February 29, 2016

Arthur Burritt, Chief
Reactor Projects Branch 5 (Region 1)
Division of Reactor Projects
U.S. Nuclear Regulatory Commission

Jack Davis, Director
Japan Lessons Learned Division
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Daniel Dorman
Region 1 Office Administrator
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Robert Kuntz
Senior Project Manager, Hazards Management Branch
Japan Lessons Learned Division
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Re: Updated NGRP Site Maps for Pilgrim Nuclear Power Station

Dear NRC Staff,

On behalf of Jones River Watershed Association (JRWA), I would like to provide you with updated site maps for Entergy's Pilgrim Nuclear Power Station that were commissioned from Northeastern Geospatial Research Professionals (NGRP).

In our January 18, 2016 letter[1] concerning an analysis of AREVA's Flood Hazard Re-Evaluation Report (the "AREVA Report") for Pilgrim, we mentioned that we would soon be forwarding you updated maps from NGRP. These new maps are updated from those originally provided to your agency in February 2015 and are based on more current LiDAR information processed by the company Coastal Risk Consulting, and improved tidal datum based on the Boston buoy. Links to the maps are provided at the end of this letter.

These new 2016 maps illustrate:

- Entergy's site maps prior to 2014 used outdated data from 1968 (mean sea level today is more than 6 inches higher than it was in 1968) to develop site plans for infrastructure (including its dry cask storage facility); those plans do not reflect current NAVD88 topographical elevations and do not provide an accurate basis for evaluating risks of sea level rise and other coastal impacts.
- The height of the breakwater jetties and other elevations in NGRP's maps appear significantly lower than those shown in Entergy's plans, and are uneven, demonstrating that the site is not as protected from flooding and sea level rise as Entergy reports.
- There are discrepancies ranging from +4 in. to -15 ft. when comparing Entergy's plans to more current elevation information because Entergy uses mixed and outdated standards of measurements for vertical elevations and water levels.

Entergy claims that it performed a site survey and its own aerial LiDAR mapping for the Pilgrim site (2014), but has not made these products publically available. It would be most useful to be able to compare Entergy's 2014 site survey and LiDAR maps that are referred to in the AREVA Report to the products produced by NGRP.

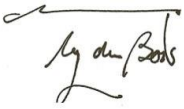
[1] JRWA letter to NRC, Jan. 18, 2016. Re: Analysis of AREVA Flood Hazard Re-Evaluation Report for Pilgrim Nuclear Power Station See: www.capecodbaywatch.org/wp-content/uploads/2016/01/LetterJRWAtoNRC_2016Jan18_FINAL.pdf

Entergy's previous site plans falsely claim the site is more protected than it actually is. Since Pilgrim will be ending operations soon, it is critically important to fully understand the risks associated with coastal hazards in order to implement a timely clean up and decommissioning strategy. As sea levels increase, so do groundwater elevations that will affect contamination present on the site. These new NGRP maps illustrate the need for Pilgrim to be decontaminated and decommissioned within a decade of closure, as opposed to being allowed to sit idle for decades or up to 60 years under long-term SAFSTOR.

Pilgrim's dry cask storage facility and stranded "low-level" radiological waste storage areas are also adjacent to the shoreline, and vulnerable to coastal inundation. Climate change will bring a radical increase in regional sea levels and coastal storms. Increasingly, predictions dictate that all nuclear waste should be shipped offsite within a decade of closure. These corrected NGRP maps illustrate certain urgency for nuclear waste storage areas to be moved farther away from Cape Cod Bay and to higher elevations, or moved offsite, in order to protect people and the environment. This will help avoid potential accidents and leaks and will set the stage for complete and thorough site cleanup. This issue should be addressed immediately, before more casks are filled after shutdown.

We look forward to further discussing these issues with NRC staff. **Please contact me at your earliest convenience to set up a time to meet and discuss these issues.**

Sincerely,



Pine duBois
Executive Director, Jones River Watershed Association
pine@jonesriver.org

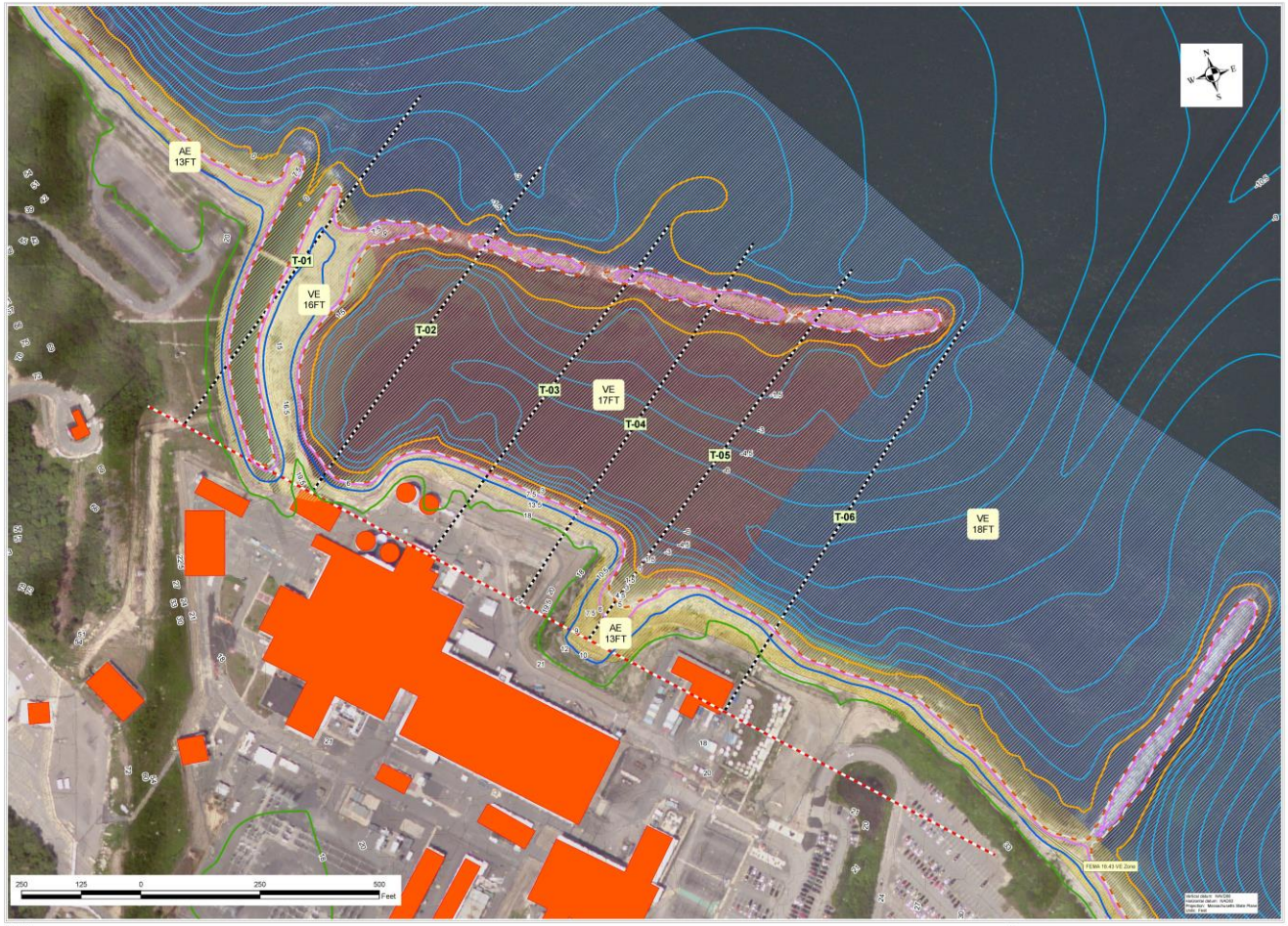
Enclosure: Northeastern Geospatial Research Professionals updated Pilgrim site maps (2016). Images attached and links to high-resolution PDF maps are as follows:

- Updated in 2016: Shoreline Profile Sections; FEMA Flood and LIDAR Elevations
- New in 2016: Historic Site Plan and Elevations; FEMA Flood Zones and Historical Site Plan

cc:

Governor Baker	Congressman William Keating
Rep. Tom Calter	Senator Edward Markey
Senator Vinny deMacedo	Rep. Matt Muratore
Attorney General Maura Healy	Plymouth Board of Selectmen
Rep. Randy Hunt	Senator Elizabeth Warren
Mr. Matthew Beaton, EOEAA Secretary	Mr. Stephen Burns, NRC Chair
Mr. Bruce Carlisle, MassCZM Director	Mr. Curt Spalding, EPA Region I Administrator
Mr. Martin Suuberg, MassDEP Commissioner	Mr. Dave Webster, EPA Water Permit Branch Chief
Ms. Jan Sullivan, MassDPH Acting Assistant Commissioner	
Mr. Arnie Gunderson, Fairewinds	Mr. David Lochbaum, UCS
Mr. Tim Judson, NIRS	Dr. Marvin Resnikoff, Radioactive Waste Management Assoc.
Ms. Deb Katz, CAN	Mr. Raymond Shadis, New England Coalition

Pilgrim Nuclear Power Station | Shoreline Profile Sections



Sources:
Topographical and Bathymetric data for 2005-2007, United States Army Corps of Engineers, and Federal Emergency Management flood data managed and supplied through NOAA's Digital Coast repository at http://coast.noaa.gov/dataviewer/
Water level data derived from the Boston water gauge #8443970

Legend

Tidal Gauge Elevations
- Mean Low Water 0.34 Feet
- Mean Sea Level 5.20 Feet
- NAVD88 5.51 Feet
- Mean High Water 9.83 Feet

Elevation Data
- Topographic Contour
- Bathymetric Contour
- FEMA 18.43 VE Zone

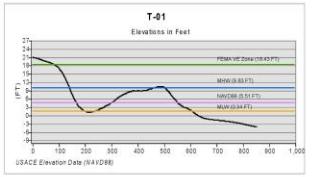
Building Footprint

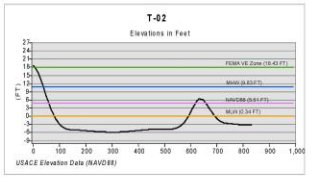
Near-Shore Bathymetric Transects
- Baseline
- Transect Lines

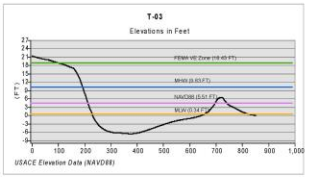
FEMA Flood Zones
Flood Zone Designations
- AE: 1% Annual Chance of Flooding, with BFE 13 Ft
- VE: High Risk Coastal Area 16 Ft
- VE: High Risk Coastal Area 17 Ft
- VE: High Risk Coastal Area 18 Ft

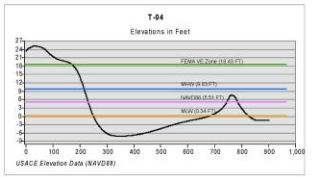
Map produced on behalf of the
Jones River Watershed Association
by Northeastern Geospatial Research Professionals

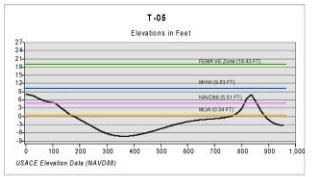
NGRP

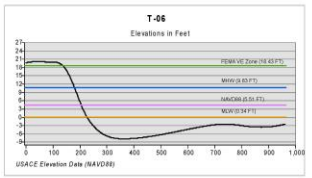




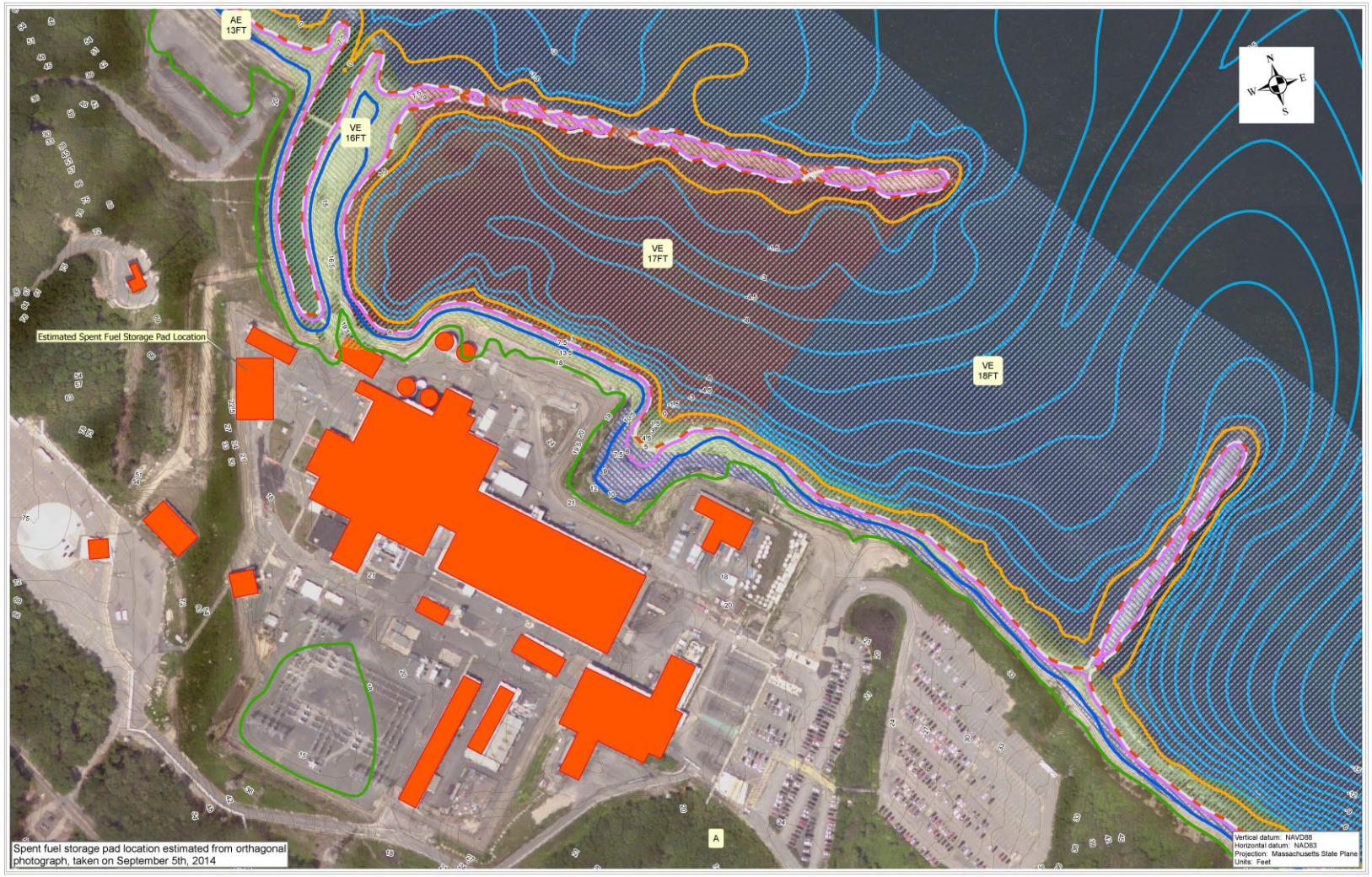








Pilgrim Nuclear Power Station | FEMA Flood and LIDAR Elevations



Legend

Tidal Gauge Elevations
- Mean Low Water 0.34 Feet
- Mean Sea Level 5.20 Feet
- NAVD88 5.51 Feet
- Mean High Water 9.83 Feet
- FEMA 18.43 VE Zone
  JWRA Elevation of Concern

Elevation Data
- Topographic Contour
  Contour Interval: 1.5 Feet
- Bathymetric Contour
  Contour Interval: 1.5 Feet
- Building Footprint

FEMA Flood Zones

Flood Zone Designations
- AE: 1% Annual Chance of Flooding, with BFE 13 Ft
- VE: High Risk Coastal Area 16 Ft
- VE: High Risk Coastal Area 17 Ft
- VE: High Risk Coastal Area 18 Ft

Jones River Watershed Association

Map produced on behalf of the
Jones River Watershed Association
by Northeastern Geospatial Research Professionals

NGRP

250 125 0 250 500
Feet

Sources:
Topographical and Bathymetric data for 2005-2007, United States Army Corps of Engineers, and Federal Emergency Management flood data managed and supplied through NOAA's Digital Coast repository at http://coast.noaa.gov/dataviewer/
Water level data derived from the Boston water gauge #8443970

Pilgrim Nuclear Power Station | Historical Site Plan and Elevations

Legend

- Survey Elevation
- FEMA 18.43 VE Zone *JWRA Elevation of Concern*

Tidal Gauge Elevations

- Mean Low Water 0.34 Feet
- Mean Sea Level 5.20 Feet
- NAVD88 5.51 Feet
- Mean High Water 9.83 Feet
- PNPS Access Road
- Building Footprint

250 125 0 250 500 Feet

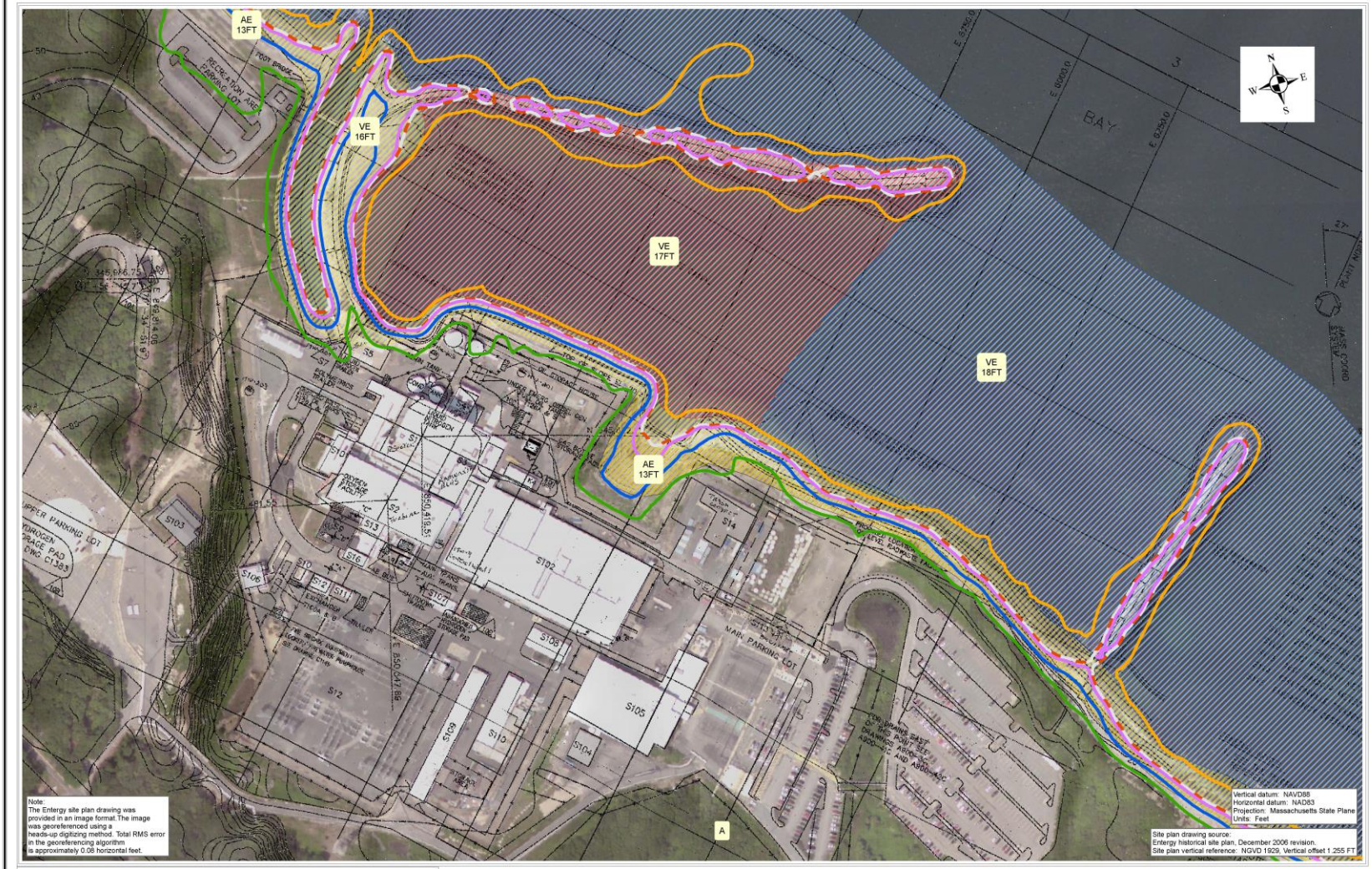
Jones River Watershed Association

Map produced on behalf of the
Jones River Watershed Association
by Northeastern Geospatial Research Professionals

NGRP

Sources:
Topographical and Bathymetric data for 2005-2007, United States Army Corps of Engineers, and Federal Emergency Management flood data managed and supplied through NOAA's Digital Coast repository at http://coast.noaa.gov/dataviewer/
Water level data derived from the Boston water gauge #8443970

Pilgrim Nuclear Power Station | FEMA Flood Zones and Historical Site Plan



Legend

Tidal Gauge Elevations

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- NAVD88 5.51 Feet
- Mean High Water 9.83 Feet
- FEMA 18.43 VE Zone *JWRA Elevation of Concern*

FEMA Flood Zones

Flood Zone Designations

- AE: 1% Annual Chance of Flooding, with BFE 13 Ft
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- VE: High Risk Coastal Area 18 Ft

Jones River Watershed Association

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NGRP

250 125 0 250 500 Feet

Sources:
Topographical and Bathymetric data for 2005-2007, United States Army Corps of Engineers, and Federal Emergency Management flood data managed and supplied through NOAA's Digital Coast repository at http://coast.noaa.gov/dataviewer/
Water level data derived from the Boston water gauge #8443970

CHAIRMAN Resource

From:	Karen Vale <karen@jonesriver.org>
Sent:	Tuesday, March 01, 2016 2:31 PM
To:	Burritt, Arthur; Davis, Jack; Kuntz, Robert; daniel.dorman@nrc.gov
Cc:	Stolle.singleton@state.ma.us; Calter, Thomas - Rep. (HOU); Vinny.deMacedo@masenate.gov; ago@state.ma.us; Hunt, Randy - Rep (HOU); Jackman, Michael; Freedhoff, Michal (Markey); Muratore, Mathew - Rep. (HOU); Stephanie_Houghton@warren.senate.gov; env.internet@state.ma.us; CHAIRMAN Resource; Bruce.carlisle@state.ma.us; spalding.curt@epa.gov; Sullivan, Jan (DPH); martin.suuberg@state.ma.us; webster.david@epa.gov; radwaste@rwma.com; sailchamplain@gmail.com; timj@nirs.org; deb katz; DLochbaum@ucsusa.org; Ray Shadis
Subject:	[External_Sender] Updated NGRP Site Maps for Pilgrim Nuclear Power Station
Attachments:	Letter to NRC_2016Feb_NewMaps_FINAL.pdf

Dear NRC Staff,

Please see attached for updated site maps for Entergy's Pilgrim Nuclear Power Station, commissioned from Northeastern Geospatial Research Professionals. These new site maps are updated from those originally provided to your agency in February 2015 and are based on more current LiDAR information and improved tidal datum.

Please let me, or Pine duBois (pine@jonesriver.org), know if you have any questions.

Thank you,
Karen Vale

--
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Flickr: www.flickr.com/photos/jonesriver/sets