



November 22, 2010

Watershed Management Program Manager
2 East Main Street
Norristown, PA 19401

Re: E51-242 – the Southport Marine Terminal

Dear Watershed Management Program Manager,

I thank PA DEP for providing the Delaware Riverkeeper Network additional time to respond to this public notice beyond the noticed comment period. We have been on record, in writing, with the Department about this project and our concerns for several years now and so appreciate the additional time.

The Delaware Riverkeeper Network oppose PA DEP issuing permits to the Southport Development project and/or certifying it as in compliance with the Federal Clean Water Act or applicable state water protection laws.

In addition, our organization believes that PADEP is violating its own legal review requirements as pertains to this project.

The Southport Development project involves the filling in of 12.28 acres of open water (.2 of which is emergent wetlands, 1.08 acres of which is shallow water habitat, and 3.62 of which is deep water habitat); 3.75 acres of nontidal wetlands; .73 acres of a tidal drainage area; filling in an unspecified amount of floodplain lands with 3 to 4 feet of fill in order to raise the area to above the 100-year floodplain (in fact to raise it to the 200 year floodplain); dredging a 35-acre area within the River to a 40+2 foot depth; impacts to approximately 4600 linear ft of existing shoreline; the permanent loss of 1.08 acres of submerged aquatic vegetation; and having a 116 acre development footprint which will necessarily be on riverside lands and result in the loss of potential terrestrial habitat.

This is clearly no small project.

The Record Demonstrates that the Process Associated with Review of the Southport Project is Not Being Properly Applied by the State.

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In the minutes of a September 23, 2009 regulators meeting about the Southport project it was explained that project backers were seeking a decision by the PADEP and the USACE that the project was “permittable” prior to submitting a permit application. Providing such a decision is highly inappropriate and legally questionable. Without permit application materials the agencies cannot answer the question of whether a project is permittable, and if they were to provide such advance assurances they would be undercutting the legal permitting process and inappropriately circumventing the requirements of law and public policy.

And yet, at this September 23, 2009 meeting, PADEP assured that a permit could be obtained based only on preliminary design materials that would/could later be modified. Such a commitment of review and approval based on only preliminary information that all agree can change undercuts the legal, permitting, agency and public process. A permit decision is to be based upon the project proposed, not some advance speculation about what the project might ultimately look like. In fact, the minutes from this meeting assert that this preliminary design could be a simply “15% design” – 15% is no where near completion and demonstrates the inappropriate advance commitment of permitting authority and final decisionmaking.

The documents Delaware Riverkeeper Network has reviewed regarding this project demonstrates that the Environmental Assessment process was neither objectively nor appropriately pursued. Documents on the record indicate that the applicant requested, and PADEP along with the Army Corps agreed, the project’s Environmental Assessment materials could be done piecemeal. (See for example Oct 29 meeting minutes.) The importance and value of any sort of Environmental Assessment is in their comprehensive and complete nature thereby ensuring complete and informed analysis over every element of a project to be considered and reviewed. Providing piecemeal review and sign off robs the drafter, reviewer, and the public of the opportunity to allow later information identified or collected to inform earlier sections of review or drafting. An EA is intended to be a single, comprehensive document, reviewed and approved (or challenged) in its entirety. Allowing a piecemeal process for fulfilling the requirements of any required environmental assessment fails to fulfill the intent or substance of the process.

The documentation we have seen from our various file reviews indicates that this project was to be the subject of an “enhanced EA” process. Delaware Riverkeeper Network’s repeated requests for definition of an “enhanced EA” to the Army Corps have gone unresponded to. The law requires the preparation of an EA, not an enhanced EA or modified EA or piecemeal EA. It is important the law be honored and complied with. We would note, that according to Army Corps documents this decision to undertake an enhanced EA was “decided several years ago”. The basis for that decision, by whom it was made, when and for what reason is unknown and apparently undocumented as Delaware Riverkeeper Network has been submitting FOIA’s to the Army Corps and conducting file reviews at PADEP for several years now and never received any such information.

Furthermore, that the draft table of contents for an EA (a draft document that was prepared by project representatives for review and feedback from agency representatives), well before the creation of any Environmental Assessment documentation, pre-identified Southport as the preferred alternative. This pre-determined outcome demonstrates that the spirit and substance of the EA process were not fulfilled, but are merely mandatory procedural hoops to

be jumped. Asserting prior to EA analysis that only an EA would be needed and that the outcome of that EA would be the selection of Southport before the EA was even performed casts an advance shadow of illegality over this document and process.

Further, multiple email communications, including one dated February 11, 2008 from John Kennedy to Randy Brown as well as a memorandum drafted by “PADEP SERO” on the same date are clear that joint federal 404 and state 105 permitting for a project like Southport is not an option. And yet, July 2010 Weston Solutions submitted a Joint Application for Chapter 105 and Section 404. PADEP conversations on this subject have been consistent and clear – no joint permitting. And yet now we see joint permitting. A joint permit process is a changed review process that diminishes the opportunity for public and other agency input and review. It is inappropriate for PA DEP to diverge from law, policy and/or practice for Southport.

The Encroachment on the River with Dredging and Fill Material Is a Source of Many of the Environmental Harms Discussed and so Should Not be Allowed by Any Clean Water Act or PA Water Obstructions and Encroachments Permitting.

The Clean Water Act and implementing regulations and guidance are clear that when there is a practicable alternative that would inflict less harm on the environment and aquatic ecosystems, that alternative should be chosen. Discharges of dredge or fill material are not allowed if there will be a detrimental effect on critical habitat for endangered or threatened species; if it will result in or contribute to the significant degradation of the waters of the US; or if there are other appropriate or practicable steps that can be taken to minimize potential adverse impacts of the discharge to the aquatic ecosystem.

No Clean Water Act permit should issue for this project based on the information available, which is too limited in the first place, but which also, to the extent we have it already, demonstrates significant harms to the Delaware River, its quality, ecosystems and aquatic life. And therefore PADEP cannot defensibly take any steps that encourage or support such permitting.

In addition, as this comment and the attached documents demonstrate, the proposed dredge and fill activities that will obstruct and encroach into the Delaware River are demonstrably and vastly damaging – to water quality, to waterflows, to habitats and ecosystems. Therefore, PADEP should not grant any state permitting or approvals for this project.

Regarding Water Quality

With regards to surface water quality impacts, we don’t believe the appropriate documentation has yet been amassed to determine what affect there might be, although we do know that the shallower reaches of the Estuary often have higher contaminant levels than the main channel.

Spoils to be used for this project, based upon official documents we have seen, tell us the spoils will either be from the deepening project (if that is allowed to move forward) or from existing confined disposal facilities operated by the Army Corps – the source of those spoils, the level of contaminants contained therein, etc, are important questions, still unanswered, that speak directly to the issue of water quality and need to be thoroughly planned for, studied, analyzed and addressed before any permitting decisions can be defensibly made.

But, what we do have on the record already, supports that there will be adverse water quality impacts that are significant and therefore should prevent any state or federal permits from issuing.

February 17, 2010 DRBC staff questioned the proposed sediment sampling for the areas proposed to be dredged:

- ✓ “we do not support the applicant’s proposal to perform PCB congener (1668A) analysis on elutriate water. In aqueous matrices in particular, the disagreement between Aroclor and congener analyses has been substantial. Analysis of the elutriate and of the Delaware River water sample ... should be performed using method 1668A.”
- ✓ “The applicant proposes to allow for an extended 72 hour settling time for the elutriate testing. The Inland Testing Manual, however, allows quiescent settling ‘for a time period equal to the anticipated field mean retention time, up to a maximum of 24 hours.’ A test settling time of 72 hours is not justified, and will yield results that do not correspond to the expected CDF return water.”

We have no information as to how these concerns have been addressed.

According to the USF&WS, samples for sediments to be used in this project demonstrate “that contaminants are leachable from the sediments at concentrations that would pose unacceptable ecological risk to aquatic organisms.” This means that these sediments deposited should only be used in areas where they will not be inundated during high water events and in a manner that reduces their potential for leaching from precipitation. Considering that spoils from this project are planned to be disposed of in the Fort Mifflin CDF it is very probable that the impacts USF&WS is concerned about will in fact occur.

According to documents on the record the spoils from the Southport project are planned for the Fort Mifflin CDF. This is highly likely to result in water pollution and harm. Fort Mifflin has been shown to effectively dump pollution back into the River from sediments disposed there rather than filtering it out prior to discharge.

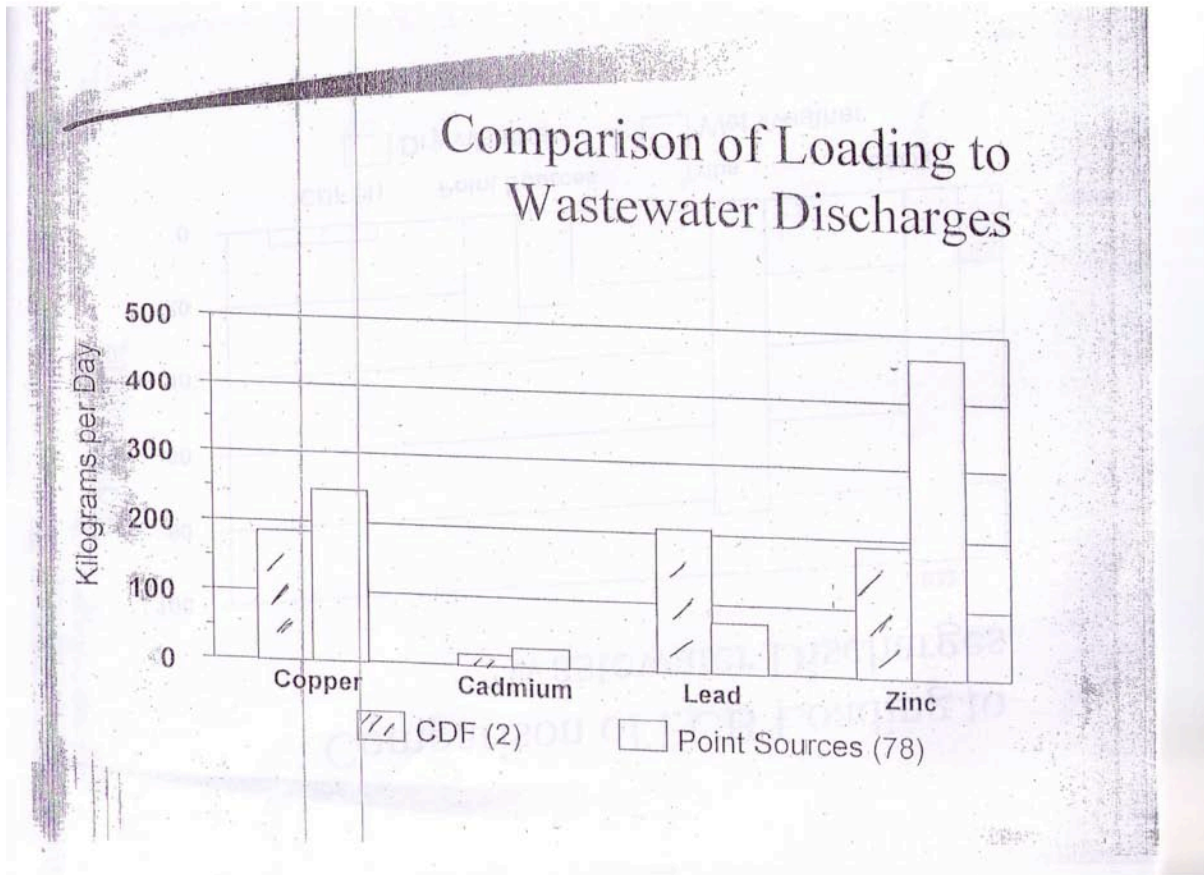
Dr. Thomas Fikslin with the Delaware River Basin Commission (DRBC) conducted a review of the overflow from confined dredge disposal areas associated with dredging projects in the Delaware estuary. Dr. Fikslin analyzed data from two existing dredge spoils disposal facilities - Money Island and Fort Mifflin. These areas receive sediments and water from Delaware River dredge operations. Sediments settle out in the area and the water is returned to the estuary. According to Dr. Fikslin's findings, these two CDFs, independently and collectively, are a significant source of toxic pollution to the Delaware River. The findings demonstrate that these particular facilities do not effectively remove contaminants from the discharge water that goes back into the River. Among the toxics discharged to the River during the de-watering process at these facilities are Cadmium, Lead, Copper, Zinc and total suspended solids. In some instances, the discharge concentration exceeds the DRBC's acute and/or chronic criteria, although the DRBC criteria are for dissolved metal.

For example, the following discharges were identified at the two sites:

	Money Island (total)	Fort Mifflin (total)	Acute Criteria	Chronic Criteria
Metals (ug/liter)				

Lead	268.1	242.0	48	16
Copper	229.7	76.7	13.3	9.1

According to Dr. Fikslin, these two disposal facilities are the eighth largest discharger to the estuary and in the case of lead discharge more lead than all 78 point source dischargers to the estuary combined. (See chart below)



Overhead slide from
 Dr. Tom Fikslin Presentation
 Nov. 4, 1998 at DRBC offices in
 West Trenton, NJ

Dr. Fikslin also found that these CDFs are a source of DDE to the River, and a potential source of PCBs that have been documented in the sediments of the estuary. According to Dr. Fikslin: his preliminary evaluation "indicates that CDFs have the potential to impact aquatic life through acute and chronic toxicity, and human health through the bioaccumulation of organic compounds such as PCBs and DDX."

This research regarding the contaminants emanating from Fort Mifflin CDF operations, coupled with the findings of the USF&WS, demonstrate the highly significant threats to water quality posed by Southport.

According to the National Marine Fisheries Service (NMFS) additional water quality concerns include “turbidity through the resuspension of sediments into the water column from dredging and port operations” degrading water quality, lowering dissolved oxygen levels, and potentially releasing “chemical contaminants bound to the fine-grained estuarine/marine sediments.” Alterations to sedimentation and wave patterns caused by vessels entering and exiting the mooring area could also increase turbidity. “Suspended sediments mask pheromones used by migratory fishes, and can smother immobile benthic organisms and demersal newly-settled juvenile fish.” (NMFS 10/22/2010) This is a particular concern for this project because its proposed location is an area that provides habitat, spawning and nursery habitat for commercially and recreationally valuable fish species as well as species listed or proposed for listing under the Endangered Species Act. Decreased water circulation can also adversely affect striped bass survival because “strong current is needed to keep the eggs suspended in the water column and prevent them from being smothered by silt.” (NMFS 10/22/2010)

Information Available Demonstrates Southport will Do Unjustified Harm to the River, including Fish, Wildlife and Other Natural Resources that State and Federal Law are Intended to Protect.

As we have reviewed additional materials associated with Southport it has become increasingly clear that the array of cumulative harms associated with the project have not been fully discussed and analyzed in the project sponsor’s environmental assessment. But to the extent we have information on the record about this project, it shows a picture of tremendous ecological damage and harm.

This section of our letter/comment quotes and discusses environmental harms of concern raised by a variety of resource agencies and experts with regards to the Southport Project and related issues in this reach of the River. It is clear from this available information that a decision granting any permitting or certifications for this project at this time is unsupportable.

We submit for the record documents from experts discussing the historic effect of Delaware River dredging projects on sediment transport and wetlands erosion. This project involves a large volume of sediment removal and dredging – 35 acres to be dredged and anywhere from 1,008,000 to 1,306,000 cubic yards of river bottom sediment to be disturbed and removed. The cumulative effects of this new dredging activity and sediment removal initiative coupled with past dredging projects, and anticipated projects nearby such as the Philadelphia airport project that includes dredging of 37 acres of riverbottom, needs to be thoroughly and publicly assessed – to date it has not been.

Dredging Impacts on the Delaware Estuary Tides, a paper reprinted in 1993 documents that narrowing the Delaware River with fill projects increases the tides of the River. The ramification has been, and is, to flood marshlands, forcing them to move inland. This paper also discusses the ramifications of past and future dredging projects on the estuary. Currently there is a tremendous amount of development already existing along Delaware Estuary waters that prevents and/or inhibits the inland migration of many marshlands. The ramifications of over 12 acres of fill, individually and cumulatively with other fill that has happened and is proposed for the future, must be an important part of the consideration of the Southport Project. Note that the airport recently selected an option in this same reach of river that also requires filling in part of the mainstem river. Also, in one of the attached emails to this comment there are discussed a variety of known development proposals for this reach of the

River that need to be part of any environmental assessment and cumulative impact analysis regarding the Southport project and the habitat and other ramifications of placing fill in this reach of the River. In addition, filling in the River, floodplains and wetlands must be considered in the context of flooding, and the affect on increasing flooding and flood damages in estuary communities.

The Southport project includes dredging 35 acres of River bottom. The attached letter for the Delaware Estuary program discusses the ramifications of dredging for Estuary marshlands – that historic dredging, and future dredging, has the ramification of increasing erosion of sensitive and ecologically important marshlands. Southport and its proposed dredging will contribute to this harmful dynamic. These kinds of ramifications have not been considered.

Of note, the National Marine Fisheries Service in a December 1, 2009 meeting with the PRPA about the Southport project specifically stated that “the effects on hydrodynamics and sediment accumulation or erosion would need to be evaluated.”

The reach of the River to be harmed by Southport (according to the US Fish & Wildlife Service, July 19, 2004) is used by a wide variety of fish species including (but not limited to):

- ✓ In the deeper inter-pier areas: spot, striped mullet, bay anchovy
- ✓ In the shallower inter-pier areas: hogchoker, channel catfish, largemouth bass, spottail shiner.
- ✓ In addition this reach of river is used by American shad, blueback herring and striped bass.

September 2, 2010 the National Marine Fisheries Service wrote about the Philadelphia International Airport Project and expressed concerns about the impact of that project on alewife and blueback herring. Blueback herring is a prey species for juvenile bluefish. Because the airport proposal includes filling in 25 acres of the freshwater portion of the River that is used by blueback herring and alewife NMFS has concerns for the effects to the essential fish habitat of the juvenile blue fish which is a federally managed species. In addition, their letter notes that “river herring are commercially and recreationally valuable species managed by the Atlantic States Marine Fisheries Commission.” And, NMFS notes, “Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960’s, they have been designated as a species of concern by NMFS in a Federal Register Notice dated October 17, 2006.” Because the Southport project, according to the agency discussions we reference and have seen in various files, also impacts these same species and same reaches of the River, it seems clear that the concerns for the airport project are also applicable to Southport – individually but also cumulatively.

The Southport site has been found to be important striped bass spawning area. Because Big Timber Creek right across the river has been found to be one of the poorest sites (according to a 1994 study says NMFS) “it cannot be assumed that the surrounding areas are equally as important as this site. Striped bass return to the same areas over and over.”

The area, according to documents we have seen, is a nursery area for American Shad, themselves determined by Atlantic States Marine Fisheries Commission to be at depressed levels in the Delaware River. As a result, the ramifications for shad populations from the

Southport Development Project need careful consideration – harms to habitat, juveniles or any element of the species is of heightened concern because of the depressed health of their populations already in the River, and also because of the economic, recreational and cultural significance of this species for the Delaware River and Delaware River communities.

According to the US Fish and Wildlife, the interpier area has particular ecological importance “because of the occurrence of fourspine stickleback, mudflats, and submerged and emergent vegetation.” “Furthermore, the area of the Delaware River downstream ... within the former Philadelphia shipyards is a significant spawning area for striped bass. In addition to the aquatic habitat values of this area, the shoreline around inter-pier 3B, although disturbed by concrete rip-rap, also supports shrubs and other vegetation that attract a variety of warblers and other songbirds.”

“...the Fish and Wildlife Service is concerned about the future development of these two sites.” [SouthPort and Piers 78-80-82] According to the Service Inter-pier areas 3A and 3B “should be left undisturbed, and every effort should be made to avoid or minimize adverse impacts to all of the other interpier areas.”

The PA Fish and Boat Commission has described the resident and anadromous fisheries located in this part of the River as “of considerable value both ecologically and recreationally.” (PA Fish and Boat Commission to the PRPA, Letter 6/1/04)

According to a 2004 Normandeau Associates report done for the project (Aquatic and Benthic Resources Study for Assessment and Improvements to Berthing Area South Port Project No. 03-149.S prepared by Normandeau Associates March 2004) aquatic vegetation found in the proposed project area “is important for its function as a substrate for macroinvertebrates and as cover for small fish as well as a source of dissolved oxygen for the water. Vegetated intertidal and shallow subtidal habitat is not common along the Delaware River Philadelphia waterfront and should be considered ecologically important along this shoreline.” The Philadelphia/Camden reach of the Delaware River is known to still suffer from an oxygen sag that can be affecting fish species, including their ability to reproduce and propagate. As a result, removal/destruction of an area of vegetation that is an important contributor of oxygen in this reach of the River is of heightened concern and should not be allowed. As our regulatory agencies and communities take steps to increase oxygen levels for the benefit of ecologically, recreationally and economically important fish and aquatic species, PADEP should not be issuing permits to a project that will do harm to habitats that are currently contributing needed oxygen to this reach of the River.

The Normandeau study notes the presence of water celery (*Vallisneria americana*) in the subtidal Interpier Area 3B portion of the Southport project. In other contexts, NJDEP has articulated the importance of rebounding wild celery species in the estuary and the importance of protecting this protected species. (*NJDEP Briefing, Delaware River Main Channel Deepening Project, Supplemental Environmental Impact Statement (SEIS) Information, January 2007.*) To the extent we are talking about the same species of emergent vegetation (while one calls it water celery and the other wild celery they all seem to be discussing *Vallisneria americana*), it seems clearly important that there be careful consideration of the impacts of Southport on this species.

Further, in documents we have seen, NMFS has expressed particular concern about the presence of water celery (*Valisneria*) because it has high wildlife value and it is not clear how readily it can be established at mitigation sites. NMFS, in its 2010 letter regarding the airport project, also talks about the tremendous value of wild celery (*Vallisneria americana*) identifying it as valuable nursery, forage and refuge habitat for a variety of fish including striped bass, American shad, alewife, and blueback herring. As we are talking about reaches of the River in proximity to one another, these concerns need to also be considered in the context of Southport.

The site used to be on the National Priority List of contaminated sites, we are unclear as to its current status in this regard.

According to the National Marine Fisheries Service in a memo dated Nov 13, 2009,

- “Weston says that there are no shortnose sturgeon or Atlantic sturgeon on the site. The problem is the site was only sampled once in late October of 2003 by Normandeau Associates. NER’s PRD sent the PRPA a letter in 2004 disagreeing with their determination that shortnose were not on the site. The sampling was not done at the correct time of year and the[y] only looked in the pier areas.”
- Also according to this memo Weston did not evaluate whether a tidal ditch on the site provides habitat for glass eel. If this is the case then PA Fish and Boat will want the channel to remain tidal and that piping it and making it dark would be an issue of concern. Apparently the project plans to pipe the entrance of the channel. *(Note from DRN: Despite some discussion of this at a march 29 meeting recently seen, the outcome of this is not totally clear and does seem to include some culverting but not total piping and that the channel is in fact to be “realigned” but with little specifics given – without full access to the file or independent review we don’t really have full information.)*
- There is also a question about whether a portion of this tidal channel and the flooded embayment portion of the “ditch” might have been mitigation for something else. Apparently this “stormwater ditch” was part of a Norfolk Southern project, it was designed by Ken Anderson of PADEP to avoid impacting wetlands and it is being used by “hundreds of minnows” and yet its full usage by fish was not evaluated. The area is approximately 12 feet wide by 2000 feet long.
- As early as 2004 NMFS made clear to the PRPA that more than a single year of sampling would be required to characterize the habitat at the site and that they would have to be sure to sample at the right time of year. This sampling has not been done. Sturgeon and Asiatic clams are among the focused areas of sampling required.
- NMFS has also made clear that mapping of SAV, including eel grass, would be required and that June was the best month for this work.
- According to Fish and Boat representatives “the entire area from the interpier areas at the north end of the site all the way around to the south end of the site is valuable for young-of-year sturgeon, shad and striped bass.”

We have seen a new sampling plan discussed for the year 2010, but as noted in the bulleted list above, a single year data collection is not enough to characterize use and affects.

The project is a threat to federally listed threatened or endangered species.

- ✓ According to the National Marine Fisheries Service in a memo dated Nov 13, 2009, “Weston says that there are no shortnose sturgeon or Atlantic sturgeon on the site. The problem is the site was only sampled once in late October of 2003 by Normandeau Associates. NER’s PRD sent the PRPA a letter in 2004 disagreeing with their determination that shortnose were not on the site. The sampling was not done at the correct time of year and the[y] only looked in the pier areas.”
- ✓ According to meeting minutes dated Oct 29, 2009 attended by the various agencies, “Likely fish species of concern in the area could include the shortnose and Atlantic sturgeon. The fish habitat resource has been document in previous studies that have been done in support of other Southport Projects. Charlie stated that this type of habitat in the Delaware River is not common in southeast Pennsylvania.”

Studies regarding Atlantic Sturgeon are demonstrating the precariousness of this species in the Delaware Estuary and documenting the importance of protecting the freshwater reaches of the river as necessary for Atlantic and Shortnose Sturgeon habitat and reproduction. The failure to find Sturgeon, either Atlantic or Shortnose, in the acreage planned to be filled by Southport is not surprising considering that there are presumed to be less than 1,000 Shortnose sturgeon throughout the Delaware estuary and less than 100 Atlantic sturgeon. (See Delaware River State of the Basin Report, 2008.) It is the value of this reach of the River as habitat for the Sturgeon that should be controlling in terms of the need for careful study and review, not whether any were caught during limited sampling by Normandeau in support of the project.

There has been an assertion by project representatives that 6 year old fish data would/could be used to assess the affects of this project. With regards to Atlantic and Shortnose sturgeon affects alone there has been important new information that has come to light in recent years about these species, their habitats, migrations, their population numbers in the Delaware River and their genetic status vis-a-vis other sturgeon populations in the United States. The Atlantic Sturgeon has been proposed for federal listing, and has been identified as genetically unique.

While the Normandeau information discounts much of the habitat value of the area to be filled in by Southport due to bulkheading and other manmade harms, as well as the presence of macroinvertebrates tolerant of reduced dissolved oxygen conditions, the destruction that has been inflicted to date by manmade activities is not what should control the review of the value of this reach of the River. There are ongoing efforts at the Delaware River Basin Commission to address low Dissolved Oxygen levels in the Estuary. There are also many strategies for restoring damaged lengths of riverbank using proved, proven and available science and technology, including in the Philadelphia region. So the consideration of the habitat value of the acreage Southport proposes to fill should be driven by the environmental habitat and benefit this area could provide under restored condition, as water quality restoration efforts are currently underway and physical habitat restoration is a viable and available opportunity if the site were to remain undestroyed by the Southport Project.

According to Barry Dubinski also at the Oct 29 meeting, “there are red-bellied turtles in the tidal area, state-listed plant species, and the bald eagle nest.” In fact, there has already been an effort to see the ability to remove the bald eagle nesting tree, a significant environmental harm.

In documents we have seen the US Fish and Wildlife Service has expressed concerns about the loss of shallow water habitats, the disposal of dredged material for this project and the potential contaminants it might contain, as well as migratory fish concerns.

Concerns about the introduction of invasive terrestrial and aquatic species from visiting container ships has been raised and as far as we know are not addressed.

NMFS has stated it “believes this project will have a very high impact to the fish and benthic environment and is skeptical an adequate mitigation plan can be crafted to compensate for the losses within the proposed project schedule.” (See notes from Dec 1, 2009 meeting with NMFS at Sandy Hook, NJ). From the notes it is unclear which version of the project NMFS was discussing with the PRPA at the time of this meeting (33 acres river fill or over 12 plus other changes) – but the fact that they speak so strongly to the Southport proposal at any point demonstrates the need for serious consideration of the project and its environmental impacts.

It was recommended by a Fisheries Biologist with the PA Fish & Boat Commission that the net design and gear described in “Efficacy of a Benthic Trawl for Sampling Small-Bodied Fishes in Large River Systems” by Herzog, et. al., North American Journal of Fisheries Management 25:594-603, 2005 should be used for the data collection associated with Southport. The gear and methods used in this paper apparently resulted in higher catch levels for fish and fish data, including sturgeon. Were these gear and methods used in the sampling for Southport?

The loss of the riverside lands to development, coupled with the loss of associated wetlands and water habitats will have an affect on birds that use the area either seasonally or year round. That areas surrounding the project site and ecosystems to be damaged are already developed does not diminish the affect to bird life, or other life as the project sponsors suggest in draft documents, in fact it enhances and magnifies the harm. The lesser the amount of habitat available in a reach of river for aquatic, land and bird life the more valuable that which is left behind. These left over havens of good habitat are sometimes the last vestiges available to support or sustain migratory, seasonal or permanent wildlife, bird life and/or aquatic life. Their value is not diminished by the loss of other available habitat nearby due to previous development; their value is instead magnified.

Other areas that need to be considered and so far have not been:

- The impact of noise and vibrations (hydro-acoustic affects) on fish from pile driving, it can be harmful and so analysis is needed.
- Contaminants from the site, oil spills, anti-fouling compounds, ballast water impacts.

Weston, a consultant working on this project, says that there are no options other than this project at this location. But it is clear from the record that consideration of other sites was given merely cursory review and were summarily dismissed for undemonstrated reasons. For example, pursuing a port project to the south of the Navy Yard was dismissed because while it would avoid filling in 33 acres (now over 12 acres) of the River it would require increasing the length of channel to be dredged from 200 ft to 800 ft. The level of comparative harm from filling over 12 acres vs dredging an additional 600 ft is not characterized or discussed in the materials we have had the opportunity to review to date.

American Eel are found, according to the US F&WS, within the stream channel, carrying stormwater, that is within the Southport project's boundaries and will be acted upon as part of this project. The USF&WS, in its Sept 26, 2010 letter sent to the Corps also discusses the ecological and historic value and role of American eel within the Delaware River and states its interest in "protecting and enhancing the abundance of American eel in these inland waters [referring to Delaware River tributary streams] so those contributions may continue and increase. This can be accomplished by protecting, restoring and enhancing the habitat suitability and access for eels in the watershed, including the stormwater (stream) channel located on the project property." This issue of the importance of the stream channel on site for American eel was raised multiple times during discussions about the project with agencies prior to this public notice, and yet the project sponsors have continued to ignore the issue.

The list of fish species that use the region of the River and its shoreline affected by Southport is significant and includes:

- ✓ alewife
- ✓ blueback herring
- ✓ American shad
- ✓ striped bass
- ✓ yellow perch
- ✓ hickory shad
- ✓ banded killifish
- ✓ mummichog
- ✓ American eel
- ✓ Atlantic herring
- ✓ Atlantic menhaden
- ✓ Bay anchovy
- ✓ gizzard shad
- ✓ hogchoker
- ✓ white perch
- ✓ Atlantic silverside
- ✓ Atlantic sturgeon
- ✓ shortnose sturgeon

Striped bass eggs, according to NMFS, have been found to be most abundant between Wilmington, DE and Philadelphia. American Shad are also shown to spawn this far down in the Delaware River.

Many of the species listed, including blueback herring, alewife, American shad and hickory shad are species of concern for NMFS – these "are species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act."

According to the ASMFC American shad stocks are at an all time low. Declines are the result of a combination of overfishing, pollution and habitat loss. Although during the 19th century annual American shad harvests reached over 50 million pounds, today they are in the 1 to 2 million pounds range coastwide. The ASMFC believes that the Delaware River population is greatly depressed – so much so that it has created a shad management plan to focus on the species' recovery and restoration. To the extent Southport further impedes the protection and

restoration of the shad populations of the Delaware River it is working at cross purposes with both the ASMFC and NMFS, and is undermining the protection and restoration of a species vital to the ecology, economy, recreation, and culture of our region.

According to research cited by NMFS, juvenile striped bass prefer nearshore habitat to offshore habitat. To the extent that Southport will damage and destroy large swaths of nearshore habitat, the effects to striped bass will be significant. Similarly, white perch are generally found in shallow water (usually not deeper than four meters). The construction of Southport will result in damage and destruction to large swaths of habitat at this critical depth range. The project as proposed will result in the “permanent loss of 12.3 acres of intertidal and subtidal shallow water habitat including mudflats, a special aquatic site under the Clean Water Act, and more than an acre of SAV dominated by wild celery.” Additionally, more acreage is to be damaged by dredging and subject to shading – further diminishing or eliminating this habitat for species that rely upon such areas.

Fishery habitat is shown to be poor (according to the NMFS Oct 22, 2010 letter) when located under large, pile-supported structures. Therefore, the assertion that, because acreage subject to this outcome for Southport is not filled in, it is therefore not harmed or diminished for aquatic life use is entirely false. Harms to fish species in such areas result from reduced light, increased turbidity and reduced water circulation.

Asiatic clam, a food source for Shortnose sturgeon, is found in the proposed development site of Southport. Food for other species are also found at this location including Gammarus, polychaete worms, chironomus, and blood worms – known to be prey for striped bass, American shad and blueback herring. This caused NMFS to conclude that the Southport development site is one that supports prey species and provides forage habitat for fish. Similarly, Weston, the project consultant, concluded that “Based on the range of substrate type and the diversity and abundance of macrobenthic invertebrates present in the study area and the results of fish surveys, the macrobenthic invertebrate community at the proposed Southport Development Project provides a significant source of forage for fish utilizing the site.” (draft “environmental assessment” prepared by project proponents, 2010)

Additionally, young of year for many of these species were found in the dredge footprint of the project, adding the harms of direct or indirect effects from dredging to the broad array of harms and concerns raised by the Southport Project and, to date, insufficiently addressed in the purported environmental analysis of the Project.

According to the USF&WS September 26, 2010 letter – this site has the potential to support 33 mammalian species (2 species were observed), 60 bird species were documented to occur in the site (including osprey and bald eagle), and there has been documented use of the site by at least 6 herptile species.

Among the negative effects that have not been adequately considered or addressed is the degradation of the shallow water habitat along the southern shoreline of the site. According to NMFS (Oct 22, 2010 letter), this shallow water habitat “will be degraded as a result of the sedimentation and increased wave action due to the construction and operation of the marine terminal. “

Impingement and entrainment of the variety of species discussed in this comment due to the intake and discharge of ballast water will be significant. The intake of millions of gallons of ballast water from the River as a result of the commercial vessels coming into Philadelphia due to this project “will entrain early life stages of commercially and recreationally important fish” including American shad, alewife, blueback herring and striped bass. 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, but not limited to, the Salem Nuclear Generation Station, Eddystone 1-4, Delaware City facility, Edgemoor 104 and 5, Hope Creek facility, Sun’s Marcus Hook facility, the Paulsboro facility in NJ, Dupont Edgemoor in DE, and PP&L Martins Creek facilities, to name a few. These facilities kill billions of fish via impingement and entrainment, and the additional impingement and entrainment that will be caused by Southport must be analyzed and considered in this context.

The Alternatives Analysis is Only a Consideration of Different Ways of Doing the Same Project and So Does Not Provide the Rigorous Consideration of Options Required.

The US Fish and Wildlife Service, in its comments dated September 23, 2010, noted numerous deficiencies in the alternatives analysis. But despite the years of comment on this precise problem with the review and analysis of the project, the project sponsors have never sought to correct this major deficiency.

The “no action” alternative is clearly viable, as the project does not have a demonstrated “need” (See this comment below). Moreover, the USF&WS has the perspective that, if the project were to be constructed, there are other locations for the project and/or other ways to undertake it that would be less harmful. Clearly, a full range of alternatives to project location, methodology, and feasibility must be put forth and analyzed in full to meet current legal obligations.

Because project proponents have been unable to assert or substantiate a “need” for Southport and the tremendous environmental harm it will inflict on public resources, they have been unable to put forth a clear or credible project purpose. As so aptly stated by NMFS in its October 22, 2010 comment letter: “Without a clearly defined project purpose, it is not possible to develop a comprehensive analysis of alternatives.”

To the extent the project sponsor claims to have considered “alternatives,” its “alternatives” are merely 6 different configurations of the same project at the same site, all assuming in-water work. This does not begin to constitute a genuine alternatives analysis that provides the level of information and options necessary to make a truly informed choice and decision.

Project Materials Fail to Consider the Project of Which Southport is a Whole – This is a Major Information, Analysis and Review Deficiency that Cannot be Overcome with the Materials That are Part of This Review.

This project is part of a larger development project called the Philadelphia Navy Yard Master Plan. As such, Southport and its environmental harms must be reviewed as part of the whole project – i.e. the Navy Yard Master Plan – and should not be segmented off for separate review.

There has Not Been the Requisite Demonstration of Need. Southport is a Threat to River Jobs; the Claims of Creating them are Not Supported in the Record.

Project materials assert that the Southport project is needed for the ports of Philadelphia to “remain competitive” and that it will result in “thousands of new, family-sustaining jobs and inject substantial new business and tax revenue into the regional economy.” These assertions are not substantiated and in fact, when one looks at the record it can not at all be assumed accurate. In fact, projects like Southport put at risk jobs – present jobs and the potential for future jobs, associated with the fish and other life that will be harmed by the project.

The claims that Southport is needed for the Philadelphia ports to remain competitive is simply not true.

- Container vessel traffic to the Ports of Philadelphia, since 1990, have grown by 300%, this is a dramatic level of growth when one considers that in this same time frame the Port of Baltimore, a port at 50 feet, has only grown in container vessel traffic by 29%.
- Additionally, the need/desire for Southport has long been linked by the Philadelphia Regional Port Authority with the deepening of the Delaware River. The Army Corps has made clear on the record that deepening will not result in induced tonnage, in fact it will result in reduced vessel calls, and so assertions that Southport are needed to service a growing number of vessels that will be coming up because of Panama Canal expansion and deepening are not supported by the public record
- Furthermore, recall, the deepening, if it happens, is only to 45 feet, not the 50 plus feet that the mega container vessels aspire to.
- And finally, since the beginning of this year alone the Ports of Philadelphia have made a number of major port deals which demonstrate that port growth is happening regardless of there being no Southport project.

Southport is not needed to support, grow or keep the ports of Philadelphia competitive – the record and reality do not support such a claim. The Army Corps’ economic and EISs and 2009 EA documented created for the Delaware Deepening project demonstrate the Army Corps’ conclusion that deepening will not increase vessel calls or tonnage coming to the Delaware River, and therefore the claims of need for Southport in order to accommodate increased vessel calls that will result from deepening is demonstrably flawed.

A failure to construct Southport is not going to imperil jobs as project materials assert. That is a scare tactic designed to pressure the response of a permit and is wholly inappropriate in this permitting context.

In its October 22, 2010 comment letter the National Marine Fisheries Service also questions the justification of “need” provided for the project. NMFS correctly notes that while the project proponent is making increasing claims that other ports will lack capacity in the future and that this now displaced traffic will come to Southport, there is no documentation or citations provided to support these claims. The project proponent entirely fails to acknowledge that other ports across the country are indeed developing plans and programs to ensure their future capacity and growth. In fact, according to the NMFS letter, not only has the Port Authority of New York and New Jersey developed a Comprehensive Port Improvement Plan to ensure its future capacity and growth (this is one of the ports Southport proponents claim will lack future capacity, thus forcing vessels to Southport), its plan has undergone the NEPA process, including public scoping and review. Clearly, the likelihood of this plan’s implementation is far

greater than the speculative and unsubstantiated assertions made by Southport supporters to the contrary.

Southport is a major river fill project that threatens a wide array of aquatic species and habitat. As such, its construction actually may hurt already existing jobs, and/or prevent the rehabilitation of lost fishery jobs. Consideration of the ramifications for jobs dependent on a healthy River and River species should be of equal value, import and priority in the decisionmaking process. Delaware Riverkeeper Network submits a copy of its River Values report discussing the economic benefits of the species found in the River.

The River belongs to us all, not to the ports. And it is not okay to be sacrificing the River's health, its ecosystems or critters for port development projects to the detriment of the rest of us that are so dependent upon this River for every aspect of our local lives.

Mitigation Does Not Allay Concerns

The mitigation under consideration raises its own troubling set of issues. The mitigation is quite a distance from the reach of river and the habitats being harmed. The mitigation is all up in the Neshaminy tributary. But the harm is being done on the main stem river. There does not seem to be a correlation in the resources benefitting from the mitigation versus those harmed by the project. Further, the kinds of habitats being proposed don't seem comparable to those being lost. There is no discussion in the mitigation of the important water celery (*Valisneria*) discussed by agencies concerned about this project. Even further, some of the mitigation isn't mitigation at all, it is simply leaving in place fill and wetlands that already exist, in fact that is a major proportion of the primary mitigation option.

Jack's Marina seems to be the major mitigation option. This option is to create intertidal habitat (7.64 acres) and then to simply maintain existing fill to provide for red bellied turtles and to maintain already existing wetlands. Leaving in place fill and wetlands that already exist is not mitigation as these things exist and can continue to exist without intervention by the PRPA for Southport.

Areas B and C only add (if they were to be taken on in addition to Jack's Marina which it is not clear is being proposed, it seems maybe the proposal is for these areas in lieu of Jack's Marina) an additional 1.14 acres of nontidal wetlands, and 5.2 acres of tidal drainage area and .3 acres of subtidal wetlands respectively. In terms of open water and wetland habitats harmed by Southport the total is 16.76 acres. The mitigation options, all three, only provide for 14.28 acres of new habitat. And there is nothing comparable for the harm inflicted by the dredging or floodplain fill. It is not at all clear how, or if, these figures, with or without the maintaining portions of the proposed mitigation, meets the ratios for mitigation articulated by the National Marine Fisheries Service.

The National Marine Fisheries Service communicated that it was important that the "mitigation project provides habitat to the fish species impacted in the Southport project area." (See notes from Dec 1, 2009 meeting with NMFS at Sandy Hook, NJ). It is not at all clear that this is the case.

In addition, NMFS expressed particular concern about the water celery (*Valisneria*) because of its high wildlife value. NMFS has said that "it is not clear how readily this can be established at

mitigation sites.” (See notes from Dec 1, 2009 meeting with NMFS at Sandy Hook, NJ). There is no discussion of this issue in the materials presented about mitigation that we have seen.

Further, NMFS has made clear that “Equal or better habitat would need to be created in out-of-kind replacement. Characterization of existing conditions at potential mitigation sites would be necessary and would need to include some characterization of benthic invertebrates in addition to physical characterization of substrate types in aquatic (non-uplands) settings.” (See notes from Dec 1, 2009 meeting with NMFS at Sandy Hook, NJ). It is not at all clear that this level of analysis and/or the information necessary to determine it has either been gathered or provided.

According to the USF&WS letter of September 26, 2010, the mitigation proposed by the applicant does not fulfill the requirements of the law, does not mitigate for the various kinds and quality of environmental harms to be inflicted by the project, and does not provide the quantity and quality of information necessary to evaluate the mitigation offering. NMFS too in its October 22, 2010 letter challenges the proposed mitigation stating that it does not offset the impacts to NOAA trust resources. NMFS further, and rightfully, concerned that the mitigation is focused on the conversion of one type of aquatic habitat into another type of habitat – e.g. “the restoration of wetlands and the filling of existing subtidal aquatic habitat to create shallower aquatic habitat.” This is of particular note and concern when, as is the case here, the original habitat has “value to aquatic life.” The project proponents propose not to provide new habitat to make up for the habitat being destroyed, but simply moving the parts around and changing the type of habitat available – resulting in a net loss of habitat contributing to the health and vitality of the aquatic life and ecosystems that are public trust resources. Additionally, the amount of activity proposed “is not sufficient to provide even a 1:1 ratio for mitigation.”

Additional Concerns Regarding the Information Submitted For State Review and Decisionmaking

There are numerous concerns the Delaware Riverkeeper Network has with the information in the packet filed with the State that need to be addressed.

Page 3 of the application materials asks whether the project is funded by state or federal grants. The response marked is “no”. We question whether this is accurate as all press reports to date talk about Southport being funded by the Commonwealth of PA.

The state application materials assert that, because there is no increased flood risk to immediately adjacent properties, and because dredging within the river will be removing a volume of sediment greater than what will be placed within the floodplain, the “impact associated with the loss of floodplain area as a result of development of the property is anticipated to be negligible considering the amount of floodplain area associated with the large-scale river system and the design requirement of no net fill considering the dredged material volume.” (See pp. 1 & 2 of Project River Hydraulics Narrative) This assertion fails to recognize the values of a vegetated floodplain and healthy floodplain soils for pollution prevention and habitat. Moreover, it fails to consider the fill that is going to be placed within the River, over 12 acres. To simply discuss what is being taken out of the River and placed on the “landside portion of the site” without discussing what portion of the River is being filled by

this project is not only misleading, but also a violation of the intent, spirit and requirements of federal and state laws and regulations on floodplain protection and no net fill.

The state public notice asserts that only 3.62 acres of fill is to be placed in the River. This is not only inaccurate but intentionally misleading. 9.41 acres of intertidal/sub-tidal wetlands will be filled by this project in the Delaware River. Thus, an accurate quantity regarding fill into the River would be the total of the two numbers, i.e. 13.03 acres. In fact, even the project sponsor's own environmental assessment document says the project will require 13 acres of River fill. (See page ES-3)

The post construction stormwater plan is focused on grading and constructing the site to convey stormwater directly into the River. Based on the state of the science and engineering on stormwater management, this is an inappropriate first strategy. The project should be focused on infiltration, wet ponds with native vegetation, filtering strips vegetated with native plants that can both cleanse pollution from runoff and encourage infiltration, and so forth. But a strategy focused on direct discharge – whether by pipe or overland flow, is not in keeping with the spirit or letter of our stormwater and water quality regulations. It appears that only about 1/3 of the site is going to be filtered through an infiltration system of some sort. And as we read it, it appears as though this area is going to be well-used by the port operations thus minimizing the level of infiltration and pollution prevention that could be achieved by other approaches in combination with, or in lieu of, this one.

The PADEP permit application materials say that only 10 acres of waterbodies are affected by the project and no wetlands. This clearly contradicts all other information in the materials for this project. Page 17 of Appendix A.

While the July 2010 application materials discussing mitigation assert that a review of alternative sites preceded selection of the Southport site – this false claim is belied by the documents and comments provided by Delaware Riverkeeper Network and elsewhere on the record and in discussions about the project. Clearly Southport was selected first and justification was made later, with the no-action alternative not receiving due consideration as required by law, or common or fiscal sense.

The PADEP application materials asserted that this reach of the River is not listed on the Clean Water Act 303(d) list of impaired waters. But in fact the estuary is listed as impaired for PCBs and there have been extensive efforts to address PCB loadings into the River. There is extensive knowledge that contaminant levels are higher in shallow water sediments and that PCBs are harbored in Estuary sediments and can be resuspended into the water column as the result of dredging and disposal of spoils. The Fort Mifflin CDF where the spoils are to be disposed of is known as a source of PCB pollution to the Delaware River, as noted earlier in this comment. Analysis of the reintroduction of PCBs from this project should be receiving significant attention. The PCB issue must be thoroughly addressed as it is a significant source of contamination for fish in the Estuary, mandating the institution of an array of fish advisories for a number of species resulting in advisories to either limit or cease consumption of such fish. Increasing the levels of PCBs in the water column and, as a result, in the fish of the Delaware Estuary is an effect that must be carefully analyzed from an environmental, human health, and recreational ecotourism/economic perspective.

The July 2010 draft mitigation plan mentions rare, threatened and endangered species that are present and at risk from this project. After consulting with state and federal agencies the list includes: bald eagle (state threatened), Shortnose sturgeon (*Acipenser brevirostrum* – federal and state endangered), Red belly turtle (*Pseudemys rubriventris* – threatened), Eastern mudminnow (*Umbra pygmaea* – potential candidate), field dodder (*Cuscuta pentagona* – proposed threatened), bugle weed (*Lycopus rubellus* – endangered), velvety panic-grass (*Panicum scoparium* – endangered), forked fush (*Juncus dichotomus* – endangered), and Atlantic sturgeon (*Acipenser oxyrinchus* – federal species of concern and now proposed for listing as endangered in the Delaware River). As of July this list is extensive, and yet in the PADEP materials there is relatively little discussion about how these species will be harmed by the project, to what degree they will be harmed and what that harm translates into in terms of their population status, and how that harm could and would be avoided. This analysis and investigation does not fulfill the level of attention and detail mandated by the law for rare, threatened, endangered and candidate species under state and federal law.

While the state permit application materials discuss mitigation, the mitigation proposed for this project falls far short of what is needed to mitigate for the habitat harms to be inflicted. The proposal fails to discuss the ramifications for the wide array of rare, threatened, endangered and candidate species that would be affected by the project.

We further note that it is not appropriate for the state permitting application to have draft mitigation plans. The applicant needs to create and propose its own mitigation plan. A draft of what the project proponents might do (or might not do), and that speculates about what might be possible (or might not be possible) is not appropriate for State decision-making purposes.

It is not appropriate that the sustainability of any mitigation project be foisted on the shoulders of an already underfunded state agency such as PA DCNR, as is proposed by the mitigation draft plan. Programs and funds must be put in place to insure sustainability and maintenance, including for an invasives removal initiative to mitigate this major threat to habitat and ecosystems.

The project sponsor's environmental assessment proposes the project will require dredging of 35 acres of the river bottom to a 42 foot depth, but then says that it may include dredging to the 47 foot depth. Were all project analyses and information based upon the 42 foot depth or 47 foot depth? If 42 then this project needs to be totally reassessed to the 47 foot depth level as that is what is ultimately being sought and planned for.

It is significant that in May 2007 Versar concluded that the affects of industrial development and shipping traffic were so significantly affecting aquatic vegetation that they didn't find much if any present; but later in June 2010 studies identified 1 acre of slip area with established SAV at the project site largely dominated by wild celery, as well as finding patches of Musk grass and algae species intermixed with wild celery in patches along the eastern shore of the Navy Yard property. It shows that the earlier data collection upon which much of the project sponsor's environmental assessment is based is dated and inaccurate. It is also a demonstration of either incompetence in 2007 or a dramatic rise in the health of this reach of the River for aquatic vegetation and therefore associated fish and water quality. If the latter is the case then it is even more important that this reach of River be protected and that this burgeoning population of SAV and all the benefits it brings be protected so that it can continue

to grow and spread bringing more health and habitat to this reach of the River that has been so degraded by past development and practices.

Continuing characterizations that the habitats and vegetation at the Southport site, in water and on land, are to be dismissed and viewed as expendable because some of them are infected with invasives or impacted by other harms is inappropriate. That a habitat has been harmed by past bad practices does not support an argument that it is expendable. In a reach of the River such as this, where habitat is at a premium because there is so little of it, its importance and value is magnified, and rather than be using “degradation” as an excuse for total decimation, it actually makes the case for active investment in restoration.

With regards to changes in the project in recent weeks/months

That in response to public outcry and other resource agency concerns the project has been reduced in size in terms of the amount of River fill tells us nothing about the project except that it was obviously over-designed in terms of the level of fill and harm. A reduction in the volume of fill does not speak to the harms that will result from the project as it is being proposed today, whether there are better alternatives available, and whether there is further opportunity to avoid River, environmental and community harm from the project.

In Conclusion

The Southport Development project involves the filling in of open waters, wetlands, floodplains, and dredging a vast area of the River for the ultimate benefit of private entities. The project will be undertaken by a private developer, and once complete the facilities will be leased to a private entity for their operations. As such this is a taking of public lands and a destruction of public natural resources for the purposes of serving private interests. Such damage to public interests to serve private gains is highly dubious, questionable and not acceptable. The use and abuse of our natural resources in this way should not be supported by regulatory agencies charged with protecting the public by in any way diminishing the rigor of the review, process and oversight that is provided.

Based on the information available, permitting for this project or certifications of compliance with law are neither warranted nor defensible. The project poses significant water quality harms, aquatic species harms, aquatic ecosystems harms, and changes to river flows and river dynamics that are significant and damaging. This project does not fulfill the requirements of minimized environmental impact that would justify it receiving permitting or approvals under either state or federal water protection and/or stream encroachment laws.

Submitted,

Maya K. van Rossum,
the Delaware Riverkeeper

Attachments:

- ✓ Email dated February 11, 2008 from John Kennedy to Randy Brown.
- ✓ Memo by PADEP SERO dated February 11, 2008

- ✓ Minutes of September 23, 2009 regulators meeting
- ✓ Minutes of October 29, 2009 regulators meeting
- ✓ Notes from Meeting with NMFS at Sandy Hook, NJ, Dec. 1, 2009
- ✓ National Marine Fisheries Service memo dated Nov 13, 2009
- ✓ National Marine Fisheries Service correspondence dated Sept 2, 2010 from Peter D. Colosi to William Flanagan.
- ✓ Regulatory Agency Mtg Minutes dated March 24, 2010
- ✓ Email from Kimberly McLaughlin dated May 27, 2010 re CAA General Conformity Rule
- ✓ Email dated May 20, 2010, subject DRBC Regulatory Review – Proposed Southport Project, Philadelphia, PA
- ✓ Email from James Newbold to John Kennedy, dated April 21, 2010 re Southport
- ✓ Email from Joseph Feola to Domenic Rocco and James Newbold dated April 16, 2010 Re Southport.
- ✓ Email from James Newbold to Zahra Nucci dated April 15, 2010, Re FW Southport
- ✓ Email from John Kennedy to Newbold, Sneath and Nucci dated May 8, 2008, re Southport Concept Comments
- ✓ Email from Domenic Rocco to Newbold and Nucci dated 3/30/10 Re Southport Mtg f/up
- ✓ Email from Randall Brown to Zahra Nucci dated 2/11/08 Re Southport issues.
- ✓ Email from Deborah Fries to Rocco and Newbold dated 7/29/08 re Delaware Avenue Projects.
- ✓ Email plus attachment from Thomas Shervinskie to Young and others dated March 9, 2010 re Draft Technical Plan for 2010 Southport Aquatic Studies. Attachment is titled Efficacy of a Benthic Trawl for Sampling Small-Bodied Fishes in Large River Systems.
- ✓ Handwritten notes dated 3/8/10 titled Southport Call.
- ✓ Handwritten notes dated 5/5/10 titled Southport Conf. Call
- ✓ Urban Waterfront Action Group Minutes dated Feb 12, 2003.
- ✓ David Densmore, US Fish and Wildlife Service Letter to James McDermott of the Philadelphia Regional Port Authority, dated July 19, 2004.
- ✓ Email from Mohler to Gorski dated Oct 9, 2009.
- ✓ Email dated Dec 9, 2009 re Southport Environmental Assessment TOC
- ✓ Memorandum for Files from Karen Greene National Marine Fisheries Service dated Nov. 13, 2009
- ✓ Briefing: Delaware River Main Channel Deepening Project, Supplemental Environmental Impact Statement (SEIS) Information, January 2007.
- ✓ Correspondence from the Partnership for the Delaware Estuary: a National Estuary Program dated December 23, 2008.
- ✓ Draft Final Report, June 30, 2005, Feasibility Assessment for Placement of Dredged material at the Philadelphia Naval Business Center and Southport, and cover memorandum dated July 11, 2005.
- ✓ Computer disc containing 1997 SEIS for Delaware River Main Channel deepening project and 1992 EIS for Delaware River Main Channel deepening project
- ✓ 2009 Environmental Assessment Main Channel Deepening project
- ✓ Delaware Riverkeeper Network River Values report on CD
- ✓ Series emails, subject “RE: EFH Coordination” with most recent dated August 20, 2010
- ✓ Emails, subject “RE: EFH Coordination” most recent dated August 19, 2010
- ✓ Email, subject “Southport Project” dated July 26, 2010

- ✓ Correspondence from PIDC to Army Corps dated Sept 22, 2010 supporting characterization that Southport part of a larger project and should not be segmented off.
- ✓ EFH Assessment Worksheet prepared by Ed Bonner, Army Corps of Engineers, Aug 5, 2010
- ✓ Comment letter from Delaware Estuary program discussing impacts of dredging and deepening on the Delaware Estuary, its sediment budget and marshlands.
- ✓ [Atlantic States Marine Fisheries Commission: American Eel](http://www.asmfc.org/americanEel.htm) -- <http://www.asmfc.org/americanEel.htm>
- ✓ Economic Update for FY 2011 Budget, Delaware River Main Channel Deepening project, dated December 2009
- ✓ Comprehensive Reanalysis Corrected Errors, but Several Issues Still Need to be Addressed, GAO report March 2010, GAO-10-420
- ✓ Correspondence from National Marine Fisheries Service to Army Corps of Engineers dated Oct 22, 2010
- ✓ Correspondence from US Fish and Wildlife Service to Army Corps of Engineers dated Sept 23, 2010