



April 5, 2017

Submitted by Fed Ex Overnight

District Engineer, U.S. Army Corps of Engineers  
Philadelphia District, Wanamaker Building  
100 Penn Square East  
Philadelphia, PA 19107-3390

**Re: Comment on Public Notice CENAP-OP-R-2016-0181-39 for the SRP Gibbstown Logistics Center**

Dear District Engineer of the U.S. Army Corps of Engineers,

The Delaware Riverkeeper Network has reviewed Public Notice CENAP-OP-R-2016-0181-39 for the SRP Gibbstown Logistics Center located in the Township of Greenwich, Gloucester County, New Jersey. The Delaware Riverkeeper Network submits this comment in response to this Public Notice.

It is our position that in accordance with 33 CFR parts 327.4 that this letter serve as a written request for the US Army Corps of Engineers to hold a **Public Hearing** to hear the public's concerns regarding this application including the reasons identified below:

**1. Environmental Impacts of Dredging**

The proposed Gibbstown Logistics Center in Greenwich Township, Gloucester County, NJ would have a substantial impact on the natural resources in this part of the Delaware River and there is no indication that this project is needed by the public. The stated purpose in the application is,

*"... to redevelop (the) site and create a deep water marine terminal that can accommodate vessels with a maximum length of 870 feet with a maximum of a 40-foot draft."*<sup>1</sup>

In order to achieve this goal, the application further states that,

*"An area approximately 29 acres in size would be dredged to a depth of -40 feet mean lower low water ± 1 foot overdraft."*<sup>1</sup>

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<sup>1</sup> U.S. Army Corps of Engineers (2017). Public Notice CENAP-OP-R-2016-0181-39. March 7, 2017.

Retrieved from

[http://www.nap.usace.army.mil/Portals/39/docs/regulatory/publicnotices/Public\\_Notice\\_2016-0181-39.pdf](http://www.nap.usace.army.mil/Portals/39/docs/regulatory/publicnotices/Public_Notice_2016-0181-39.pdf)

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*“Approximately 1264 square feet of open water habitat would be filled between the proposed sheet pile and the existing earthen berm.”*<sup>1</sup>

*“457,000 cubic yards of material would be removed from the waterway.”*<sup>1</sup>

The Delaware Riverkeeper Network has commented in the past on the significant environmental impacts that dredging causes in this section of the Delaware River. First, deepening 29 acres of river area to a depth of -40 feet mean lower low water  $\pm$  1 foot overdraft will open this newly deepened area to the potential for an increased risk of harm if there is a catastrophic spill event. With a deepened area, ships will access the proposed deepwater port and, when filled for export will be heavily laden with natural gas liquids or other chemicals. Using the catastrophic experience of the Athos I oil spill of November 26, 2004, the volume of carried material available to leak and wreak havoc on the environment and our communities will be greater and therefore more dangerous with the added capacity of the proposed port’s dredging of 29 acres.<sup>2</sup>

The Athos I catastrophe exposed 115 miles of River, 280 miles of shoreline, 16,500 birds, as well as many species of fish, shellfish, and wildlife and a variety of important habitats to the heavy crude it dumped into the Delaware River.<sup>2</sup> Habitats, wildlife, water quality, air quality, industry, recreation, and communities were all significantly harmed by the spill. Any project that will increase the magnitude of such a tremendous level of damages in the event of a future catastrophe is a danger to all of these natural and human resources.

## **2. Contaminated Dredge Spoils**

The dredge spoils from this proposed activity would clearly not be clean. According to the application,

*“...based on initial testing, approximately 106,000 cubic yards of the material proposed to be dredged appears to be contaminated.”*<sup>1</sup>

*“The material would then be dried on-site or at the Camden facility and then deposited on the adjoining uplands.”*<sup>1</sup>

Dredge spoils significantly increase the amount of heavy metals and toxins that would be released into waterways and the environment<sup>2</sup>, especially with the amount of material that appears to be contaminated at this site. The impacts of the spoil disposal plans and potential pollution impacts could have significant community and environmental effects. The threat posed by dredged spoils is known to be a source of water pollution after on-land disposal.<sup>2</sup> In addition to polluting the water and land, there are likely to be air quality impacts including NOx emissions associated with the construction and associated traffic from this project that should be considered as well.

## **3. Impacts to Sturgeon**

This project would also adversely affect both species of sturgeon found in the Delaware River. From the application:

*“A preliminary review of this application indicates that the proposed work may impact 2 fish species listed on the Endangered Species List pursuant to Section 7 of the Endangered Species Act as amended. The first*

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<sup>2</sup> Delaware Riverkeeper Network (2011). Comment Re: 2011 Draft EA for Delaware River Main Channel Deepening Project Philadelphia. Submitted to U.S. Army Corps of Engineers on July 6, 2011.

would be the Short-nose Sturgeon (*Acipenser brevirostrum*) and the second would be Atlantic Sturgeon (*Acipenser oxyrinchus*) and its proposed critical habitat.”<sup>1</sup>

Both direct take and incidental take of sturgeon are a distinct possibility with a project of this nature. Both the Atlantic sturgeon and shortnose sturgeon are threatened and adversely affected by dredging and effects to water quality including dissolved oxygen (DO) levels, water temperature, and contaminants.<sup>2</sup> The proposed project will entail significant levels of dredging as well as significant water quality effects and dramatic changes in important habitats including juvenile habitat and spawning grounds.

The dredging of river systems significantly impacts aquatic ecosystems in a number of ways that will harm both sturgeon species. Among the effects that the project will have on the Delaware River populations of both sturgeon species are:

- ✓ Deep-draft vessel traffic in the Delaware River has been cited as the biggest threat to the survival of the Delaware River population Atlantic sturgeon; the increased vessel traffic and increased area for deep-draft vessels to strike Atlantic sturgeon directly resulting from this project will significantly increase sturgeon vessel strikes and could accelerate the extinction of this endangered species population.<sup>3</sup>
- ✓ Dredging activities remove, disturb, dispose of and re-suspend river sediments, modifying the river bottom substrate and impacting the community of benthic macrofauna;
- ✓ Dredging operations can remove or bury organisms and destroy benthic feeding areas;
- ✓ Dredging operations can create noise and disturbance, and can disrupt spawning migrations;
- ✓ Dredging activities can re-suspend contaminants, affect turbidity and siltation, and deposit fine sediments in spawning habitats; and
- ✓ Dredging activities alter the hydrodynamic regime, alter physical habitats, and create the loss of riparian habitat.<sup>2</sup>

The act of dredging can entrain sturgeon, taking them up into the dredge drag-arms and impeller pumps and resulting in death.<sup>2</sup> New data from tagged Atlantic sturgeon continue to show their presence in or near the main navigation channel, making them vulnerable to direct take by dredging operations, as well as direct take from the larger vessels that will be using the channel.<sup>2</sup> These lethal takes are significant for a species that is at such low levels (fewer than 300, maybe even fewer than 100), and as genetically unique as the Atlantic sturgeon of the Delaware River are.<sup>2</sup>

Dredging in the portions of the River near Philadelphia is likely to be detrimental to the successful spawning of sturgeon in the Delaware – not just because of the act of dredging but also because of the degradation of spawning habitat.<sup>2</sup> Dredging increases the level of suspended sediments and contaminants in the water. An increase in suspended sediments could be detrimental to egg survival of sturgeon – increasing the probability that eggs adhere to suspended solids and suffocate.<sup>2</sup> Increasing contaminant loads can alter growth and reproductive performance in sturgeon.<sup>2</sup>

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<sup>3</sup> Brown and Murphy. 2010. Atlantic Sturgeon Vessel-Strike Mortalities in the Delaware Estuary. Fisheries 35(2): 72-83.

Dredging is a factor in the destruction, modification, or curtailment of the Atlantic sturgeon's habitat and range.<sup>2</sup> The environmental impacts of dredging include direct removal or burial of organisms, elevated turbidity or siltation, contaminant re-suspension, noise or disturbance, alterations to hydrodynamic regime and physical habitat, and loss of riparian habitat.<sup>2</sup> Furthermore, an increase in vessel traffic on the Delaware River resulting from the project would increase the likelihood of vessel strikes to sturgeon.<sup>2</sup>

A study of mortality rates on Atlantic sturgeon in the Delaware River between 2005 and 2008 found that 50% of the mortalities were the result of vessel strikes. The remaining 50% were too decomposed to determine if they were caused by vessel strikes but it is likely most were.<sup>2</sup> For small remnant populations of Atlantic sturgeon, such as that in the Delaware River, the loss of just a few individuals per year due to anthropogenic sources of mortality, such as vessel strikes, may continue to hamper restoration efforts.<sup>2</sup> According to a 2010 research article on vessel strikes, "Both the dredging to deepen the channel and the subsequent increase in large vessel traffic may further hamper the recovery of the Delaware River Atlantic sturgeon population."<sup>2</sup> Of critical importance, this study is concerned about the size of the vessels resulting from deepening as opposed to any increase in the volume of vessels. The larger size of the vessels from the deepened channel will likely increase the number of vessel strikes for both sturgeon species.<sup>2</sup>

The continued dredging of new deep-water areas will further impact Atlantic sturgeon spawning by accelerating the intrusion of brackish water into the hard-bottom spawning grounds, and thus forcing Atlantic sturgeon to spawn further upstream in the zone of depressed dissolved oxygen. This shift then exposes the eggs and larvae of newly spawned Atlantic sturgeon to low oxygen conditions from which they may not survive. This "squeeze" between increased salt intrusion in the estuary downstream (exacerbated by channel deepening, new deep-dredged berthing areas, and rising sea levels) and the near-lethal dissolved oxygen levels upstream limits the ability of Atlantic sturgeon to successfully reproduce, and increases the likelihood of extinction. This project makes a significant contribution to such salt-intrusion by adding 29 acres of new deep-water channel and berthing to an estuary under siege.<sup>4</sup>

#### **4. Mussel Impacts**

In November of 2010, researchers discovered beds of freshwater mussels in the Delaware River between Chester, PA and Trenton, NJ.<sup>2</sup> The species found included the alewife floater (*Anodonta implicata*) and the tidewater mucket (*Leptodea ochracea*), only found in New Jersey in the tidal Delaware River; the pond mussel (*Ligumia nasuta*) and the yellow lampmussel (*Lampsilis cariosa*), both considered critically-imperiled; and the creeper (*Strophitus undulatus*) and the eastern floater (*Pyganodon cataracta*) both considered vulnerable; as well as the eastern elliptio (*Elliptio complanata*), the only mussel known to be native to our Delaware River that is not considered to be in jeopardy.<sup>2</sup> Mussels are not mentioned in the application or in the applicant's Compliance Statement. Particularly because some of these estuarine species are state-listed and/or critically imperiled, the extent and composition of these mussel beds needs to be accurately surveyed prior to any in-water work at the site. Once the locations, abundance, and identify of these species are documented, a relocation plan would be needed to move individual mussels out of areas where direct mortality might occur.

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<sup>4</sup> Moberg and DeLucia. 2016. Potential Impacts of Dissolved Oxygen, Salinity and Flow on the Successful Recruitment of Atlantic Sturgeon in the Delaware River. The Nature Conservancy. Harrisburg, PA. 69 pp.

Freshwater mussels can live 80 to 100 years old, and most species do not begin reproducing until they are 8 to 10 years old.<sup>2</sup> Because they are so slow growing and don't begin to reproduce until this older age, they are not able to quickly recover from disturbances and the population cannot recover quickly from impacts that result in death to individuals.<sup>2</sup> Freshwater mussels require a fish host, a specific species depending on the mussel, to complete their life cycle. Activities that damage the needed fish hosts in turn do direct harm to the freshwater mussel species they help serve in the life cycle.<sup>2</sup>

Mussels are vital for filtering pollution and filling important habitat niches. Experts believe that revitalizing freshwater mussels in the Delaware River could improve water quality downstream and thereby benefit estuarine species.<sup>2</sup> All of the freshwater mussels in the Delaware River system, except for one (the Eastern elliptio, *Elliptio complanata*), are identified by one or more of the states as endangered, threatened, imperiled, vulnerable, critically impaired, very rare, extremely rare or extirpated.<sup>2</sup>

Freshwater mussels are very sensitive to water quality. Exposure to contaminants either directly via dissolved compounds or contaminants that are particle-mediated can have adverse consequences.<sup>2</sup> Freshwater mussels are highly exposed to changes in water quality because of their filtering activities and the passage of large volumes of water across many thin tissue layers. Dissolved toxins, such as heavy metals, are rapidly taken up by direct absorption and indirectly via food.<sup>2</sup> Because this project will likely result in pollution both directly and through contaminants from spoil disposal, the implications of this pollution for the mussels in this area must be examined.

Stressed mussels require more oxygen. The dredging described for this project is a threat to any submerged aquatic vegetation in the area that is critical for providing oxygen in the Estuary, including the Philadelphia reach of the River, which includes the location of the proposed project. Although dissolved oxygen levels can become excessively low in this area even today, they have improved significantly compared to decades past. In fact, the DRBC is considering elevating their "Aquatic Life Designated Use" rule in this section of the Delaware River to maintain and protect dissolved oxygen levels.<sup>5</sup> Increased sedimentation from dredging activity inhibits mussels and their host fish species from taking in oxygen.<sup>2</sup> Additionally, invasive or exotic species resulting from interbasin transfers of water can be a very direct threat to freshwater mussels as well as many other species. Increased ballast water from deeper ships, and increased ship traffic, brought up the River by a deeper channel could heighten this risk.<sup>2</sup> The issue of invasive and exotic species and ballast water and their ecological and economic implications for freshwater mussels and other River fish and wildlife species must also be considered.

Identification of host fish needed for freshwater mussels is one of the least studied aspects of freshwater mussel life history. American eel are known to be hosts for *Elliptio complanata*; some believe they are in fact the preferred host.<sup>2</sup> Some species of trout and yellow perch too can serve as hosts and data shows that some of the species found in the tidal estuary, *Strophitus undulatus*, can use pumpkinseed and yellow perch.<sup>2</sup> Shad too are considered by some as possible host species.<sup>2</sup> The potential impacts to these host species are additional factors to consider when assessing the threats to mussels.

## **5. Additional Fish and Wildlife Impacts**

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<sup>5</sup> Delaware River Basin Commission (2017) Draft Resolution, February 23, 2017. Retrieved from [http://www.nj.gov/drbc/library/documents/Res\\_EstuaryAquaticLifeUses\\_draft022317.pdf](http://www.nj.gov/drbc/library/documents/Res_EstuaryAquaticLifeUses_draft022317.pdf)

As indicated in Appendix E of Ramboll Environ's Compliance Statement, there are bald eagle (*Haliaeetus leucocephalus*) nests and osprey (*Pandion haliaetus*) nests near or within the project site.<sup>6</sup> From the Compliance Statement:

*"There are currently two (2) active bald eagle nests located within 1 km of the Project Site: one located on Mond's land and a second located east of the Project Site near Clonmell Creek."*<sup>4</sup>

*"Field observations have confirmed that four osprey nests were established on the Project Site on man-made structures including utility poles and a loading arm located at the wharf."*<sup>4</sup>

Even with the best mitigation plan in place, there would inevitably be some level of disturbance to these nests versus the no-action alternative which would leave the nests as they currently are. The nests are not even mentioned in the public notice and this is an issue that the public should be aware of. While formerly a highly-degraded site when DuPont owned and operated the property, the wetland and upland portions of the site have reverted to a natural state with a diverse ecosystem suitable as nesting habitat for these two imperiled bird species. Any disturbances or alterations to these nesting areas could be detrimental to the breeding success of these birds and therefore the future viability of their populations in this area.

Additionally, there is evidence that the acoustic impacts from construction activities, such as those described for this project, can significantly harm fish.<sup>7</sup> The effects of underwater sounds created by pile driving on fish may range from a brief acoustic annoyance to instantaneous lethal injury depending on many factors.<sup>5</sup> Even at non-lethal levels, low levels of acoustic damage may result in the fish not being able to swim normally, detect predators, stay oriented relative to other fish in the school, or feed or breed successfully.<sup>5</sup> This is a potential threat to all fish, including both sturgeon species as well as all the fish that serve as host species to mussels.

## **6. Increased Ballast Water Needs and Discharge**

The deepened 29 acres of river area that would provide access to the proposed deepwater port would result in larger and deeper draft vessels coming up the River which means more ballast water needs, discharges, and impacts. Impingement and entrainment of the variety of species discussed in this comment and beyond due to the intake and discharge of ballast water could be significant. The increased intake of ballast water from the River as a result of the commercial vessels coming into the River due to this project would entrain early life stages of commercially and recreationally important fish including American shad, alewife, blueback herring and striped bass.<sup>2</sup> The cumulative effects of this impingement and entrainment need to be considered in conjunction with the impingement and entrainment that already occurs at existing cooling water intakes operating in the Delaware Estuary and River, including the nearby Paulsboro and West Deptford Township facilities.

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<sup>6</sup> Ramboll Environ (2016). Compliance Statement in Support of Multiple Individual Permit Applications. Appendix E, Habitat Impact Assessment Report, July 2016.

<sup>7</sup> Delaware Riverkeeper Network (2011). Supplemental Comment Re: 2011 Draft EA for Delaware River Main Channel Deepening Project Philadelphia. Submitted to U.S. Army Corps of Engineers on July 6, 2011.

In addition, the concerns about invasive exotic species that may result from larger discharges of ballast water from larger vessels cannot be overstated in terms of either ecological or economic impacts. The invasion of such species into major ports and waterways of the U.S. have cost billions of dollars in control efforts and lost economic value from damage to important fish and wildlife species as well as the habitats that support them.<sup>2</sup> For more information see

[http://water.epa.gov/polwaste/vwd/ballastwater/invasive\\_species\\_index.cfm](http://water.epa.gov/polwaste/vwd/ballastwater/invasive_species_index.cfm)

[http://water.epa.gov/polwaste/vwd/ballastwater/invasive\\_species\\_bal\\_links.cfm](http://water.epa.gov/polwaste/vwd/ballastwater/invasive_species_bal_links.cfm)

<http://www.invasivespecies.gov/index.html>

## **7. Submerged Aquatic Vegetation**

As with mussels, there is lack of survey information by the applicant regarding the presence of any submerged aquatic vegetation (SAV) in the project area and it is not even mentioned anywhere in the application or in their Compliance Statement. SAV is vital habitat for many of the life stages of prey base, young-of-the-year striped bass, and river herring.<sup>2</sup> It functions as a substrate for macroinvertebrates and as cover for small fish as well as a source of dissolved oxygen for the water.<sup>2</sup> For the Delaware Estuary, the current high levels of dredging and industrial shipping limit the extent and abundance of this vital habitat, necessitating the protection and preservation of each SAV bed. If present in the project area, the resulting implications for water quality and species require careful consideration.

## **8. Recreational Impacts**

This project would likely introduce toxic contaminants into the River and food chain. The Delaware River and Estuary are major destination points for recreational fishing. Exacerbating the already contaminated conditions of the fish, subjecting them to extended fish advisories due to the addition of more contaminants into the River system, or resulting in new advisories, are potential harms to this major recreational use of the River. Spending in the Delaware River and Estuary region by recreational anglers is valued at \$62 to \$100 per angler per day.<sup>2</sup> NOAA reported in 1991 that roughly 155,000 people spent almost \$60 million fishing in Delaware's waters resulting in \$29 million in earnings, and supporting 1,605 jobs.<sup>2</sup>

In that same year, 950,000 people spent more than \$630 million fishing in New Jersey's waters, resulting in \$400 million in earnings, and supporting 16,750 jobs.<sup>2</sup> While the Delaware Estuary is not responsible for all of this fishing and related jobs and income, it is responsible for a fair share of it. Further contamination and/or even the perception of additional contamination from this project could create significant recreational and economic harms.

## **9. Economic Costs**

In addition to the numerous environmental costs of this project, there would also be extensive economic costs. There are potentially hundreds of millions of dollars a year that could be lost in river jobs and economic returns (present and future) associated with the environmental resources put at risk from the project.<sup>2</sup> The project puts at risk the fish, shellfish, wildlife, and habitats that are critical for providing hundreds of millions of dollars of income and jobs in the present and future. Finally, there is no demonstrated public benefit that outweighs the level of public, economic, and environmental harms that will result from implementing this project.

## **10. Secondary Impacts**

The proposed project does not appear to sufficiently address compliance with the Clean Water Act's Section 404(b)(1) guidelines for consideration of alternatives. The fundamental objective of these guidelines was to ensure that discharges of dredged or fill materials into waters of the US, including wetlands, should not occur unless it can be demonstrated that such discharges either individually or cumulatively, will not result in unacceptable adverse effects on the aquatic ecosystem (40 CFR 230.10(a)). As such, the applicant is required to evaluate opportunities for use of non-aquatic areas and other aquatic sites that would result in less adverse impacts of the ecosystem.

It is not clear from the public notice how secondary impacts to the aquatic ecosystem were evaluated by the applicant. In many cases the secondary impacts result in significant impacts to the environment including impacts to delegated wetlands and waters. The overall project contemplates impacts to 7.22 acres of riparian zone as well as 8 acres of freshwater wetlands, 6 acres of coastal wetland, 0.39 acres of open water and approximately 47 acres of freshwater and coastal wetland buffer areas. The applicant has not satisfied its obligation to show that it exhausted attempts to avoid and then minimize of impacts to regulated resources such as riparian zones, coastal and freshwater wetlands and wetland transition area. Compliance with the 404(b)1 guidelines has not been seriously attempted or any effort to adequately illustrate compliance. The project proposed before the Army Corps should not be reviewed as approval of the waterfront portion in isolation of all other impacts of this project as these impacts are inextricably associated with other significant impacts situated outside of the Corps' jurisdiction.

## **11. EPA Review**

Section 404(q) of the Clean Water Act establishes a requirement that the Secretary of the Army and the Administrator of the EPA enter into an agreement assuring that delays in the issuance of permits under Section 404 are minimized. In August 1992, a Memorandum of Agreement (MOA) was created and the EPA may request that certain permit applications receive a higher level of review within the Department of Army. This project clearly demonstrates that there is the potential for adverse impacts to aquatic resources, as such, this project should receive a higher level of review. Has communication with the US Environmental Protection Agency occurred with regards to this project? If not, it is requested that the EPA be made aware of this project and initiate a higher level of review.

## **12. Compensatory Mitigation**

In 2008, EPA and the US Army Corps of Engineers jointly promulgated regulations revising and clarifying requirements regarding compensatory mitigation. According to these regulations, compensatory mitigation means the restoration, establishment, enhancement and/or in certain circumstances preservation of wetlands, streams and other aquatic resources for the purpose of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. The public notice states that the applicant has

*“avoided/minimized impacts to the aquatic environment by incorporating engineering/construction procedures into the process that will substantially reduce impacts to aquatic resources. Additionally, the applicant states that the amount of fill in open water has been minimized by designing a portion of the multi-purpose pier as an open deck structure and by removing existing deteriorated and unnecessary*



*marine structures. Due to the large area and volume of existing structures to be removed, there is an overall decrease in the area and volume of fill in open water compared to previous conditions. Therefore, it is the opinion of the applicant that the new fill is more than offset by the removal of existing structures and fill, no compensatory mitigation is being offered.*

The applicant does not provide any factual basis in their alternatives analysis to support this claim. As such, compensatory mitigation should be provided in accordance with 40 CFR Chapter 1 – Subpart J to address the losses of aquatic resources.

Delaware Riverkeeper Network opposes the approval by the Corps of the proposed permit that is being considered under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344) for the reasons discussed herein and because the proposed permit does not serve the public interest, would have a substantial impact on the natural resources of the Delaware River and because there is no indication that this project is needed by the public.

Respectfully submitted,

Handwritten signatures in blue ink. The signature on the left is 'Maya van Rossum' and the signature on the right is 'Tracy Carluccio'.

Maya van Rossum  
the Delaware Riverkeeper

Tracy Carluccio  
Deputy Director