



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

BRAXTON DAVIS
Director, Division of Coastal
Management

February 14, 2019

MEMORANDUM:

FROM: Courtney Spears, Assistant Major Permits Coordinator
 NCDEQ - Division of Coastal Management
 127 Cardinal Drive Ext., Wilmington, NC 28405
 Fax: 910-395-3964 (Courier 04-16-33)
courtney.spears@ncdenr.gov

SUBJECT: CAMA / Dredge & Fill Application Review

Applicant: N.C. State Ports Authority Major Mod. 47-87
Project Location: 1 Shipyard Blvd., adjacent to the Cape Fear River, in Wilm., New Hanover County

Proposed Project: To improve and expand an existing turning basin

Please indicate below your agency's position or viewpoint on the proposed project and **return this form to Courtney Spears** at the address above by **March 8, 2019**. If you have any questions regarding the proposed project, contact Courtney Spears at (910) 796-7426 when appropriate, in-depth comments with supporting data is requested.

- REPLY:**
- This agency has no objection to the project as proposed.
Additional comments may be attached
 - This agency has no comment on the proposed project.
 - This agency approves of the project only if the recommended changes are incorporated. See attached.
 - This agency objects to the project for reasons described in the attached comments.

PRINT NAME Paul Wojoski

AGENCY NC Division of Water Resources

SIGNATURE *Paul Wojoski*

DATE 3/8/2019

- The project is under 401 Review by the Division; comments forthcoming.

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LINDA CULPEPPER

Director



NORTH CAROLINA
Environmental Quality

January 14, 2019

DWR # 20181585
New Hanover County

North Carolina State Ports Authority
Attn: Mr. Paul Cozza
2202 Burnett Blvd.
Wilmington, NC 28401

Subject: REQUEST FOR ADDITIONAL INFORMATION
NC State Ports Authority Port of Wilmington Turning Basin Expansion
USACE Action ID. No. SAW-2015-02235

Dear Mr. Cozza:

On November 15, 2018, the Division of Water Resources (Division) received your CAMA Major application requesting a 401 Water Quality Certification from the Division for the subject project. The North Carolina State Ports Authority (NCSPA, the applicant) has proposed to remove an existing wooden pier, install a sheet-pile toe wall and associated infrastructure and expand the width of and deepen the Port of Wilmington (POW) turning basin via dredging. The Division has questions about the proposed work and has determined that additional information is necessary to process your application. **The application is on-hold until all of the following information is received:**

1. Impacts – The project proposes to impact 17.76 acres of Primary Nursery Area (PNA) habitat in waters of the Cape Fear River. These waters are also designated as Anadromous Fish Spawning Area and are Class SC waters. Title 15A NCAC 02B .0220 outlines the water quality standards for Class SC waters:

(1) Best Usage of Waters: any usage except primary recreation or shellfishing for market purposes; usages include aquatic life propagation and maintenance of biological integrity (including fishing, fish and functioning PNAs), wildlife, and secondary recreation; [emphasis added]

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North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

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(2) Conditions Related to Best Usage: the waters shall be suitable for aquatic life propagation and maintenance of biological integrity, wildlife, and secondary recreation. Any source of water pollution that precludes any of these uses, including their functioning as PNAs, on either a short-term or a long-term basis shall be considered to be violating a water quality standard; [emphasis added]

Please demonstrate how the proposed project complies with Class SC standards set forth in Title 15A NCAC 02B .0220.

2. **Mitigation Plan** – The Division is concerned that the proposed mitigation plan does not sufficiently demonstrate ecological compensation for the loss of functioning PNA. The proposed mitigation plan includes the creation of 3 acres of *Spartina alterniflora* marsh habitat adjacent to Shellbed Island near the mouth of the Cape Fear River and donation of \$650,000 towards the construction of Lock and Dam #1 Rock Ramp Fish Passage project.

a. **Shellbed Island**

- i. The Division's understanding is this portion of the mitigation plan is for the proposed impacts to coastal and Section 404 wetlands as well as the general water quality impacts to the river outside of PNA. Please confirm or correct this understanding.
- ii. The Division prefers mitigation that will improve water quality and habitat in the area in which the impacts are proposed, however this project will be farther downstream. Are there options to improve or restore impaired tributaries or wetlands upstream of the project area?

b. **Lock and Dam #1**

- i. The Division's understanding is this portion of the mitigation plan is for the proposed impacts to PNA. Please confirm or correct this understanding.
- ii. According to the Division of Marine Fisheries (DMF), PNA designation is not only based on factors like habitat, benthic composition and location, but also on the sampled presence of indicator fish species at various points in their lifecycles. During the 401 review of a 2015 POW project that included PNA impacts, DMF provided comments stating "*a mitigation option should never become the norm to validate the loss of PNA or other highly valued habitat.*" Compensatory mitigation for PNA impacts creates a unique challenge in that habitat alone does not replace functioning PNA.

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- iii. It is undisputed that this Lock and Dam #1 Rock Ramp Fish Passage project would provide benefit to anadromous fish species but is it unclear how this project would compensate for loss of PNA or wetlands. Please demonstrate how the Lock and Dam #1 Rock Ramp Fish Passage project is compensatory to the PNA impacts of your proposed project.
- iv. The proposed mitigation plan states that the applicant proposes to donate \$650,000 towards the construction of Lock and Dam #1 Rock Ramp Fish Passage project if the National Marine Fisheries Service (NMFS) can provide their Biological Opinion (BO) on the project to the US Army Corps of Engineers within 120 days of a permit application. If NMFS cannot complete the BO within the conditioned timeframe, will the financial contribution to the Lock and Dam Project not be made? Will the applicant provide an alternative mitigation plan to compensate for the loss of PNA?
- v. The connection between the proposed dollar amount contributed to the Lock and Dam #1 Rock Ramp Fish Passage project and the area of impact is unclear. For example, as the applicant outlined in the proposed mitigation plan, the NC Division of Mitigation Services (DMS) In-Lieu Fee Program's current rate to purchase just one acre of costal wetland is \$560,000. When this rate is applied to the proposed 17.76 acres of PNA impact, a figure of \$9,945,600 is reached. Since PNAs comprise multiple habitats and species, it could be argued that the price per acre would be considerably higher than the DMS coastal marsh fee. The Division understands coastal wetland credits are currently unavailable, this example is offered to draw a comparison with the economics of the applicant's mitigation proposal. Please explain how the dollar amount was determined.
- vi. During a conference call on January 3, 2019, the applicant stated that extensive research had been conducted to classify tidal and other wetland sites in a search for viable mitigation sites in the Lower Cape Fear River and no adequate sites were located. Please provide documentation to the Division which other areas of the Lower Cape Fear were considered for mitigation and why there are no other viable mitigation sites suitable for restoration, enhancement or preservation that would improve water quality closer to the vicinity of the project and/or appropriately compensate the loss of functioning PNA. A mitigation search would include the following natural resource targets areas:
 - o Submerged Aquatic Vegetation
 - o Shell Bottom
 - o Submerged Aquatic Vegetation and Shell Bottom
 - o Wetlands (freshwater)
 - o Wetlands (brackish or salt marsh)
 - o Streams (restoration only)
 - o Soft Bottom

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The *North Carolina Coastal Habitat Protection Plan (2016)* and *Strategic Habitat Area Nominations for Region 4: The Cape Fear River Basin in North Carolina (Final Report, May 2018)*, both published by the NC Division of Marine Fisheries, provide recommendations of priority habitats to consider. Using them to guide a search for, and evaluate the potential value of, mitigation sites is recommended. These reports are available on the NC DMF website.

3. **Cumulative Impacts** – Title 15A NCAC 02H .0506(b)(4) directs the Division to consider a project's cumulative impacts based on past or reasonably anticipated future impacts. The current project comes as the latest request to modify Division of Coastal Management (DCM) State Permit 47-87 (the permit) that was issued in 1987 for maintenance, operation and expansion of the POW facilities. The Division has received an application from NCSA to construct a multi-use terminal ("North Terminal") north of and adjacent to the existing Liquid Bulk Terminal, which proposes an additional 4.94 acres of PNA impacts and 8.56 acres of fill in Section 404 wetland (100% of wetlands on the parcel). Also, the Division is aware that the NCSA is currently conducting studies to deepen the Cape Fear River to -50' feet MLW, which may result in additional water quality impacts and dredging in PNA.

The Division requires additional information regarding cumulative impacts. Please provide a *qualitative* cumulative impacts analysis, taking into consideration past and past and reasonably anticipated future impacts associated with the maintenance, operation and expansion of the POW facilities.

Pursuant to Title 15A NCAC 02H .0502(e), the applicant shall furnish all of the above requested information for the proper consideration of the application. Please respond in writing within 30 calendar days of receipt of this letter by sending one (1) copy of all of the above requested information to the 401 & Buffer Permitting Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617 OR by submitting all of the above requested information through this link: <https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form> (please note that the DWR# requested on the link is referenced above).

If all of the requested information is not received within 30 calendar days of receipt of this letter, the Division will be unable to approve the application and it will be returned. The return of this project will necessitate reapplication to the Division for approval, including a complete application package and the appropriate fee.

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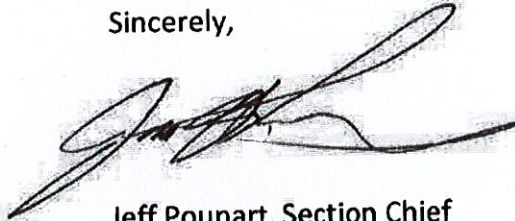
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Please be aware that you have no authorization under the Water Quality Certification Rules for this activity and any work done within waters of the state may be a violation of North Carolina General Statutes and Administrative Code.

Contact Paul Wojoski at 919-707-3631 or Paul.Wojoski@ncdenr.gov if you have any questions or concerns.

Sincerely,



Jeff Poupart, Section Chief
Water Quality Permitting

cc: Steve Dial, Dial Cordy and Associates, Inc.
Todd Walton, North Carolina State Ports Authority
Liz Hair, Army Corps of Engineers, Wilmington District
Doug Huggett/Courtney Spears, Division of Coastal Management (via email)
Anne Deaton/Curtis Weychert, Division of Marine Fisheries (via email)
DWR WiRo (via email)
DWR 401 & Buffer Permitting Unit

Filename: 20181585_NCSA_POW_TurningBasinExpansion(New Hanover)_AddInfo

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DIAL CORDY
AND ASSOCIATES INC
Environmental Consultants

201 N. Front Street, Suite 307
Wilmington, NC 28401
(910) 251-9790 Fax (910) 251-9409

February 11, 2019

Jeff Poupart
Section Chief
Water Quality Permitting
NCDEQ DWR
512 North Salisbury Street
Raleigh, NC 27699-1617

Re: Response to Request for Additional Information
NC State Ports Authority Port of Wilmington Turning Basin Expansion
USACE Action ID. No. SAW-2015-02235

Dear Mr. Poupart;

Dial Cordy and Associates Inc. (DC&A), on behalf of the North Carolina State Ports Authority, is pleased to submit our response to the above RFI. In addition, please find attached a revised mitigation plan which includes significant changes in compensation proposed. The applicant also agrees to delay start of construction to July 1, 2019 to stay in the allowable dredging window.

1. Impacts - The project proposes to impact 17.76 acres of Primary Nursery Area (PNA) habitat in waters of the Cape Fear River. These waters are also designated as Anadromous Fish Spawning Area and are Class SC Waters. Title 15A NCAC 02B.0220 outlines the water quality standards for Class SC waters:

*(1) Best Usage of Waters: any usage except primary recreation or shellfishing for market purposes; usages include aquatic life propagation and maintenance of biological integrity (including fishing, fish and **functioning PNAs**), wildlife, and secondary recreation; [emphasis added]*

*(2) Conditions Related to Best Usage: the waters shall be suitable for aquatic life propagation and maintenance of biological integrity, wildlife, and secondary recreation. **Any source of water pollution that precludes any of these uses, including their functioning as PNAs, on either a short-term or a long-term basis shall be considered to be violating a water quality standard;** [emphasis added]*

Please demonstrate how the proposed project complies with Class SC standards set forth in Title 15A NCAC 02B.0220.

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Although short term increases in turbidity would be expected during the active dredging process, the proposed project would not create any new sources of water pollution that would preclude the use of PNA habitats within the project area. Impacts to 16.08 acres of deepwater (>6 ft) softbottom PNA would not preclude the use of these habitats. These deep softbottom areas are located adjacent to the disturbed slope of the existing channel, as shown on the plans. The benthic communities associated with these PNA soft bottom habitats are dominated by opportunistic species that are adapted to frequent disturbance and the high energy conditions that prevail in this portion of the river. Although dredging impacts on benthic invertebrates would temporarily reduce the availability of benthic prey for estuarine fishes, it is expected that benthic community recovery will occur rapidly. Therefore, it is expected that effects on deepwater softbottom habitat function would be short term and localized.

Impacts to 1.01 acres of tidal salt marsh and 1.68 acres of shallow (<6 ft) bottom would impact the water quality functions of wetlands in PNA and the functions of important shallow softbottom/marsh edge PNA habitat within the project area; however, the attached revised mitigation plan incorporates substantial new mitigation both on-site (immediately south of action area) and on the Brunswick River to compensate for these impacts. The revised plan includes on-site enhancement of 1.75 acres of *Phragmites australis* dominated Section 404 wetland habitat to native coastal tidal marsh (1.25:1 ratio) and 4 acres of wetland enhancement via the conversion of non-native common reed (*Phragmites australis*) stands on dredge spoil to native tidal marsh wetlands (2.9:1 ratio, total of 4.1:1 ratio) on the port's Brunswick River/Eagle Island property. Additionally, mitigation will include 2.0 acres of tidal pool/marsh edge habitat creation via excavation of common reed/dredge spoil areas on the Brunswick River/Eagle Island property. In addition, the applicant agrees to perform monitoring of both compensatory mitigation projects for the required 5-year period or longer as needed to demonstrate success, with annual reports prepared and submitted. The proposed revisions to the plan, including tidal marsh enhancement both on-site and ~1 mile upstream of the project area and the creation of tidal pool marsh edge PNA habitat, will effectively mitigate for the losses of shallow softbottom/marsh edge PNA habitat function and tidal marsh water quality functions in PNA habitat. Thus, we believe the revisions to the mitigation plan address your concerns expressed above regarding compliance with SC water quality standards.

2. Mitigation Plan - *The Division is concerned that the proposed mitigation plan does not sufficiently demonstrate ecological compensation for the loss of functioning PNA. The proposed mitigation plan includes the creation of 3 acres of Spartina alterniflora marsh habitat adjacent to Shellbed Island near the mouth of the Cape Fear River and donation of \$650,000 towards the construction of Lock and Dam #1 Rock Ramp Fish Passage project.*

a. Shellbed Island

i. *The Division's understanding is this portion of the mitigation plan is for the proposed impacts to coastal and Section 404 wetlands as well as the general water quality impacts to the river outside of PNA. Please confirm or correct this understanding.*

ii. *The Division prefers mitigation that will improve water quality and habitat in the area in which the impacts are proposed; however this project will be farther*

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downstream. Are there options to improve or restore impaired tributaries or wetlands upstream of the project area?

As described above, and in the attached revised compensatory mitigation plan, all proposed enhancement will occur adjacent to or within one-mile of the action area. The plan includes a total of 5.75 ac of on-site and off-site enhancement via the conversion of non-native common reed (*Phragmites australis*) dominated wetland to native tidal marsh wetlands (4.1:1 ratio). Additionally, mitigation will include 2.0 acres of tidal pool/marsh edge habitat creation via excavation of common reed/dredge spoil areas on the Brunswick River/Eagle Island property. The proposed revisions to the plan, including tidal marsh enhancement both onsite and approximately one mile upstream of the project area and the creation of tidal pool marsh edge PNA habitat, will effectively mitigate for the losses of shallow bottom/marsh edge PNA habitat function and tidal marsh water quality functions in PNA habitat. Thus, we believe the revisions to the mitigation plan address your concerns expressed above regarding the proximity of mitigation to the impact area.

b. Lock and Dam #1

i. The Division's understanding is this portion of the mitigation plan is for the proposed impacts to PNA. Please confirm or correct this understanding.

ii. According to the Division of Marine Fisheries (DMF), PNA designation is not only based on factors like habitat, benthic composition and location, but also on the sampled presence of indicator fish species at various points in their lifecycles. During the 401 review of a 2015 POW project that included PNA impacts, DMF provided comments stating "a mitigation option should never become the norm to validate the loss of PNA or other highly valued habitat." Compensatory mitigation for PNA impacts creates a unique challenge in that habitat alone does not replace functioning PNA.

ii. It is undisputed that this Lock and Dam #1 Rock Ramp Fish Passage project would provide benefit to anadromous fish species but [it is] unclear how this project would compensate for loss of PNA or wetlands. Please demonstrate how the Lock and Dam #1 Rock Ramp Fish Passage project is compensatory to the PNA impacts of your proposed project.

Support for construction of the Lock and Dam #1 Fish Passage, to be completed within a year of permit issuance, is intended to provide for the restoration of healthy, self-sustaining anadromous fish populations in the Cape Fear River system. A diverse assemblage of anadromous species undertake annual migrations from coastal waters to spawning grounds in the upper freshwater reaches of the Cape Fear River; including Atlantic and shortnose sturgeon, striped bass, American shad, hickory shad (*Alosa mediocris*), blueback herring (*A. aestivalis*), and alewife (*A. pseudoharengus*). In addition to anadromous species, elvers of the catadromous American eel (*Anguilla rostrata*) migrate upriver to freshwater juvenile nursery areas in the upper Cape Fear River each year to spend their early lives in the freshwater tributaries (USACE 2010). The restoration of self-sustaining anadromous fish populations has wide-ranging beneficial ecological implications that are essential to the overall restoration of the entire Cape Fear River ecosystem. Anadromous species play a critical role in sustaining the ecological integrity of major river systems through ocean-derived primary production to a broad spectrum of higher trophic levels. Organisms that are associated with estuaries and inland freshwater systems. We believe that the provision

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of financial support for the restoration of anadromous fish populations will ultimately contribute to an enhanced Cape Fear River ecosystem, inclusive of the PNA habitats of the lower estuary and the full range of species that they support.

As described above, the attached revised compensatory mitigation plan includes substantial enhancement both onsite and approximately one mile upstream of the project area. We believe that the revisions to the mitigation plan in combination with the mitigation at Lock and Dam #1 will effectively mitigate impacts to PNA within the project area.

iv. The proposed mitigation plan states that the applicant proposes to donate \$650,000 towards the construction of Lock and Dam #1 Rock Ramp Fish Passage project if the National Marine Fisheries Service (NMFS) can provide their Biological Opinion (BO) on the project to the US Army Corps of Engineers within 120 days of a permit application. If NMFS cannot complete the BO within the conditioned timeframe, will the financial contribution to the Lock and Dam project not be made? Will the applicant provide an alternative mitigation plan to compensate for the loss of PNA?

We have revised this statement in the revised mitigation plan to the effect that this aspect of the proposed mitigation is not conditional to receipt of a BO from the NMFS. It is now a mitigation feature towards compensation for effects within PNA.

v. The connection between the proposed dollar amount contributed to the Lock and Dam #1 Rock Ramp Fish Passage project and the area of impact is unclear. For example, as the applicant outlined in the proposed mitigation plan, the NC Division of Mitigation Services (DMS) in-Lieu Fee Program's current rate to purchase just one acre of [coastal] wetland is \$560,000. When this rate is applied to the proposed 17.76 acres of PNA impact, a figure of \$9,945,600 is reached. Since PNAs compromise multiple habitats and species, it could be argued that the price per acre would be considerably higher than the DMS coastal marsh fee. The Division understands coastal wetland credits are currently unavailable, this example is offered to draw a comparison with the economics of the applicant's mitigation proposal. Please explain how the dollar amount was determined.

The balance of funds needed to complete construction of the proposed modification to Lock and Dam #1 Fish Passage is \$650,000 (personal communication Frank Yelverton, CFRW, October 2018). In addition, the Port has offered to cover one-year of post construction monitoring (Fish Egg Sampling – March-June, 2020) up to \$150,000. This monitoring will also cover annual egg sampling below the other two dams. Present funds for egg sampling and supporting DMF's telemetric monitoring will expire after the spring 2019 sampling event. Mitigation for loss of coastal and Section 404 wetlands was discussed in response to prior comments, with mitigation being provided for on-site and near the PNA affected. Since tidal wetland credits are not available, we do not see the relevancy of use of the DMS rate towards the cost of mitigation for compensation for impacts to PNA.

As described above, the attached revised compensatory mitigation plan includes substantial enhancement both onsite and ~1 mile upstream of the project area. We believe that the revisions to the mitigation plan in combination with the mitigation at Lock and Dam #1 will effectively mitigate impacts to PNA within the project area.

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In summary, the planning level cost estimate for mitigating impacts to wetlands and shallow water soft bottom habitat within PNA is \$1,800,000, with all measures listed below.

Revised Wetland Compensation Plan (4.1: 1 ratio)

1. Wetland enhancement of *Phragmites* dominated habitat near –site (adjacent NCSPA owned property) – 1.75 acres enhanced to coastal tidal marsh (1.25:1 ratio)
2. Wetland enhancement of *Phragmites* dominated habitat on NSCPA owned land on Brunswick River – 4 acres enhanced to brackish tidal marsh (2.9:1 ratio)

Revised PNA Compensation Measures

1. Conservation easement and conveyance of ownership on 29.5 ac of Brunswick River property
2. For water quality and juvenile fish benefits in PNA- enhance 2.0 ac of *Phragmites* dominated habitat to shallow-water tidal pool habitat on Brunswick River property
3. Donate \$850,000 for construction and monitoring of Lock and Dam # 1 Rock Ramp Fish Passage modification.
4. In addition, the enhancement of tidal wetlands near the proposed project, also provides water quality benefits within PNA

Compliance Monitoring

1. Wetland and tidal pool enhancement measures to be monitored for 5 years or more as needed to meet success criteria, with annual reporting
2. Sturgeon monitoring during dredging can be performed if desired.

vi. During a conference call on January 3, 2019, the applicant stated that extensive research had been conducted to classify tidal and other wetland sites in a search for viable mitigation sites in the Lower Cape Fear River and no adequate sites were located. Please provide documentation to the Division which other areas of the Lower Cape Fear were considered for mitigation and why there are no other viable mitigation sites suitable for restoration, enhancement or preservation that would improve water quality closer to the vicinity of the project and/or appropriately compensate the loss of functioning PNA. A mitigation search would include the following natural resource target areas:

- *Submerged Aquatic Vegetation*
- *Shell Bottom*
- *Submerged Aquatic Vegetation and Shell Bottom*
- *Wetlands (freshwater)*
- *Wetlands (brackish or salt marsh)*
- *Streams (restoration only)*
- *Soft Bottom*

The North Carolina Coastal Habitat Protection Plan (2016) and Strategic Habitat Area Nominations for Region 4: The Cape Fear River Basin in North Carolina (Final Report, May 2018), both published by the NC Division of Marine Fisheries, provide recommendations of priority habitats to consider. Using them to guide a search for, and evaluate the potential value of, mitigation sites is recommended. These reports are available on the NC DMF website.

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Please see revised mitigation plan, which includes mitigation measures on-site and within close proximity to the impacted PNA and coastal wetlands. A summary of these measures are included in the responses above.

3. Cumulative Impacts - Title 15A NCAC 02H .0506(b)(4) directs the Division to consider a project's cumulative impacts based on past or reasonably anticipated future impacts. The current project comes as the latest request to modify Division of Coastal Management (DCM) State Permit 47-87 (the permit) that was issued in 1987 for maintenance, operation and expansion of the POW facilities. The Division has received an application from NCSPA to construct a multi-use terminal ("North Terminal") north of and adjacent to the existing Liquid Bulk Terminal, which proposes an additional 4.94 acres of PNA impacts and 8.56 acres of fill in Section 404 wetland (100% of wetlands on the parcel). Also, the Division is aware that the NCSPA is currently conducting studies to deepen the Cape Fear River to -50' feet MLW, which may result in additional water quality impacts and dredging in PNA.

The Division requires additional information regarding cumulative impacts. Please provide a qualitative cumulative impacts analysis, taking into consideration past and past and reasonably anticipated future impacts associated with the maintenance operation and expansion of the POW facilities.

Cumulative effects analysis for the proposed project includes a review of the impacts of past, present, and reasonably anticipated future dredging actions on water quality, coastal wetlands and soft bottom benthic habitat. Past construction and maintenance projects will be considered back until 2000 to incorporate the Wilmington Harbor 96 Act project. Present projects include recent permits issued in the past year, and future projects will include continued maintenance dredging, the proposed multi-use terminal, the proposed Section 203 Wilmington Harbor Improvement Project, presently under study and the proposed action for the expansion to the turning basin. Table 1 includes a list of all projects and specific information associated with each project/action. It should be noted that since the Section 203 study is in progress, there is no information readily available on the selected plan and its effects on resources within the Cape Fear. In addition, the project design depth will be less than -50 ft MLLW.

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Table 1. Past, Present and Reasonably Foreseeable Future Projects

Project	Dates	Purpose	Tidal Wetland and/or Section 404 Wetlands	Soft Bottom Habitat within PNA	Water Quality	Mitigation Provided	Dredging within Environmental Window
Past Projects (2000-2016)							
Wilmington Harbor Deepening	2000-2002	Dredging to - 42 ft MLLW	No direct wetland impacts and no indirect projected	No direct impacts due to widening	Moderate	Yes	Yes
Maintenance Dredging Events	Annual	Maintenance of federal channel and berths	No	No	Minimal and short-term	N/A	Most of the time
Agitation Dredging Events	1-2x annually	Maintenance of berths	No	Minimal and short-term	Minimal	No	No
Turning Basin Expansion	2015	Expansion of basin for larger vessels	No	8.53 acres	Minimal, short-term	\$750k towards Lock and Dam 2/3 Fish Passage Design and Permitting	Yes
Present (2017-2018)							
Water Injection Dredging	2017	Maintenance of berths	No	Minimal and short-term	Minimal	No	No
Maintenance Dredging	Annual	Maintenance of federal channel and berths	No	N/A	Minimal and short-term	N/A	Most of the time
Agitation Dredging Events	1-2x annually	Maintenance of berths	No	Minimal and short-term	Minimal	N/A	No

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Table 1. (concluded).

Project	Dates	Purpose	Tidal Wetland and/or Section 404 Wetlands	Soft Bottom Habitat within PNA	Water Quality	Mitigation Provided	Dredging within Environmental Window
Future (2019-2022) Proposed							
Multi-purpose Terminal	2020	Berthing and storage for break bulk	No direct impact to tidal wetlands, 0.06 ac of shading effect	4.94 acres	Minimal and short-term	Yes	Yes
Turning Basin Expansion	2019	Expand basin to accommodate larger vessels	1.4 ac of tidal wetland and Section 404 wetlands	17.76 ac (1.68 less than -6ft MLLV)	Minimal and short-term	<ul style="list-style-type: none"> On-site and off-site enhancement of 5 ac of <i>Phragmites</i> habitat to tidal marsh Off-site tidal pool enhancement (2 ac) Donation for construction and monitoring of Lock and Dam #1 Fish Passage Mod (\$850K) 	Yes
Wilmington Harbor Improvement Study	2022-2024	Dredging to -47 ft MLLW	Not available	Not available	Not available	Not available	Unknown
Maintenance Dredging	Annual	Maintenance of federal channel and berths	No	N/A	Minimal and short-term	N/A	Most of the time

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Wetland Effects

The past 150 years of dredging and harbor improvements, as well as the conversion of wetlands to rice plantations, watershed development, and sea level rise; have greatly reduced the extent and altered the composition and distribution of tidal wetlands in the lower Cape Fear River estuary. There have been no direct impacts to tidal wetlands within the Cape Fear River associated with NCSPA port and federal harbor actions that have occurred since 2000. The last federal channel deepening project in the early 2000s did not directly impact any wetlands; and did not result in any adverse indirect effects on tidal wetlands, based on model-projected salinity changes and ten years of post-construction salinity and vegetation monitoring (USACE 2012). Maintenance dredging and agitation/water injection dredging of the federal channel and/or berths has not and will not impact wetlands in the future. No tidal wetlands were impacted by the 2015 turning basin expansion. Potential impacts associated with future dredging projects by the Port include impacts to 0.06 ac of coastal tidal marsh due to shading and 8.64 ac of impacts to Section 404 non-tidal freshwater wetlands for the proposed future multi-use terminal, and 1.4 acres of coastal and Section 404 wetland impacts for the currently proposed turning basin expansion. Mitigation has been proposed to compensate for unavoidable impacts to wetlands. Since the Wilmington Harbor Improvement Project Section 203 Study is in progress, there is currently no available information regarding potential indirect wetland effects due to potential increases in tidal range and salinity. In summary, a review of past, present and potential future projects indicates there has not been a cumulative loss of wetlands due to past and/or present port related activities. Assuming the proposed actions are permitted and constructed, a total of 1.07 acres of tidal marsh within PNA and a total of 9.03 ac of additional Section 404 wetlands could be affected. It is important to note that wetland impacts associated with these two proposed projects will be mitigated in accordance with state and federal mitigation rules and regulations.

Water Quality Effects

Water quality degradation due to annual maintenance dredging and use of agitation and water injection dredging over the 20 year review period has and will likely continue to be short-term and minimal. The port has chosen to use water injection dredging as a means to reduce environmental effects and costs typically associated with use of hopper dredges for maintenance dredging. Moderate effects on water quality within the river likely occurred during the Wilmington Harbor Deepening Project of the early 2000s, simply due to the duration of the dredging events over a two-year period and will likely occur during the proposed Wilmington Harbor Improvement Project, if it is authorized and funded by Congress. However, use of a hydraulic cutterhead dredge does minimize suspended sediment loading, as compared to other dredge types. Dredging for past and future expansion of the turning basin was and will be short-term, and due to the past and proposed use of a mechanical excavator will result in only minor increases in turbidity. In summary, short term water quality degradation has and will continue to occur periodically, typically in association with larger federal harbor deepening projects as opposed to dredging activities associated with maintenance, turning basin expansion, or small terminal expansion projects.

Soft Bottom Habitat Effects within PNA

This review does not take into account maintenance dredging of the federal channel, which does not encompass PNA habitat and has been maintained by the USACE for well over 70 years. No direct impacts on soft bottom PNA habitat resulted from widening and deepening the federal channel in the early 2000s. A total of 8.53 acres of soft bottom PNA habitat was dredged for expansion of the turning basin in 2015. For future proposed projects, temporary

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impacts to soft bottom habitat may include dredging 17.76 acres (1.68 ac less than 6 ft deep) of soft bottom for the turning basin, 4.94 acres for the multi-use terminal, and an unknown area of soft bottom for the proposed harbor deepening project that is currently under study. Cumulative effects for past, present and foreseeable future projects assessed in this review include 15.15 ac of shallow water soft bottom habitat and 16.05 acres of deeper slope soft bottom habitat within PNA (Table 1).

It is important to note that soft bottom benthic infaunal communities are dominated by opportunistic species that are adapted to frequent disturbance and recover quickly following dredging, especially in the upper river reaches near the port where high energy conditions prevail. Although the impacts of agitation and/or water injection dredging on benthic invertebrates would reduce the availability of benthic prey for estuarine fishes, it is expected that benthic community recovery would occur rapidly. Therefore, it is expected that the majority of the effects on softbottom habitat function would be short term and localized.

Summary of Cumulative Effects

An analysis of dredging activities over the +/- 20 year review period (2000-2020), inclusive of those associated with the proposed action show no significant cumulative effect on tidal wetlands within PNA. Anticipated future impacts to coastal wetlands in PNA habitat would include 0.06 ac of impact associated with the multi-use terminal and 1.01 acres of impact associated with the currently proposed turning basin expansion. While the combined impacts of the two projects could potentially have minor cumulative effects on water quality and estuarine dependent species, the impacts of the proposed action will be effectively mitigated through onsite and upstream wetland enhancement and PNA softbottom habitat creation (i.e., tidal pools), as described in the attached revised mitigation plan. Therefore, is expected that any cumulative wetland effects would be minor and temporary.

Water quality effects due to dredging projects over the 20 year review period show periodic elevations in suspended sediments and turbidity during active dredging, however, there is no information to indicate that the effects of the proposed action would contribute to significant cumulative impacts when added to the effects of separate past, present and future actions.

Soft-bottom PNA habitat has been affected by dredging many times over the 20 year review period, however, much of this has been associated with habitat in the federal channel that is not designated PNA. Dredging has temporarily impacted or will impact 15.15 acres of shallow soft bottom habitat and 16.08 acres of deeper, slope habitat within PNA during the 20-year review period. Given that the functional benefits associated with much of the affected habitat has or will recover naturally from dredging, and considering that effective mitigation is proposed to offset the impacts of the proposed turning basin expansion, it is concluded that the effects of the proposed action; when added to the effects of separate past, present and future actions; will not result in significant cumulative effects.

Should you need any clarification on our above response to your comments, please do not hesitate to contact us directly.

Sincerely,
Dial Cordy and Associates Inc.



R. Steve Dial
President

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Spears, Courtney

From: Wojoski, Paul A
Sent: Wednesday, March 13, 2019 4:59 PM
To: Steve Dial; Todd Walton
Cc: Hair, Sarah E CIV CESAW CESAD (US); Spears, Courtney; Huggett, Doug; Higgins, Karen; Deaton, Anne; Weychert, Curtis R; Coburn, Chad
Subject: NCSPA POW Turning Basin Expansion (New Hanover) Additional Info Request 2 - 20190114 (DWR #20181585)
Attachments: 20181585 Ver 1_Additional Info Request_2_20190114.pdf

Mr. Walton / Mr. Dial –

Please find the attached letter from DWR requesting additional information regarding the Port of Wilmington Turning Basin Expansion Project. A hard copy will follow via mail. Please let me know if you have questions.

Thank you,
Paul

Paul Wojoski
401 & Buffer Permitting Branch
Division of Water Resources
Department of Environmental Quality

(919) 707-3631 office ***Please note new phone number.***
Paul.Wojoski@ncdenr.gov

512 N. Salisbury Street (Archdale Building), Suite 942-F, Raleigh, NC 27604
1617 Mail Service Center, Raleigh, NC 27699-1617

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

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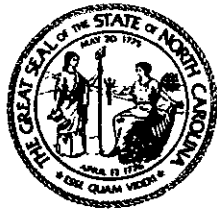
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DCM WILMINGTON, NC

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

LINDA CULPEPPER
Director



NORTH CAROLINA
Environmental Quality

March 13, 2019

DWR # 20181585
New Hanover County

North Carolina State Ports Authority
Attn: Mr. Paul Cozza
2202 Burnett Blvd.
Wilmington, NC 28401

Subject: REQUEST FOR ADDITIONAL INFORMATION
NC State Ports Authority Port of Wilmington Turning Basin Expansion
USACE Action ID. No. SAW-2015-02235

Dear Mr. Cozza:

On November 15, 2018, the Division of Water Resources (Division) received your CAMA Major application requesting a 401 Water Quality Certification from the Division for the subject project. The North Carolina State Ports Authority (NCSA, the applicant) has proposed to remove an existing wooden pier, install a sheet-pile toe wall and associated infrastructure and expand the width of and deepen the Port of Wilmington (POW) turning basin via dredging.

The Division sent a request for more information letter on January 14, 2019 and received your response letter on February 11, 2019 with a revised mitigation plan. The Division met with you, the Division of Coastal Management (DCM), the N.C. Wildlife Resource Commission, the N.C. Division of Marine Fisheries (DMF), and NOAA National Marine Fisheries Service (collectively the "resource agencies") via phone on February 19, 2019 to discuss feedback on the revised mitigation plan. We received your updated mitigation plan summary from this meeting on February 20, 2019 and updated figures on February 22, 2018. We met again via phone with DCM and the resource agencies on February 25, 2019 to discuss the latest revisions. We received your updated mitigation plan summary and updated figures on February 26, 2019. We met again via phone with the U.S. Army Corps of Engineers (ACOE), DCM and the resource agencies on February 26, 2019 to provide feedback and discuss this latest mitigation plan revision. On March 1, 2019 we received additional mitigation plan information you provided including site Environmental Conditions, Viability Review and Habitat Equivalency Analysis.

As outlined above, the Division is in continued consultation with you and other State and Federal agencies on the project and the proposed mitigation plan. The Division continues to work towards
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North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

resolution of the outstanding questions with the proposed mitigation plan. We also have questions regarding the ACOE's selection of the least environmentally damaging practical alternative (LEDPA), their approval of the proposed spoil disposal at Eagle Island and approval of the proposed impacts to the federally maintained channel. **The application is on-hold until all of the following information is received:**

1. A final mitigation plan must be submitted with input from resource agencies. Some of the items we've identified as needing resolution, include, but aren't limited to:
 - a. Brunswick Mitigation Site Project Design Detail – As part of the mitigation plan, you have proposed tidal pool creation on 6.75 acres and wetland enhancement on 2.25 acres of the Brunswick River. Please provide more detail on the project design for this site to demonstrate the project is viable for mitigation:
 - i. Are wetland or surface water impacts anticipated with the construction of the tidal pools or connection ditches? Please provide a wetland/upland delineation including types.
 - ii. Please provide water-quality modeling showing the proposed pools and channels will flush and not create hypoxic environments.
 - iii. To what depth will the tidal pools be excavated? How will banks be stabilized, specifically at the wetland/tidal pool interface? Please provide construction design exhibits.
 - b. SPA Mitigation Site Project Design Detail
 - i. Please provide a wetland/upland delineation including types of wetlands.
 - ii. To what depth will the wetlands be excavated? How will banks be stabilized, specifically at the wetland/upland interface? Please provide construction design exhibits.
 - iii. How will the integrity of the mitigation site be ensured when considering surrounding property uses?
 - c. Work practices – Please provide detail on work practices and construction methodologies for the mitigation sites.
 - i. What equipment will be used for excavation?
 - ii. Where will spoil be disposed?
 - iii. How will wetlands be crossed, and the sites accessed?
 - iv. Will additional permitting be required for impacts to wetlands or waters?
 - d. Please clarify how much money and to whom it will be paid for the construction of the Lock and Dam #1 Fish Passage Modification and the subsequent monitoring.
 - i. The latest revision of the Mitigation Plan (February 11, 2019) states that the NCSA will donate \$650,000 towards the construction of Lock and Dam #1 Fish Passage Modification.
 1. To whom will this money be paid?
 2. Who will complete the construction?
 3. How will successful completion of the project be ensured?

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- ii. The plan also stated that \$150,000 will be contributed for post-construction monitoring. The plan states the money will go to NC DEQ for their use in contracting the construction of the project. It's the Division's understanding from the February 19, 2019 phone call that NC DEQ - specifically the Division of Marine Fisheries - is not the entity who would accept this money and conduct monitoring. Please clarify specifically to whom this money is being paid and specifically what they are providing.
 - e. As stated in the notes you provided Feb 25, 2019, specifics on success criteria/monitoring/sampling protocols for the juvenile fish/invertebrate utilization of the tidal pools are to be provided.
 - f. More detail is needed on the proposed adaptive management of the mitigation sites. What happens if the success criteria aren't met?
2. The Division is still reviewing the compensative quality of the proposed mitigation plan. Resolution of the outstanding questions listed above may help clarify, but the following are comments offered by the Division in this regard:
 - a. Please note that the Division does not consider the placement of a conservation easement on the mitigation site properties creditable as mitigation equivalency. As outlined in our phone meetings, the placement of a conservation easement or similar mechanism is a routine and required part of the permittee responsible mitigation plans and therefore should not be counted as mitigation credit as shown in Table 1 (page 5) of the response to comments received March 1, 2019 (dated February 28, 2019). If conserved area is designed to buffer the improved/constructed wetlands/tidal pools, we would consider this a necessary component to the site's success. If you are proposing preservation credit for the conservation of additional resources, please clarify this.
 - b. The Lock and Dam Fish Passage Construction and Monitoring Funding is offered as mitigation for the Primary Nursery Area (PNA) impacts and Anadromous Fish Spawning Areas (AFSA) impacts. The Division is still reviewing the project's functional benefits to these areas.
 - c. When calculating mitigation equivalent the Lock and Dam #1 Fish Passage Project, the \$150,000 monitoring money should not be included. This is assurance as to the success of the permittee-responsible mitigation project. Monitoring and success assurance are necessary components of mitigation proposals.
 - d. Tidal marsh enhancement at SPA property is listed as PNA mitigation in Table 1 (page 5) of the response to comments received March 1, 2019 (dated February 28, 2019). We can consider the qualitative benefits this part of the project has to PNA but can not double-count it for mitigation to PNA and wetland impacts.

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3. See page 13, Section 6.0, of revised mitigation plan (February 11, 2019). The plan states that impacts to deepwater softbottom PNA will not preclude the use of these habitats and "it's expected that benthic community recovery will occur rapidly." What is the time frame that this recovery is expected? Is recovery anticipated to sustain with periodic maintenance of the channel and turning basin? Any literature citation to support your position would be helpful.
4. Please bear in mind that the 401 Certification is a certification of the ACOE's Section 10 and 404 Permit Authorization. As such, our review process is interlinked with the Federal permitting process.
 - a. Title 15A NCAC 02H .0506 requires that a proposed activity has no practical alternative by demonstrating that, considering the potential for a reduction in size, configuration or density of the proposed activity and all alternative designs, the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to wetlands. The Division cannot complete the review of your proposed project until the USACE determines that this alternative is the least environmentally damaging practical alternative (LEDPA).
 - b. The Division understands that the ACOE is in formal consultation on the project's proposed use of the Federally owned Eagle Island disposal site and the project's impacts to the Federally maintained channel. Please bear in mind that the Division may not be able to render a decision until the ACOE is further in their review and can provide feedback to the Division as to their position on these issues.

Pursuant to Title 15A NCAC 02H .0502(e), the applicant shall furnish all of the above requested information for the proper consideration of the application. Please respond in writing within 30 calendar days of receipt of this letter by sending one (1) copy of all of the above requested information to the 401 & Buffer Permitting Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617 OR by submitting all of the above requested information through this link: <https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form> (please note that the DWR# requested on the link is referenced above).

If all of the requested information is not received within 30 calendar days of receipt of this letter, the Division will be unable to approve the application and it will be returned. The return of this project will necessitate reapplication to the Division for approval, including a complete application package and the appropriate fee.

Please be aware that you have no authorization under the Water Quality Certification Rules for this activity and any work done within waters of the state may be a violation of North Carolina General Statutes and Administrative Code.

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Contact Paul Wojoski at 919-707-3631 or Paul.Wojoski@ncdenr.gov if you have any questions or concerns.

Sincerely,



Jeff Poupart, Section Chief
Water Quality Permitting

cc: Steve Dial, Dial Cordy and Associates, Inc.
Todd Walton, North Carolina State Ports Authority
Liz Hair, Army Corps of Engineers, Wilmington District
Doug Huggett/Courtney Spears, Division of Coastal Management (via email)
Anne Deaton/Curtis Weychert, Division of Marine Fisheries (via email)
DWR WiRo (via email)
DWR 401 & Buffer Permitting Unit

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