

**From:** Cary, Richard H. <Richard.Cary@pseg.com>  
**Sent:** Wednesday, April 7, 2021 9:26 AM  
**To:** incidental.take@noaa.gov; EndangeredSpecies Resource  
**Cc:** Neilan, Brian  
**Subject:** [External\_Sender] Salem Generating Station - Incidental Take Reports: Atlantic Sturgeon 04/06/2021  
**Attachments:** Sturgeon Incidental Take Report for 04062021 #1.pdf; Sturgeon Incidental Take Report for 04062021 #2.pdf; Sturgeon Incidental Take Report for 04062021 #3.pdf; Sturgeon Incidental Take Report for 04062021 #4.pdf; Sturgeon Incidental Take Report for 04062021 #5.pdf; Sturgeon Incidental Take Report for 04062021 #6.pdf

Attached are the Incidental Take Reports and Data Collection Forms for three live and three deceased Atlantic sturgeon collected on 04/06/2021 from the Salem Generating Station during routine raking of the cooling water intake trash bars. The three live sturgeon were returned to the Delaware River following examination, and the three deceased specimens are being held for study pending direction from NOAA/NMFS. This incidental take is authorized under Biological Opinion NER-2010-6581.

Thanks, and please let me know if you have any questions or need additional information.

Richard Cary  
Environmental Compliance & Program Manager  
PSEG Nuclear Environmental Affairs  
O: 856-339-1487  
C: 706-254-2584

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**Hearing Identifier:** NRR\_DRMA  
**Email Number:** 1107

**Mail Envelope Properties** (49fa9dd8ec6b464fae57b9e49179c227)

**Subject:** [External\_Sender] Salem Generating Station - Incidental Take Reports: Atlantic  
Sturgeon 04/06/2021  
**Sent Date:** 4/7/2021 9:25:54 AM  
**Received Date:** 4/7/2021 9:26:39 AM  
**From:** Cary, Richard H.

**Created By:** Richard.Cary@pseg.com

**Recipients:**

"Neilan, Brian" <Brian.Neilan@dep.nj.gov>  
Tracking Status: None  
"incidental.take@noaa.gov" <incidental.take@noaa.gov>  
Tracking Status: None  
"EndangeredSpecies Resource" <EndangeredSpecies.Resource@nrc.gov>  
Tracking Status: None

**Post Office:** pseg.com

Files	Size	Date & Time
MESSAGE	1372	4/7/2021 9:26:39 AM
Sturgeon Incidental Take Report for 04062021 #1.pdf	468421	
Sturgeon Incidental Take Report for 04062021 #2.pdf	429916	
Sturgeon Incidental Take Report for 04062021 #3.pdf	433949	
Sturgeon Incidental Take Report for 04062021 #4.pdf	319001	
Sturgeon Incidental Take Report for 04062021 #5.pdf	529446	
Sturgeon Incidental Take Report for 04062021 #6.pdf	386022	

**Options**

**Priority:** Normal  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**

### Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 1, intake 12B

Date animal observed: 04/06/2021 Time animal observed: 0900

Date animal collected: 04/06/2021 Time animal collected: 0840

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. – 13.9 °C; Sal. – 5.0 ppt; Wind –N; sky – partly cloudy; Wave – slight; tide- E1 (93.5ft.)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.0 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%

# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See  
reverse side of this form for aid in  
identification.

LOCATION FOUND: ☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS)  
trash racks, intake bay 12B, during routine trash rack cleaning at the Salem Generating  
Station, PSEG Nuclear LLC.

Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☒ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

	Circle unit
Fork length	<u>76.2 cm</u>
Total length	<u>86.3 cm</u>
Length <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	
Mouth width (inside lips, see reverse side)	<u>4.4 cm</u>
Interorbital width (see reverse side)	<u>5.7 cm</u>
Weight <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	<u>3.1 kg</u>

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # \_\_\_\_\_ Tag Type \_\_\_\_\_ Location of tag on carcass \_\_\_\_\_  
No tag found \_\_\_\_\_

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☒ 4 = Frozen for later examination  
☐ 5 = Other (describe).

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear  
Environmental Affairs

## SAMPLES COLLECTED? ☒ Yes ☐ No

### Sample

Pelvic fin clip

### How preserved

stored in non-denatured ethanol  
and refrigerated.

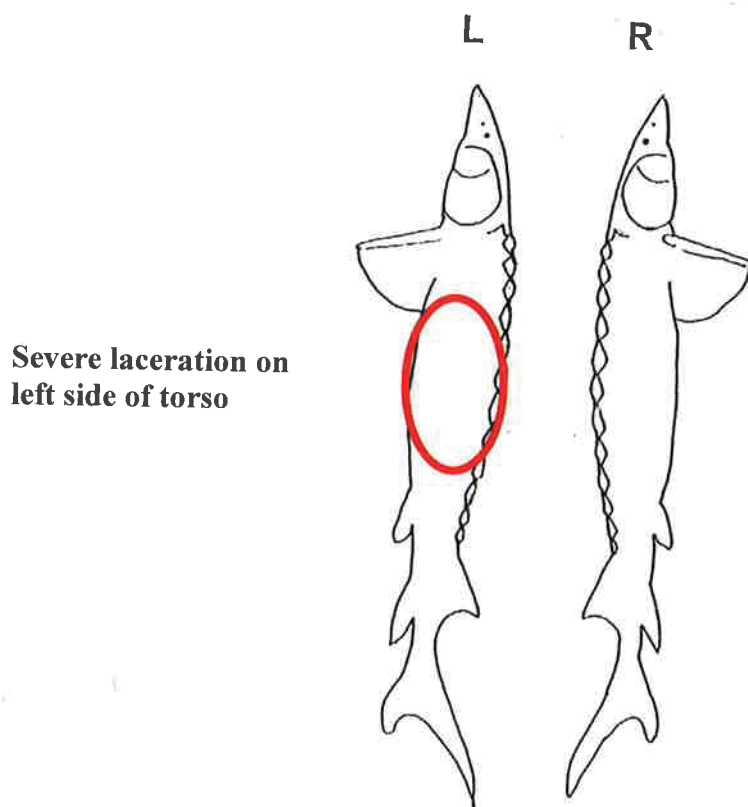
### Disposition (person, affiliation, use)

Held at the office of ECSI for aggregated  
shipment to designated laboratory.

Comments: A recently deceased Atlantic sturgeon was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 08:40AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. A pelvic fin clip was also collected for future DNA analysis. Upon completion of processing, the specimen was placed on ice and prepared for transport back to the ECSI main office, where it will be stored under refrigeration, awaiting direction on further disposition. The fin clip sample has been stored in refrigeration and will be held for aggregated shipment to a designated laboratory.



Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. Specimen was deceased at the time of collection likely due to an existing severe laceration observed mid torso on the left side, and was found to extend from the dorsal scutes to the belly, exposing tissue and internal organs (refer to diagram above).

**Submit completed forms (within 24 hours of observation of fish):** by e-mail to [IncidentalTake@noaa.gov](mailto:IncidentalTake@noaa.gov) or by fax (978-281-9394). Questions can be directed to NMFS Protected Resources Division at 978-281-9328.

**Data Access Policy:** Upon written request, information submitted to National Marine Fisheries Service (NOAA Fisheries) on this form will be released to the requestor provided that the requestor credit the collector of the information and NOAA Fisheries. NOAA Fisheries will notify the collector that these data have been requested and the intent of their use.

## Photographs



A ventral view showing the size and condition of the damaged and deceased Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved at approximately 08:40AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station (04/06/2021).



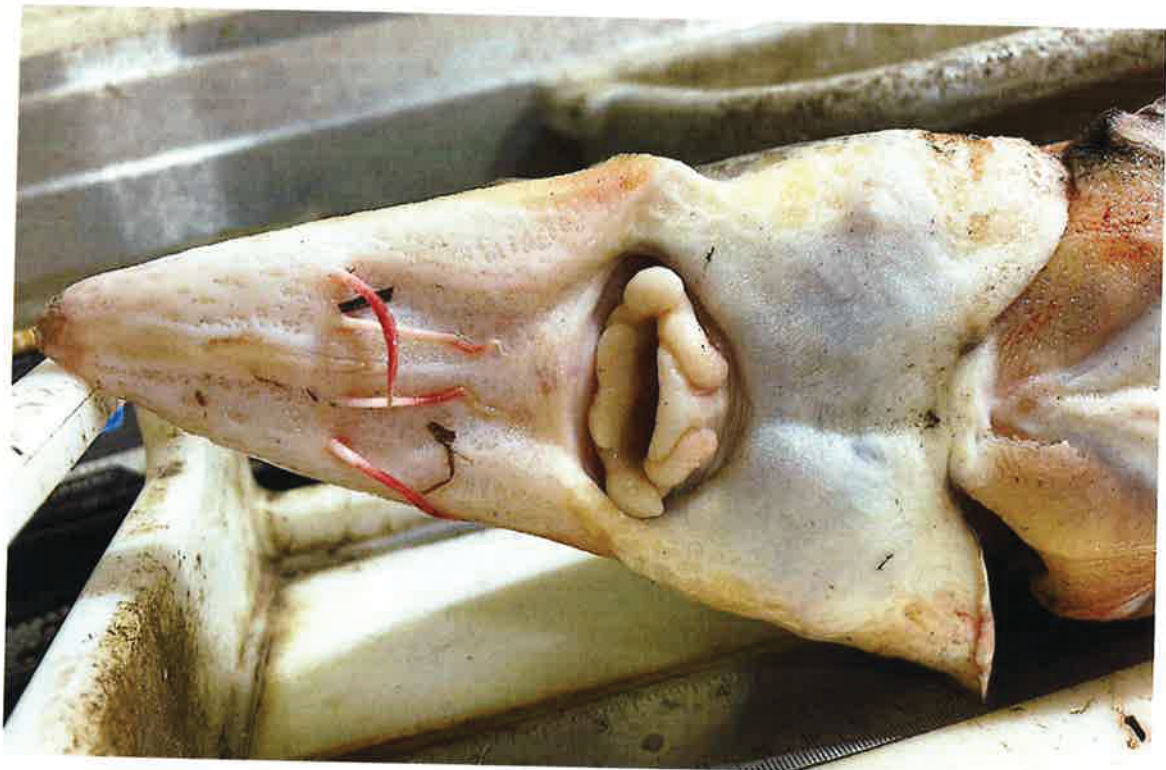
A dorsal view showing the extent of damage observed at the time of processing. A severe laceration, located mid torso on the left side, was found to extend from the dorsal row of scutes down to the belly, exposing damaged tissue and internal organs (04/06/2021).



## Photographs



A close-up of the damage to the specimen, caused by a severe laceration to the left torso, which exposed damage tissue and internal organs (04/06/2021).



A ventral view of the specimen showing the characteristic long rostrum and small mouth (04/06/2021).

### Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 2, intake 23A

Date animal observed: 04/06/2021 Time animal observed: 10:00 AM

Date animal collected: 04/06/2021 Time animal collected: 09:30 AM

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. - 13.9 °C; Sal. - 5.0 ppt; Wind -N; sky - partly cloudy; Wave - slight; tide- E1 (92.5ft.)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.5 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%



# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See reverse side of this form for aid in identification.

LOCATION FOUND: ☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS) trash racks, intake bay 23A, during routine trash rack cleaning at the Salem Generating Station, PSEG Nuclear LLC.

Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☒ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

	Circle unit
Fork length	<u>67.3 cm</u>
Total length	<u>78.7 cm</u>
Length <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	
Mouth width (inside lips, see reverse side)	<u>3.2 cm</u>
Interorbital width (see reverse side)	<u>6.4 cm</u>
Weight <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	<u>1.7 kg</u>

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # \_\_\_\_\_ Tag Type \_\_\_\_\_ Location of tag on carcass \_\_\_\_\_  
No tag found \_\_\_\_\_

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☒ 4 = Frozen for later examination  
☐ 5 = Other (describe).

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear Environmental Affairs

## SAMPLES COLLECTED? ☒ Yes ☐ No

Sample

Pelvic fin clip

How preserved

stored in non-denatured ethanol and refrigerated.

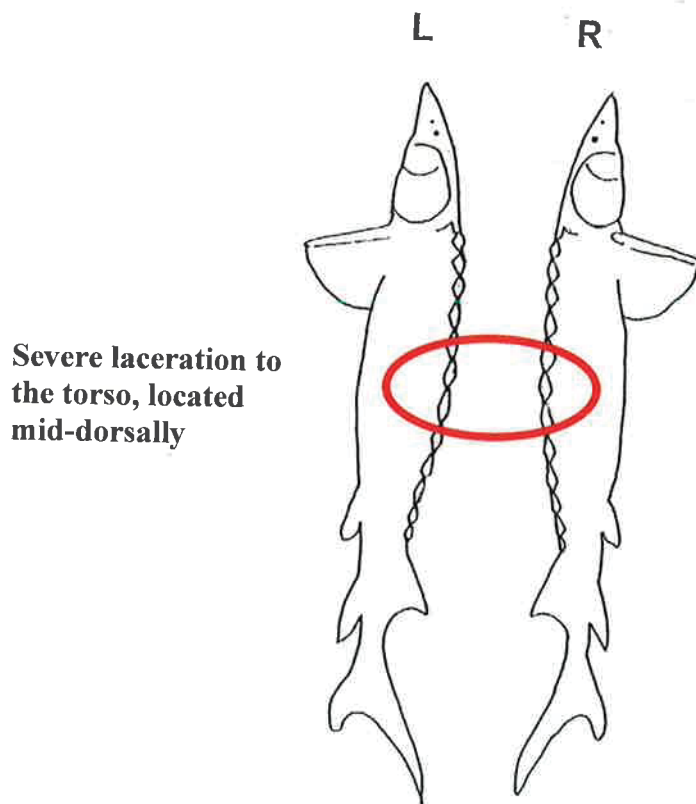
Disposition (person, affiliation, use)

Held at the office of ECSI for aggregated shipment to designated laboratory.

Comments: A second, deceased Atlantic sturgeon was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 09:30AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. A pelvic fin clip was also collected for future DNA analysis. Upon completion of processing, the specimen was placed on ice and prepared for transport back to the ECSI main office, where it will be stored under refrigeration, awaiting direction on further disposition. The fin clip sample has been stored in refrigeration and will be held for aggregated shipment to a designated laboratory.



Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). **Please note if no wounds / abnormalities are found. Specimen was deceased at the time of collection due to an existing severe laceration, located dorsally and mid torso, which exposed damaged tissue, cartilage, and internal organs (refer to diagram above).**

**Submit completed forms (within 24 hours of observation of fish): by e-mail to [Incidental Take@noaa.gov](mailto:IncidentalTake@noaa.gov) or by fax (978-281-9394).** Questions can be directed to NMFS Protected Resources Division at 978-281-9328.

**Data Access Policy:** Upon written request, information submitted to National Marine Fisheries Service (NOAA Fisheries) on this form will be released to the requestor provided that the requestor credit the collector of the information and NOAA Fisheries. NOAA Fisheries will notify the collector that these data have been requested and the intent of their use.

## Photographs



A dorsolateral view showing the size and condition of a second, severely damaged and deceased Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved at approximately 09:30AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station (04/06/2021).



A dorsal view showing the extent of damage observed at the time of processing. A severe laceration, located dorsally and mid-torso, was exposing flesh, cartilage, and internal organs (04/06/2021).



## Photographs



A dorsal view of the specimen showing the characteristic elongated rostrum (04/06/2021).

### Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 2, intake 22B

Date animal observed: 04/06/2021 Time animal observed: 09:50 AM

Date animal collected: 04/06/2021 Time animal collected: 09:45 AM

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. - 16.6 °C; Sal. - 5.0 ppt; Wind -N; sky - partly cloudy; Wave - slight; tide- E1 (92.0 ft)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.0 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%

PIT ID

Microchip ID Systems™



93300.0320184001

# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See reverse side of this form for aid in identification.

## LOCATION FOUND:

☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS) trash racks, intake bay 22B, during routine trash rack cleaning at the Salem Generating Station, PSEG Nuclear LLC.

Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☐ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

Circle unit  
Fork length 71.1 cm  
Total length 83.8 cm  
Length ☒ actual ☐ estimate  
Mouth width (inside lips, see reverse side) 3.2 cm  
Interorbital width (see reverse side) 4.4 cm  
Weight ☒ actual ☐ estimate 2.5 kg

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # \_\_\_\_\_ Tag Type \_\_\_\_\_ Location of tag on carcass \_\_\_\_\_  
No tag found

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☐ 4 = Frozen for later examination  
☒ 5 = Other (describe). Specimen was alive, but exhibited some minor damage. After processing, and a period of holding to reduce stress, it was released back to the Delaware River

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear Environmental Affairs

## SAMPLES COLLECTED? ☐ Yes ☒ No

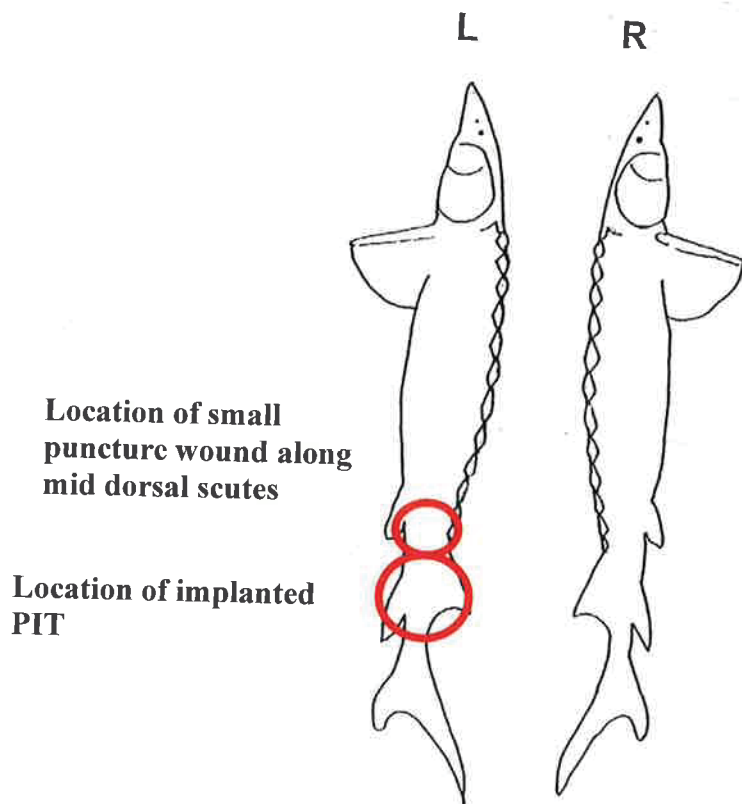
Sample \_\_\_\_\_ How preserved \_\_\_\_\_

Disposition (person, affiliation, use) \_\_\_\_\_

Comments: A third Atlantic sturgeon, slightly damaged but alive, was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 09:45AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. Therefore, PIT tagging procedures for placement of a tag were implemented. Specimen has been identified with tag #933000320184001. A pelvic fin clip was not collected from the specimen. Upon completion of processing, the specimen was released back to the Delaware River at 10:00AM.



Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. Specimen was alive at the time of collection, but shown evidence of minor damage in the form of a small puncture wound on the left side of the torso, along the mid-dorsal line of scutes (refer to diagram above). No PIT was indicated, so tagging procedures were implemented. Specimen received a PIT (#933000320184001), implanted below the dorsal fin on the left side.

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## Photographs



A ventral view showing the size and condition of a third Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved alive at approximately 09:45AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station (04/06/2021).



A dorsolateral view showing the extent of damage to the specimen observed at the time of processing. A puncture wound was observed below the dorsolateral line of scutes on the left side of the torso, and near the pelvic fin (04/06/2021).



## Photographs



A ventral view of the specimen showing the characteristic elongated rostrum and small mouth (04/06/2021).

### Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 2, intake 21A

Date animal observed: 04/06/2021 Time animal observed: 10:30 AM

Date animal collected: 04/06/2021 Time animal collected: 10:12 AM

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. - 17.2 °C; Sal. - 5.0 ppt; Wind -N; sky - partly cloudy; Wave - slight; tide- E1 (91.5 ft)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.0 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%

PIT ID





# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See  
reverse side of this form for aid in  
identification.

## LOCATION FOUND:

☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS)  
trash racks, intake bay 21A, during routine trash rack cleaning at the Salem Generating  
Station, PSEG Nuclear LLC.  
Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☐ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

	Circle unit
Fork length	<u>72.4 cm</u>
Total length	<u>83.8 cm</u>
Length <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	
Mouth width (inside lips, see reverse side)	<u>3.2 cm</u>
Interorbital width (see reverse side)	<u>7.0 cm</u>
Weight <input checked="" type="checkbox"/> actual <input type="checkbox"/> estimate	<u>3.2 kg</u>

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # \_\_\_\_\_ Tag Type \_\_\_\_\_ Location of tag on carcass \_\_\_\_\_  
No tag found \_\_\_\_\_

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☐ 4 = Frozen for later examination  
☒ 5 = Other (describe). Specimen was alive and in good  
condition. After processing, and a period of holding to reduce  
stress, it was released back to the Delaware River.

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear  
Environmental Affairs

## SAMPLES COLLECTED? ☐ Yes ☒ No

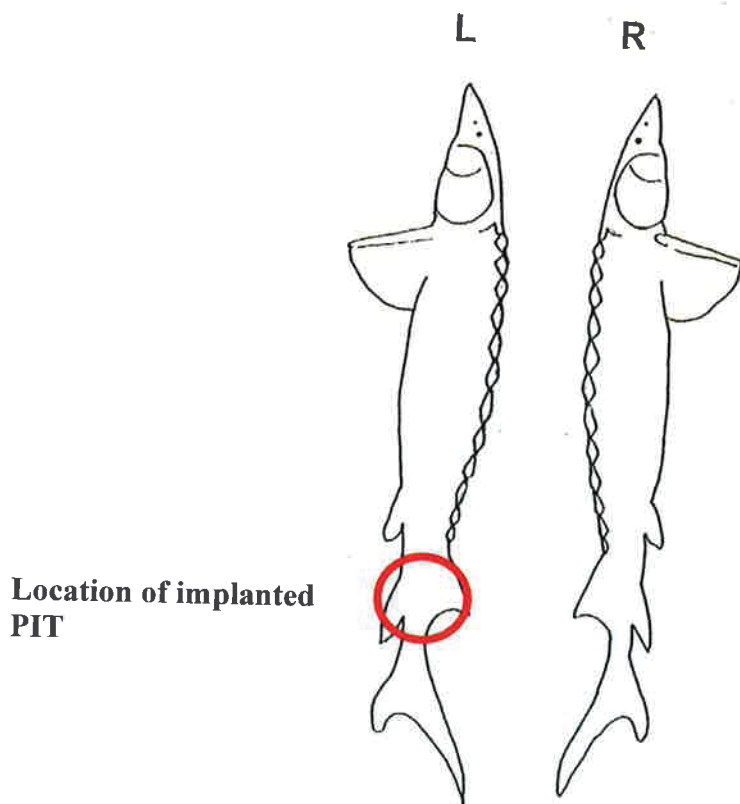
Sample \_\_\_\_\_ How preserved \_\_\_\_\_

Disposition (person, affiliation, use) \_\_\_\_\_

Comments: A fourth Atlantic sturgeon, alive and undamaged, was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 10:12AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. Therefore, PIT tagging procedures for placement of a tag were implemented. Specimen has been identified with tag #933000320184002. A pelvic fin clip was not collected from the specimen. Upon completion of processing, the specimen was released back to the Delaware River at 10:30AM.



Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. Specimen was alive at the time of collection, with no injuries observed. No PIT was indicated, so tagging procedures were implemented. Specimen received a PIT (#933000320184002), implanted below the dorsal fin on the left side (refer to diagram above).

**Submit completed forms (within 24 hours of observation of fish):** by e-mail to [Incidental Take@noaa.gov](mailto:IncidentalTake@noaa.gov) or by fax (978-281-9394). Questions can be directed to NMFS Protected Resources Division at 978-281-9328.

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## Photographs



A ventral view showing the size and condition of a fourth Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved alive at approximately 10:12AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station. Specimen exhibits the characteristic small mouth and elongated rostrum (04/06/2021).

## Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 2, intake 21A

Date animal observed: 04/06/2021 Time animal observed: 10:45 AM

Date animal collected: 04/06/2021 Time animal collected: 10:12 AM

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. - 17.2 °C; Sal. - 5.0 ppt; Wind -N; sky - partly cloudy; Wave - slight; tide- E1 (91.5 ft)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.0 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%

PIT ID

Microchip ID Systems™



933000320184022



# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See  
reverse side of this form for aid in  
identification.

LOCATION FOUND: ☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS)  
trash racks, intake bay 21A, during routine trash rack cleaning at the Salem Generating  
Station, PSEG Nuclear LLC.

Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☐ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

Circle unit  
Fork length 67.0 cm  
Total length 77.7 cm  
Length ☒ actual ☐ estimate  
Mouth width (inside lips, see reverse side) 2.9 cm  
Interorbital width (see reverse side) 6.4 cm  
Weight ☒ actual ☐ estimate 2.3 kg

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # \_\_\_\_\_ Tag Type \_\_\_\_\_ Location of tag on carcass \_\_\_\_\_  
No tag found \_\_\_\_\_

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☐ 4 = Frozen for later examination  
☒ 5 = Other (describe). Specimen was alive but showing  
moderate damage. After processing, and a period of holding to  
reduce stress, it was released back to the Delaware River.

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear  
Environmental Affairs

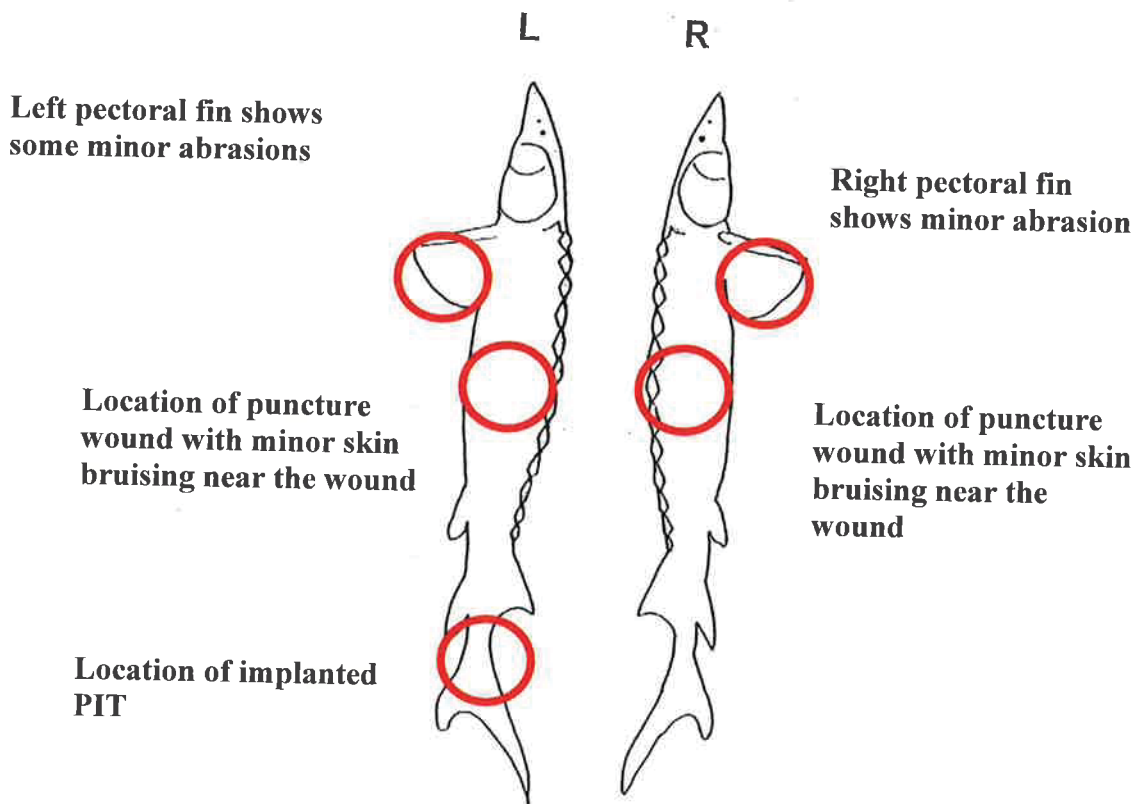
## SAMPLES COLLECTED? ☐ Yes ☒ No

Sample \_\_\_\_\_ How preserved \_\_\_\_\_

Disposition (person, affiliation, use) \_\_\_\_\_

Comments: A fifth Atlantic sturgeon, alive but showing some moderate damage, was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 10:12AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. Therefore, PIT tagging procedures for placement of a tag were implemented. Specimen has been identified with tag #933000320184022. A pelvic fin clip was not collected from the specimen. Upon completion of processing, the specimen was released back to the Delaware River at 10:30AM.

Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. Specimen was alive at the time of collection, but exhibited damage in the form two puncture wounds located mid-torso, in the vicinity of the dorsolateral line of scutes on both the right and left sides. Specimen also exhibited evidence of surface bruising of the skin along and below the scutes near the puncture wounds, as well as minor abrasions to the pectoral fins. No PIT was indicated, so tagging procedures were implemented. Specimen received a PIT (#933000320184022), implanted below the dorsal fin on the left side (refer to diagram above).

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## Photographs



A dorsolateral view showing the size and condition of a fifth Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved alive but showing moderate damage, at approximately 10:12AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station (04/06/2021).



Dorsolateral view showing a close up of a puncture wound observed on the left side of the torso. Evidence of surface bruising on the side of the torso as well as on the pectoral fin was also evident (04/06/2021).



## Photographs



Dorsolateral view showing a close up of a puncture wound observed on the right side of the torso. Evidence of surface bruising on the side of the torso, as well as abrasions on the pectoral fin, are also evident (04/06/2021).



Dorsolateral view of the right side, showing a close-up of surface bruising on the torso and surface abrasions on the pectoral fin (04/06/2021).

### Appendix C, Part 2A (Sturgeon)

*Photographs should be taken and the following information should be collected from all sturgeon (alive and dead). Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt. You must also complete and submit the "Sturgeon Data Collection Form"*

Observer's full name: Beth Graham (Environmental Consulting Services, Inc. [ECSI])

Reporter's full name: Beth Graham

Species Identification : Atlantic sturgeon (Acipenser oxyrinchus)

Site of Collection: PSEG Salem Generating Station; SGS Unit 2, intake 21A

Date animal observed: 04/06/2021 Time animal observed: 11:00 AM

Date animal collected: 04/06/2021 Time animal collected: 10:12 AM

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. - 13.9 °C; Sal. - 5.0 ppt; Wind -N; sky - partly cloudy; Wave - slight; tide- E1 (91.5ft.)

If removed from intakes (trash racks or traveling screens):

Date and time of last inspection of screen: 04/06/2021; at 03:27 AM

Water temperature (°C) at site and time of observation: 11.5 °C

Number of pumps operating at time of observation: Unit 1: 6 circulators / Unit 2: 6 circulators

Average percent of power generating capacity achieved per unit at time of observation: Unit 1: 99.4% /Unit 2: 100.1%

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation: Unit 1: 99.4% /Unit 2: 100.0%



# STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action

## OBSERVER'S CONTACT INFORMATION

Name: First Beth Last Graham  
Agency Affiliation PSEG subcontractor Email Beth.Graham@pseg.com  
Address 100 South Cass Street, Middletown, DE 19709  
Area code/Phone number (302) 378-9881 (Environmental Consulting Services, Inc.)

SEC 7 UNIQUE IDENTIFIER (PCTS No.  
Assigned by NMFS)

## DATE REPORTED:

Month 04 Day 06 Year 2021

## DATE EXAMINED:

Month 04 Day 06 Year 2021

## SPECIES: (check one)

- ☐ shortnose sturgeon  
☒ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
Check "Unidentified" if uncertain. See  
reverse side of this form for aid in  
identification.

## LOCATION FOUND:

☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)  
River/Body of Water Delaware River City Lower Alloways Creek State NJ  
Descriptive location (be specific) Removed from Circulating Water Intake Structure (CWIS)  
trash racks, intake bay 21A, during routine trash rack cleaning at the Salem Generating  
Station, PSEG Nuclear LLC.  
Latitude 39.460603° (Dec. Degrees) Longitude -75.536133° (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☒ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☐ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

Circle unit  
Fork length 66.5 cm  
Total length 79.5 cm  
Length ☒ actual ☐ estimate  
Mouth width (inside lips, see reverse side) 3.2 cm  
Interorbital width (see reverse side) 5.1 cm  
Weight ☒ actual ☐ estimate 1.9 kg

TAGS PRESENT? Examined for external tags including fin clips? ☒ Yes ☐ No Scanned for PIT tags? ☒ Yes ☐ No  
Tag # Tag Type Location of tag on carcass

No tag found

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☒ 4 = Frozen for later examination  
☐ 5 = Other (describe).

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No  
Disposition of Photos/Video PSEG Nuclear  
Environmental Affairs

## SAMPLES COLLECTED? ☒ Yes ☐ No

### Sample

Pelvic fin clip

### How preserved

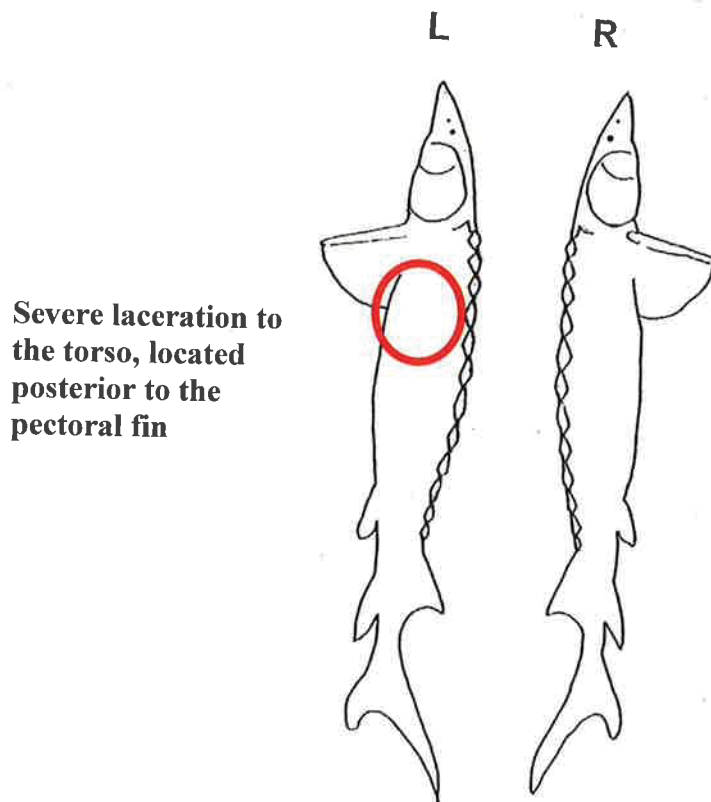
stored in non-denatured ethanol  
and refrigerated.

### Disposition (person, affiliation, use)

Held at the office of ECSI for aggregated  
shipment to designated laboratory.

Comments: A sixth Atlantic sturgeon, deceased and showing some damage, was retrieved from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 04/06/21, at 10:12AM. After positive identification was made by Environmental Consulting Services personnel, the specimen was measured, photographed, and inspected for tags. No evidence of external tags was found, and no existing PIT tags were indicated. A pelvic fin clip was also collected for future DNA analysis. Upon completion of processing, the specimen was placed on ice and prepared for transport back to the ECSI main office, where it will be stored under refrigeration, awaiting direction on further disposition. The fin clip sample has been stored in refrigeration and will be held for aggregated shipment to a designated laboratory.

Draw wounds, abnormalities, tag locations on diagram and briefly describe below



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. Specimen was deceased at the time of collection due to an existing severe laceration to the torso, located posterior to the left pectoral fin, which exposed damaged tissue and internal organs (refer to diagram above).

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## Photographs



A dorsal view showing the size and condition of a sixth, severely damaged and deceased Atlantic sturgeon (*Acipenser oxyrinchus*), retrieved at approximately 10:12AM on 04/06/2021 from the Salem Circulating Water Intake by Salem Yard Crew personnel during routine trash rack cleaning at Salem Nuclear Generating Station (04/06/2021).



A dorsal view showing a close-up of damage observed to the left side of the torso, which included a severe laceration, located immediately posterior to the pectoral fin, which has exposed internal organs (04/06/2021).