0	0	1	0	1	0	0	0	2	92.0	89.0	92.0	95.0	4.2	
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====						
	362	373	271	183	118	71	31	20	3	1	0	8449						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-8 Length Frequency Distribution of Young-of-Year Atlantic Tomcod in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9
06JUL-09JUL	0	0	0	0	0	0	0	0	0	1	9	10	17	18	16	16	14
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	1	2	2	8	4	4	4
03AUG-06AUG	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
17AUG-20AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1
31AUG-03SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	3
13SEP-16SEP	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
27SEP-30SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11OCT-14OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25OCT-29OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	0	0	1	10	13	21	27	23	28	25
DATES	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9	135.0- 139.9	140.0- 144.9	145.0- 149.9+	N	MEAN	MIN	MED	MAX	SD
06JUL-09JUL	4	1	1	0	1	0	0	0	0	0	0	108	79.3	55.0	79.0	117.0	11.1
20JUL-23JUL	2	2	0	0	0	0	0	0	0	0	0	31	80.8	60.0	81.0	102.0	11.1
03AUG-06AUG	0	0	0	0	0	0	0	0	0	0	0	4	82.3	72.0	82.0	93.0	10.8
17AUG-20AUG	0	2	0	0	0	0	0	0	0	0	0	7	90.6	81.0	88.0	103.0	8.9
31AUG-03SEP	4	1	2	0	1	0	0	0	0	0	0	16	94.4	75.0	93.5	117.0	9.9
13SEP-16SEP	4	0	1	1	0	0	1	1	0	0	0	12	99.3	69.0	98.0	131.0	18.3
27SEP-30SEP	0	2	1	2	0	2	0	0	0	1	0	9	111.6	88.0	111.0	142.0	15.7
11OCT-14OCT	0	0	2	0	1	1	0	0	2	0	1	7	123.4	105.0	121.0	145.0	15.8
25OCT-29OCT	0	0	0	1	1	0	1	1	2	1	0	7	128.1	111.0	132.0	140.0	10.7
08NOV-12NOV	0	0	0	0	0	1	0	0	1	1	0	3	133.3	124.0	135.0	141.0	8.6
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	1	1	145.0	145.0	145.0	145.0	.
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	14	8	7	4	4	4	2	2	5	3	2	205					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-9 Length Frequency Distribution of Young-of-Year Atlantic Tomcod in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9
15JUN-17JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28JUN-01JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13JUL-15JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27JUL-30JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10AUG-13AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24AUG-27AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DATES	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
28JUN-01JUL	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
13JUL-15JUL	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27JUL-30JUL	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10AUG-13AUG	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24AUG-27AUG	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	0	0	0	0	0	0	0	0	0	0					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-10 Length Frequency Distribution of Larval and Young-of-Year Bay Anchovy in Hudson River Estuary Determined from Long River Survey, 2010

DATES	0.0- 1.9	2.0- 3.9	4.0- 5.9	6.0- 7.9	8.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- 17.9	18.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9
16MAR-18MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24MAR-26MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30MAR-02APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05APR-08APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13APR-16APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20APR-23APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27APR-30APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04MAY-07MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11MAY-14MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18MAY-21MAY	0	0	1	0	0	0	0	0	0	0	0	0	0	0
25MAY-28MAY	0	2	1	0	0	0	0	0	0	0	0	0	0	0
01JUN-04JUN	1	48	92	5	0	0	0	0	0	0	0	0	0	0
08JUN-11JUN	0	218	864	397	79	25	2	0	0	0	0	0	0	0
15JUN-18JUN	0	5	225	551	433	191	72	19	3	1	0	0	0	0
21JUN-25JUN	0	10	119	275	389	440	258	122	43	20	4	0	0	0
29JUN-02JUL	0	22	104	215	189	191	296	320	335	219	165	12	0	0
14JUL-16JUL	0	11	89	169	194	280	251	239	178	124	307	234	133	40
27JUL-29JUL	0	0	9	61	200	237	202	191	200	199	348	124	106	52
10AUG-12AUG	0	0	6	8	23	31	71	89	122	138	355	237	131	88
24AUG-26AUG	0	0	0	42	140	139	68	66	53	55	297	295	277	144
08SEP-10SEP	0	0	0	1	4	27	71	71	82	86	132	111	419	409
21SEP-23SEP	0	0	0	0	1	1	5	11	17	36	107	38	139	310
04OCT-07OCT	0	0	0	0	1	0	0	0	2	6	30	69	75	156
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	1	316	1510	1724	1653	1562	1296	1128	1035	884	1745	1120	1280	1199
DATES	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9+	N	MEAN	MIN	MED	MAX	SD	
16MAR-18MAR	0	0	0	0	0	0	0	0	.	.	.	.	.
24MAR-26MAR	0	0	0	0	0	0	0	0	.	.	.	.	.
30MAR-02APR	0	0	0	0	0	0	0	0	.	.	.	.	.
05APR-08APR	0	0	0	0	0	0	0	0	.	.	.	.	.
13APR-16APR	0	0	0	0	0	0	0	0	.	.	.	.	.
20APR-23APR	0	0	0	0	0	0	0	0	.	.	.	.	.
27APR-30APR	0	0	0	0	0	0	0	0	.	.	.	.	.
04MAY-07MAY	0	0	0	0	0	0	0	0	.	.	.	.	.
11MAY-14MAY	0	0	0	0	0	0	0	0	.	.	.	.	.
18MAY-21MAY	0	0	0	0	0	0	0	1	4.9	4.9	4.9	4.9	.	
25MAY-28MAY	0	0	0	0	0	0	0	3	3.8	3.0	3.5	5.0	1.0	
01JUN-04JUN	0	0	0	0	0	0	0	146	4.3	1.8	4.3	7.0	0.9	
08JUN-11JUN	0	0	0	0	0	0	0	1585	5.5	2.0	5.2	13.0	1.6	
15JUN-18JUN	0	0	0	0	0	0	0	1500	8.1	3.1	7.8	18.7	2.2	
21JUN-25JUN	0	0	0	0	0	0	0	1680	10.2	2.5	10.1	22.2	3.0	
29JUN-02JUL	0	0	0	0	0	0	0	2068	13.6	2.4	14.1	27.8	4.8	
14JUL-16JUL	3	0	0	0	0	0	0	2252	16.7	2.6	15.1	40.0	7.9	
27JUL-29JUL	41	19	4	0	0	0	0	1993	18.4	4.5	16.8	53.0	8.5	
10AUG-12AUG	79	44	35	3	0	0	0	1460	25.1	4.6	23.2	56.0	9.9	
24AUG-26AUG	63	42	22	9	0	0	0	1712	24.5	6.2	24.9	57.0	10.7	
08SEP-10SEP	212	102	49	23	2	2	0	1805	31.9	7.6	33.0	66.0	10.6	
21SEP-23SEP	221	137	55	41	19	7	0	1154	37.8	9.4	38.0	68.0	10.6	
04OCT-07OCT	388	264	153	79	40	27	0	1302	43.7	9.6	43.0	68.0	9.4	
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	1007	608	318	155	61	36	0	18661						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-11 Length Frequency Distribution of Young-of-Year Bay Anchovy in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9
06JUL - 09JUL	0	25	105	19	2	0	0	0	0	0
20JUL - 23JUL	1	9	28	62	31	13	2	0	0	0
03AUG - 06AUG	0	9	34	38	25	59	21	18	6	0
17AUG - 20AUG	0	1	15	57	59	33	19	5	6	0
31AUG - 03SEP	0	0	11	45	61	32	23	8	6	1
13SEP - 16SEP	0	0	7	6	42	58	40	18	13	5
27SEP - 30SEP	0	0	2	10	14	42	55	32	25	9
11OCT - 14OCT	0	0	2	3	5	15	54	48	40	14
25OCT - 29OCT	0	0	0	0	1	2	10	9	14	12
08NOV - 12NOV	0	0	0	3	8	7	21	10	9	6
29NOV - 03DEC	0	0	0	0	0	0	1	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	1	44	204	243	248	261	246	148	119	47
DATES	60.0- 64.9	65.0- 69.9	70.0- 74.9+	N	MEAN	MIN	MED	MAX	SD	
06JUL - 09JUL	0	0	0	151	21.8	15.0	21.0	30.0	2.8	
20JUL - 23JUL	0	0	0	146	27.4	14.0	27.0	44.0	5.3	
03AUG - 06AUG	0	0	0	210	32.9	17.0	34.0	53.0	8.8	
17AUG - 20AUG	0	0	0	195	32.4	17.0	31.0	54.0	6.8	
31AUG - 03SEP	0	0	0	187	33.2	20.0	31.0	56.0	7.1	
13SEP - 16SEP	0	2	0	192	38.7	20.0	37.0	69.0	8.0	
27SEP - 30SEP	4	4	0	197	43.0	23.0	42.0	67.0	8.5	
11OCT - 14OCT	3	1	0	187	45.7	22.0	45.0	66.0	7.2	
25OCT - 29OCT	10	7	0	68	53.0	34.0	54.0	67.0	8.7	
08NOV - 12NOV	6	2	0	72	45.0	25.0	43.0	67.0	9.9	
29NOV - 03DEC	0	0	0	1	42.0	42.0	42.0	42.0	.	
	=====	=====	=====	=====						
	23	16	0	1606						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-12 Length Frequency Distribution of Young-of-Year Bay Anchovy in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
28JUN-01JUL	0	5	18	1	0	0	0	0	0	0	0	24	21.1	16.0	21.0	25.0	2.2
13JUL-15JUL	0	1	20	34	3	1	0	0	0	0	0	59	25.2	16.0	25.0	39.0	3.3
27JUL-30JUL	0	4	23	9	13	22	7	0	0	0	0	78	29.6	17.0	30.5	43.0	7.6
10AUG-13AUG	0	2	38	20	1	1	0	0	1	0	0	63	23.9	19.0	23.0	51.0	4.7
24AUG-27AUG	0	10	43	21	10	5	5	0	0	0	0	94	25.2	16.0	24.0	42.0	6.1
07SEP-10SEP	0	3	36	23	25	13	10	7	0	0	0	117	29.7	19.0	28.0	49.0	7.9
21SEP-24SEP	0	0	46	26	13	1	6	4	0	1	0	97	27.2	20.0	25.0	56.0	7.3
04OCT-07OCT	0	0	11	23	11	19	18	18	10	5	0	115	37.5	21.0	37.0	59.0	10.1
18OCT-22OCT	0	0	0	2	2	0	6	8	9	6	7	43	50.5	25.0	51.0	64.0	9.7
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	0	25	235	159	78	62	52	37	20	12	7	690					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-13 Length Frequency Distribution of Larval and Young-of-Year American Shad in Hudson River Estuary Determined from Long River Survey, 2010

DATES	0.0- 1.9	2.0- 3.9	4.0- 5.9	6.0- 7.9	8.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- 17.9	18.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9
16MAR-18MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24MAR-26MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30MAR-02APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05APR-08APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13APR-16APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20APR-23APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27APR-30APR	0	0	0	0	4	8	0	0	0	0	0	0	0	0	0	0	0	0	0
04MAY-07MAY	0	0	0	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0
11MAY-14MAY	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0
18MAY-21MAY	0	0	0	0	3	3	3	0	2	0	0	0	0	0	0	0	0	0	0
25MAY-28MAY	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0
01JUN-04JUN	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
08JUN-11JUN	0	0	0	0	0	0	0	0	0	2	2	0	1	2	0	0	0	0	0
15JUN-18JUN	0	0	0	0	0	0	0	0	0	0	2	3	3	1	0	0	0	0	0
21JUN-25JUN	0	0	0	0	0	0	0	3	0	2	2	4	7	5	5	3	3	1	0
29JUN-02JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	3
14JUL-16JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27JUL-29JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10AUG-12AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24AUG-26AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21SEP-23SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	9	23	11	4	4	5	6	7	11	9	6	4	4	3	3
DATES	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9+	N	MEAN	MIN	MED	MAX	SD
16MAR-18MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24MAR-26MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
30MAR-02APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
05APR-08APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
13APR-16APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20APR-23APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27APR-30APR	0	0	0	0	0	0	0	0	0	0	0	0	0	12	10.1	8.3	10.4	11.2	1.0
04MAY-07MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	7	10.7	9.3	10.4	12.5	1.0
11MAY-14MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	14	12.1	10.5	11.9	13.9	1.2
18MAY-21MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	11	12.0	9.0	11.2	17.0	2.8
25MAY-28MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	3	13.8	9.8	14.7	16.8	3.6
01JUN-04JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	2	18.0	17.9	18.0	18.1	0.1
08JUN-11JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	7	27.0	18.4	23.9	37.0	8.0
15JUN-18JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	9	28.9	22.8	29.0	35.0	3.9
21JUN-25JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	35	34.7	14.8	34.0	56.0	11.2
29JUN-02JUL	2	1	0	0	0	0	0	0	0	0	0	0	0	13	56.8	35.0	60.0	71.0	10.6
14JUL-16JUL	2	0	0	0	0	0	0	0	0	0	0	0	0	2	66.5	65.0	66.5	68.0	2.1
27JUL-29JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10AUG-12AUG	0	0	0	0	1	0	0	0	0	0	0	0	0	1	85.0	85.0	85.0	85.0	.
24AUG-26AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
08SEP-10SEP	0	0	0	0	2	0	0	0	0	0	0	0	0	2	86.0	85.0	86.0	87.0	1.4
21SEP-23SEP	0	0	0	0	0	0	0	0	0	0	0	0	1	1	125.0	125.0	125.0	125.0	.
04OCT-07OCT	0	0	0	0	0	1	1	0	1	0	0	0	0	3	99.0	94.0	98.0	105.0	5.6
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	4	1	0	0	3	1	1	0	1	0	0	0	1	122					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-14 Length Frequency Distribution of Young-of-Year American Shad in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9
06JUL-09JUL	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
03AUG-06AUG	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	1	0
17AUG-20AUG	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	3	0
31AUG-03SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0
13SEP-16SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
27SEP-30SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1
11OCT-14OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
25OCT-29OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	1	1	1	1	2	5	8	6	9	10
DATES	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9	135.0- 139.9	140.0- 144.9+	N	MEAN	MIN	MED	MAX	SD	
06JUL-09JUL	0	0	0	0	0	0	0	0	0	0	5	57.6	45.0	55.0	75.0	11.3	
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	1	65.0	65.0	65.0	65.0	.	
03AUG-06AUG	0	0	0	0	0	0	0	0	0	0	7	75.6	66.0	72.0	85.0	7.2	
17AUG-20AUG	0	0	0	0	0	0	0	0	0	0	10	78.9	70.0	78.0	89.0	6.4	
31AUG-03SEP	1	0	1	0	0	0	0	0	0	0	8	85.9	78.0	81.5	105.0	9.9	
13SEP-16SEP	0	1	2	0	0	0	0	0	0	0	7	95.3	81.0	91.0	108.0	10.4	
27SEP-30SEP	0	0	2	0	0	2	0	0	0	0	8	101.3	86.0	99.0	124.0	15.5	
11OCT-14OCT	7	4	7	2	1	0	0	0	1	1	30	103.1	90.0	100.5	143.0	12.5	
25OCT-29OCT	0	0	0	1	0	0	0	0	0	0	1	114.0	114.0	114.0	114.0	.	
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	
	8	5	12	3	1	2	0	0	1	1	77						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-15 Length Frequency Distribution of Young-of-Year American Shad in Hudson River Estuary Determined from Beach Seine Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9
15JUN-17JUN	0	0	0	6	10	6	2	1	0	0	0	0	0	0
28JUN-01JUL	0	0	0	1	2	15	6	3	6	11	7	5	0	0
13JUL-15JUL	0	0	1	0	0	1	0	2	13	4	16	18	13	5
27JUL-30JUL	0	0	0	0	0	0	0	0	1	1	9	22	11	10
10AUG-13AUG	0	0	0	0	0	0	0	0	0	0	2	18	27	21
24AUG-27AUG	0	0	0	0	0	0	0	0	0	0	0	1	11	17
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	2	10
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	3
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	1	7	12	22	8	6	20	16	34	64	64	73
DATES	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9+	N	MEAN	MIN	MED	MAX	SD	
15JUN-17JUN	0	0	0	0	0	0	0	25	33.0	26.0	32.0	45.0	5.1	
28JUN-01JUL	0	0	0	0	0	0	0	59	49.7	29.0	53.0	68.0	11.3	
13JUL-15JUL	3	0	0	0	0	0	0	79	63.4	23.0	64.0	83.0	9.9	
27JUL-30JUL	2	7	1	1	0	0	0	66	71.4	54.0	69.0	97.0	8.8	
10AUG-13AUG	7	1	0	0	0	0	0	76	73.0	63.0	73.0	85.0	4.9	
24AUG-27AUG	17	2	0	0	0	0	0	48	77.5	65.0	77.0	89.0	4.9	
07SEP-10SEP	24	26	5	2	1	0	0	70	84.4	73.0	84.0	100.0	5.4	
21SEP-24SEP	11	15	10	2	0	1	0	44	86.6	76.0	87.0	106.0	6.0	
04OCT-07OCT	3	12	20	15	1	3	1	58	92.1	75.0	92.0	110.0	6.9	
18OCT-22OCT	3	6	11	8	2	0	0	32	91.0	78.0	90.5	102.0	6.3	
	=====	=====	=====	=====	=====	=====	=====	=====						
	70	69	47	28	4	4	1	557						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-16 Length Frequency Distribution of Young-of-Year Alewife in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9
06JUL -09JUL	0	0	0	0	0	0	11	12	10	3	4	1	0	0	0	0
20JUL -23JUL	0	0	0	0	0	0	5	3	9	7	5	5	1	0	0	0
03AUG -06AUG	0	0	0	0	0	0	2	0	4	7	15	21	15	5	3	0
17AUG -20AUG	0	0	0	0	0	0	0	0	1	3	4	13	9	13	2	1
31AUG -03SEP	0	0	0	0	0	0	0	0	0	1	4	10	14	19	14	6
13SEP -16SEP	0	0	0	0	0	0	0	0	0	0	0	8	14	16	12	7
27SEP -30SEP	0	0	0	0	0	0	0	0	0	0	0	2	22	20	14	7
11OCT -14OCT	0	0	0	0	0	0	0	0	0	0	2	8	24	46	48	29
25OCT -29OCT	0	0	0	0	0	0	0	0	0	1	0	4	7	15	5	6
08NOV -12NOV	0	0	0	0	0	0	0	0	0	0	0	2	11	10	14	3
29NOV -03DEC	0	0	0	0	0	0	0	0	0	0	0	0	1	5	4	2
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	18	15	24	22	34	74	118	149	116	61
DATES	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9	135.0- 139.9+	N	MEAN	MIN	MED	MAX	SD
06JUL -09JUL	0	0	0	0	0	0	0	0	0	0	42	50.0	41.0	48.0	66.0	6.9
20JUL -23JUL	0	0	0	0	0	0	0	0	0	0	37	55.4	42.0	55.0	70.0	7.9
03AUG -06AUG	0	0	0	0	0	0	0	0	0	0	72	65.6	43.0	65.5	84.0	8.0
17AUG -20AUG	0	0	0	0	0	0	0	0	0	0	47	70.3	52.0	71.0	85.0	7.2
31AUG -03SEP	0	1	0	0	0	0	0	0	0	0	69	75.2	58.0	76.0	95.0	7.2
13SEP -16SEP	0	1	2	0	0	0	0	0	0	0	61	77.5	60.0	76.0	104.0	8.4
27SEP -30SEP	5	3	3	0	0	0	0	0	0	0	76	79.4	66.0	78.0	103.0	8.3
11OCT -14OCT	15	5	5	1	0	0	0	0	0	0	183	80.9	62.0	81.0	106.0	8.1
25OCT -29OCT	5	5	3	2	1	0	0	0	0	1	55	84.4	55.0	82.0	135.0	13.4
08NOV -12NOV	1	2	1	0	0	0	0	0	0	0	44	78.9	65.0	77.5	103.0	7.8
29NOV -03DEC	4	0	0	1	0	0	1	0	0	0	18	86.2	70.0	83.0	121.0	12.2
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	30	17	14	4	1	0	1	0	0	1	704					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-17 Length Frequency Distribution of Young-of-Year Alewife in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9
15JUN-17JUN	0	0	0	0	0	0	19	3	2	0	2	3	0	0	0
28JUN-01JUL	0	0	0	0	0	0	11	12	19	26	3	3	1	0	0
13JUL-15JUL	0	0	0	0	0	0	1	6	17	18	30	24	8	0	0
27JUL-30JUL	0	0	0	0	0	0	2	3	9	22	38	24	5	0	0
10AUG-13AUG	0	0	0	0	0	0	0	0	0	9	26	38	11	2	1
24AUG-27AUG	0	0	0	0	0	0	0	0	0	3	13	33	25	12	1
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	2	19	35	17	10
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	3	9	25	16	9
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	10	12	10	11
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	2	2	3	2	1
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	33	24	47	78	119	165	125	59	33
DATES	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9+	N	MEAN	MIN	MED	MAX	SD	
15JUN-17JUN	0	0	0	0	0	0	0	0	29	46.9	41.0	42.0	68.0	9.1	
28JUN-01JUL	0	0	0	0	0	0	0	0	78	53.1	41.0	53.5	70.0	6.5	
13JUL-15JUL	0	0	0	0	0	0	0	0	111	60.2	43.0	61.0	73.0	6.6	
27JUL-30JUL	0	0	0	0	0	0	0	0	109	60.9	43.0	62.0	74.0	5.9	
10AUG-13AUG	0	0	0	1	0	2	1	0	104	66.3	55.0	65.0	117.0	10.0	
24AUG-27AUG	7	0	0	0	0	0	1	0	96	70.3	56.0	69.0	117.0	8.4	
07SEP-10SEP	3	1	0	0	0	1	0	1	89	74.2	64.0	72.0	123.0	8.8	
21SEP-24SEP	2	0	0	1	1	0	0	0	66	74.7	61.0	74.0	105.0	7.5	
04OCT-07OCT	6	0	0	1	0	0	0	0	50	76.2	65.0	76.0	100.0	7.5	
18OCT-22OCT	0	1	0	0	0	0	0	0	11	73.3	63.0	71.0	93.0	8.6	
	=====	=====	=====	=====	=====	=====	=====	=====	=====						
	18	2	0	3	1	3	2	1	743						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-18 Length Frequency Distribution of Young-of-Year Blueback Herring in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9
06JUL-09JUL	0	0	0	0	0	0	14	18	8	0	1	0
20JUL-23JUL	0	0	0	0	0	0	6	10	12	10	3	0
03AUG-06AUG	0	0	0	0	0	0	3	6	19	32	10	0
17AUG-20AUG	0	0	0	0	0	0	0	0	19	26	8	1
31AUG-03SEP	0	0	0	0	0	0	0	1	0	11	44	17
13SEP-16SEP	0	0	0	0	0	0	1	0	0	10	19	27
27SEP-30SEP	0	0	0	0	0	0	0	0	0	0	8	22
11OCT-14OCT	0	0	0	0	0	0	0	0	0	2	16	72
25OCT-29OCT	0	0	0	0	0	0	0	0	0	0	0	2
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	0
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	24	35	58	91	109	141
DATES	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9+	N	MEAN	MIN	MED	MAX	SD	
06JUL-09JUL	0	0	0	0	0	41	46.4	41.0	46.0	62.0	4.1	
20JUL-23JUL	0	0	0	0	0	42	51.6	42.0	52.0	62.0	5.6	
03AUG-06AUG	0	0	0	0	0	76	55.3	41.0	56.0	64.0	5.1	
17AUG-20AUG	0	0	0	0	0	59	56.6	50.0	57.0	65.0	3.8	
31AUG-03SEP	1	0	0	0	0	83	62.3	49.0	62.0	70.0	3.2	
13SEP-16SEP	1	1	0	0	0	63	63.1	41.0	64.0	77.0	4.9	
27SEP-30SEP	14	1	0	0	0	46	67.6	60.0	67.0	76.0	3.6	
11OCT-14OCT	74	28	9	1	0	203	70.1	57.0	70.0	88.0	4.9	
25OCT-29OCT	1	1	0	0	0	4	70.3	65.0	69.5	77.0	5.4	
08NOV-12NOV	1	0	0	0	0	1	72.0	72.0	72.0	72.0	.	
29NOV-03DEC	0	0	0	0	0	0	.	.	.	.	.
	=====	=====	=====	=====	=====	=====						
	92	31	9	1	0	618						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-19 Length Frequency Distribution of Young-of-Year Blueback Herring in Hudson River Estuary Determined from Beach Seine Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9
15JUN-17JUN	0	0	0	0	0	0	1	0	0	0	0	0	0
28JUN-01JUL	0	0	0	0	0	0	9	5	1	2	1	0	0
13JUL-15JUL	0	0	0	0	0	0	22	9	18	8	2	0	0
27JUL-30JUL	0	0	0	0	0	0	5	10	10	40	6	1	0
10AUG-13AUG	0	0	0	0	0	0	1	6	20	29	5	1	0
24AUG-27AUG	0	0	0	0	0	0	0	1	10	21	11	3	0
07SEP-10SEP	0	0	0	0	0	0	0	0	9	12	10	26	2
21SEP-24SEP	0	0	0	0	0	0	0	0	2	12	20	21	3
04OCT-07OCT	0	0	0	0	0	0	0	0	2	9	13	51	18
18OCT-22OCT	0	0	0	0	0	0	0	0	3	5	26	57	38
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	38	31	75	138	94	160	61

DATES	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	1	41.0	41.0	41.0	41.0	.
28JUN-01JUL	0	0	0	0	0	0	19	47.1	41.0	45.0	63.0	7.2
13JUL-15JUL	0	0	0	0	0	0	61	48.8	41.0	47.0	62.0	6.1
27JUL-30JUL	0	0	0	0	0	0	79	55.0	40.0	57.0	67.0	5.7
10AUG-13AUG	0	0	0	0	0	0	65	55.0	41.0	55.0	67.0	4.6
24AUG-27AUG	0	0	0	0	0	0	48	57.5	48.0	57.0	66.0	4.2
07SEP-10SEP	0	0	0	0	0	0	69	61.4	50.0	61.0	72.0	5.2
21SEP-24SEP	0	0	0	0	0	0	61	62.8	50.0	64.0	72.0	4.5
04OCT-07OCT	6	2	1	0	1	0	105	67.0	50.0	67.0	96.0	6.6
18OCT-22OCT	6	0	0	0	0	0	138	67.0	53.0	67.0	78.0	4.7
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	12	2	1	0	1	0	646					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-20 Length Frequency Distribution of Young-of-Year Spottail Shiner in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9
06JUL-09JUL	0	0	0	0	0	0	0	0	0	0	0
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	0
03AUG-06AUG	0	0	0	0	0	0	0	0	0	0	0
17AUG-20AUG	0	0	0	0	0	0	0	0	0	0	0
31AUG-03SEP	0	0	0	0	0	0	0	0	0	0	0
13SEP-16SEP	0	0	0	0	0	0	0	0	0	0	1
27SEP-30SEP	0	0	0	0	0	0	0	0	0	0	0
11OCT-14OCT	0	0	0	0	0	0	0	1	0	0	0
25OCT-29OCT	0	0	0	0	0	0	0	0	0	1	0
08NOV-12NOV	0	0	0	0	0	0	0	0	0	1	5
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	1	0	2	6
DATES	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9+	N	MEAN	MIN	MED	MAX	SD	
06JUL-09JUL	0	0	0	0	0	.	.	.	.	.
20JUL-23JUL	0	0	0	0	0	.	.	.	.	.
03AUG-06AUG	0	0	0	0	2	60.0	60.0	60.0	60.0	0.0	
17AUG-20AUG	0	0	0	0	0	.	.	.	.	.
31AUG-03SEP	0	0	0	0	0	.	.	.	.	.
13SEP-16SEP	0	0	0	0	1	61.0	61.0	61.0	61.0	.	
27SEP-30SEP	0	1	0	0	1	72.0	72.0	72.0	72.0	.	
11OCT-14OCT	3	4	1	3	13	70.8	48.0	71.0	83.0	9.5	
25OCT-29OCT	0	1	0	1	3	69.7	57.0	71.0	81.0	12.1	
08NOV-12NOV	4	6	9	9	35	73.5	59.0	75.0	85.0	8.1	
29NOV-03DEC	0	0	1	1	2	78.0	75.0	78.0	81.0	4.2	
	=====	=====	=====	=====	=====						
	7	12	11	14	57						

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-21 Length Frequency Distribution of Young-of-Year Spottail Shiner in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9
15JUN-17JUN	0	3	8	12	1	0	0	0	0	0	0
28JUN-01JUL	0	2	14	12	34	10	0	0	0	0	0
13JUL-15JUL	0	0	1	4	12	16	12	7	4	0	0
27JUL-30JUL	0	0	0	0	1	3	13	14	14	17	3
10AUG-13AUG	0	0	0	0	0	0	0	5	14	14	8
24AUG-27AUG	0	0	0	0	0	0	0	5	10	23	9
07SEP-10SEP	0	0	0	0	0	0	1	1	5	16	9
21SEP-24SEP	0	0	0	0	0	0	0	1	7	5	8
04OCT-07OCT	0	0	0	0	0	0	0	0	1	4	8
18OCT-22OCT	0	0	0	0	0	0	0	0	1	1	5
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	5	23	28	48	29	26	33	56	80	50
DATES	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	24	23.9	17.0	25.0	30.0	3.1
28JUN-01JUL	0	0	0	0	0	72	29.2	18.0	30.0	38.0	4.9
13JUL-15JUL	0	0	0	0	0	56	38.2	22.0	38.0	52.0	6.6
27JUL-30JUL	0	0	0	0	0	68	49.9	31.0	50.5	63.0	7.3
10AUG-13AUG	2	0	0	0	0	48	55.9	45.0	56.0	65.0	5.4
24AUG-27AUG	9	1	0	0	0	59	57.8	45.0	57.0	70.0	6.0
07SEP-10SEP	16	9	3	0	0	61	62.6	43.0	63.0	75.0	7.0
21SEP-24SEP	15	6	1	0	0	44	63.0	49.0	64.5	79.0	7.1
04OCT-07OCT	20	10	12	14	0	70	70.8	52.0	70.0	84.0	8.1
18OCT-22OCT	12	11	12	3	0	45	70.6	52.0	70.0	81.0	6.5
	=====	=====	=====	=====	=====	=====					
	74	37	28	17	0	547					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-22 Length Frequency Distribution of Young-of-Year White Catfish in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9
06JUL -09JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20JUL -23JUL	0	1	0	0	0	0	0	0	0	0	0	0	0	0
03AUG -06AUG	0	0	0	0	0	1	1	0	0	0	0	0	0	0
17AUG -20AUG	0	0	0	0	0	0	0	0	1	0	0	0	0	0
31AUG -03SEP	0	0	0	0	0	0	0	0	0	0	0	0	1	2
13SEP -16SEP	0	0	0	0	0	0	0	0	0	0	1	0	0	0
27SEP -30SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11OCT -14OCT	0	0	0	0	0	0	0	0	0	1	0	0	0	0
25OCT -29OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08NOV -12NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29NOV -03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	1	0	0	0	1	1	0	1	1	1	0	1	3
DATES	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9+	N	MEAN	MIN	MED	MAX	SD
06JUL -09JUL	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20JUL -23JUL	0	0	0	0	0	0	0	0	1	17.0	17.0	17.0	17.0	.
03AUG -06AUG	0	0	0	0	0	0	0	0	2	39.0	37.0	39.0	41.0	2.8
17AUG -20AUG	0	0	0	0	0	0	0	0	1	54.0	54.0	54.0	54.0	.
31AUG -03SEP	0	1	1	0	0	0	0	0	5	81.8	72.0	79.0	93.0	8.9
13SEP -16SEP	0	0	0	0	0	0	0	0	1	61.0	61.0	61.0	61.0	.
27SEP -30SEP	0	0	0	0	0	0	0	0	1	76.0	76.0	76.0	76.0	.
11OCT -14OCT	1	0	0	0	1	0	0	0	3	81.7	59.0	83.0	103.0	22.0
25OCT -29OCT	0	1	1	2	1	0	0	0	5	95.0	89.0	96.0	103.0	5.7
08NOV -12NOV	0	0	0	0	0	0	0	0	0	.	.	.	.	.
29NOV -03DEC	0	0	1	0	1	0	0	1	3	103.7	93.0	101.0	117.0	12.2
	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	1	2	3	2	3	0	0	1	22					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-23 Length Frequency Distribution of Young-of-Year White Catfish in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9
15JUN-17JUN	0	0	0	0	0	0	0	0	0	0	0	0
28JUN-01JUL	0	0	0	0	0	0	0	0	0	0	0	0
13JUL-15JUL	0	0	0	0	0	0	0	0	0	0	0	0
27JUL-30JUL	0	0	0	0	0	0	0	0	0	0	0	0
10AUG-13AUG	0	0	0	0	0	0	0	0	0	0	0	0
24AUG-27AUG	0	0	0	0	0	0	0	0	0	0	0	0
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	0	0
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	0	0	0	0	0
DATES	70.0- 74.9	75.0- 79.9	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	0	.	.	.	.	.
28JUN-01JUL	0	0	0	0	0	0	0	.	.	.	.	.
13JUL-15JUL	0	0	0	0	0	0	0	.	.	.	.	.
27JUL-30JUL	0	0	0	0	0	0	0	.	.	.	.	.
10AUG-13AUG	0	0	0	0	0	0	0	.	.	.	.	.
24AUG-27AUG	0	0	0	0	0	0	0	.	.	.	.	.
07SEP-10SEP	0	0	0	0	0	0	0	.	.	.	.	.
21SEP-24SEP	0	0	0	0	0	0	0	.	.	.	.	.
04OCT-07OCT	0	0	0	0	0	0	0	.	.	.	.	.
18OCT-22OCT	0	0	0	0	0	0	0	.	.	.	.	.
	=====	=====	=====	=====	=====	=====	=====					
	0	0	0	0	0	0	0					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-24 Length Frequency Distribution of Young-of-Year Weakfish in Hudson River Estuary Determined from Fall Juvenile Survey, 2010

	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9
DATES														
06JUL-09JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20JUL-23JUL	0	0	0	0	1	0	0	1	0	0	0	0	0	0
03AUG-06AUG	0	0	1	0	1	0	1	1	0	3	1	0	0	0
17AUG-20AUG	0	0	0	0	0	0	0	0	1	2	1	1	2	2
31AUG-03SEP	0	0	0	0	0	0	0	1	0	0	0	1	0	2
13SEP-16SEP	0	0	0	0	0	0	0	0	0	2	1	0	0	1
27SEP-30SEP	0	0	0	0	0	0	0	0	0	1	0	0	0	1
11OCT-14OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25OCT-29OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08NOV-12NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	1	0	2	0	1	3	1	8	3	2	2	6

	80.0- 84.9	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9	125.0- 129.9	130.0- 134.9	135.0- 139.9	140.0- 144.9	145.0- 149.9
DATES														
06JUL-09JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20JUL-23JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03AUG-06AUG	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17AUG-20AUG	0	0	0	1	1	1	0	0	0	0	0	0	0	0
31AUG-03SEP	3	5	2	4	1	1	1	0	1	0	0	1	0	0
13SEP-16SEP	0	0	0	0	1	1	0	0	1	2	1	2	0	0
27SEP-30SEP	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11OCT-14OCT	0	0	0	0	0	0	1	0	0	0	0	0	1	0
25OCT-29OCT	0	0	0	0	0	1	0	0	2	1	1	0	0	3
08NOV-12NOV	0	0	0	0	0	0	0	1	0	1	0	0	0	0
29NOV-03DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	4	6	2	5	3	4	2	1	4	4	2	3	1	3

	150.0- 154.9	155.0- 159.9	160.0- 164.9	165.0- 169.9	170.0- 174.9	175.0- 179.9	180.0- 184.9+	N	MEAN	MIN	MED	MAX	SD
DATES													
06JUL-09JUL	0	0	0	0	0	0	0	0	.	.	.	.	.
20JUL-23JUL	0	0	0	0	0	0	0	3	45.3	30.0	46.0	60.0	15.0
03AUG-06AUG	0	0	0	0	0	0	0	10	52.0	24.0	57.0	80.0	16.1
17AUG-20AUG	0	0	0	0	0	0	0	12	75.2	53.0	71.5	109.0	18.7
31AUG-03SEP	0	0	0	0	0	0	0	23	91.3	47.0	89.0	136.0	17.9
13SEP-16SEP	0	0	0	0	0	0	0	12	103.4	58.0	113.5	139.0	31.6
27SEP-30SEP	0	0	0	0	0	0	0	3	73.3	58.0	77.0	85.0	13.9
11OCT-14OCT	0	0	1	0	0	0	0	3	139.3	113.0	144.0	161.0	24.3
25OCT-29OCT	1	1	1	0	0	0	1	12	141.5	105.0	146.0	181.0	21.2
08NOV-12NOV	0	0	0	0	1	0	0	3	139.7	118.0	127.0	174.0	30.1
29NOV-03DEC	0	0	0	0	0	0	0	0	.	.	.	.	.
	=====	=====	=====	=====	=====	=====	=====	=====					
	1	1	2	0	1	0	1	81					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

Table F-25 Length Frequency Distribution of Young-of-Year Weakfish in Hudson River Estuary Determined from Beach Seine Survey, 2010

DATES	10.0- 14.9	15.0- 19.9	20.0- 24.9	25.0- 29.9	30.0- 34.9	35.0- 39.9	40.0- 44.9	45.0- 49.9	50.0- 54.9	55.0- 59.9	60.0- 64.9	65.0- 69.9	70.0- 74.9	75.0- 79.9	80.0- 84.9
15JUN-17JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28JUN-01JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13JUL-15JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27JUL-30JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10AUG-13AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24AUG-27AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07SEP-10SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21SEP-24SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04OCT-07OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18OCT-22OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DATES	85.0- 89.9	90.0- 94.9	95.0- 99.9	100.0- 104.9	105.0- 109.9	110.0- 114.9	115.0- 119.9	120.0- 124.9+	N	MEAN	MIN	MED	MAX	SD
15JUN-17JUN	0	0	0	0	0	0	0	0	0	.	.	.	.	.
28JUN-01JUL	0	0	0	0	0	0	0	0	0	.	.	.	.	.
13JUL-15JUL	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27JUL-30JUL	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10AUG-13AUG	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24AUG-27AUG	0	0	0	0	0	0	0	0	0	.	.	.	.	.
07SEP-10SEP	0	0	0	0	0	0	0	0	0	.	.	.	.	.
21SEP-24SEP	0	0	0	0	0	0	0	0	0	.	.	.	.	.
04OCT-07OCT	0	0	0	0	0	0	0	0	0	.	.	.	.	.
18OCT-22OCT	0	0	0	0	0	0	0	1	1	120.0	120.0	120.0	120.0	.
	=====	=====	=====	=====	=====	=====	=====	=====	=====					
	0	0	0	0	0	0	0	1	1					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation