Staff Report

Focused Review: Permit Processing (Department of Natural Resources and Environmental Control)

153rd General Assembly, 1st session

JOINT LEGISLATIVE OVERSIGHT & SUNSET COMMITTEE

Respectfully submitted to the
Joint Legislative Oversight and Sunset Committee
May 2025

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Table of Contents

ABOUT THIS REPORT

This staff report, prepared by the Division of Legislative Services, focuses on the focused review of permit processing within the Department of Natural Resources and Environmental Control ("DNREC"), specifically subaqueous lands permits, including dredging. The Joint Legislative Oversight and Sunset Committee selected this topic and assigned it to the Division of Legislative Services staff on May 9, 2024.

The Joint Legislative Oversight and Sunset Committee ("JLOSC" or "Committee") is a bipartisan 10-member legislative body which performs periodic legislative review of the performance and activities of state entities designed to increase accountability and improvement. The primary purpose of any JLOSC review is to assess genuine public need and performance of the entity under review. JLOSC performs its duties with support provided by the dedicated and objective staff of Division of Legislative Services. The Division of Legislative Services is an independent and confidential reference bureau for the General Assembly and supplies many services, including staff support for JLOSC.

JLOSC staff completes focused reviews as assigned by majority vote of JLOSC members. A focused review contrasts with the broader evaluation of a full review and evaluates a component within an entity, such as a specific statute, policy, rule, regulation, or program related to the entity. The Committee and its staff define the scope of a focused review, guiding the research process. Once the research is completed, a staff report is prepared for JLOSC members, summarizing the research, findings, conclusions, and recommendations.

JLOSC staff prepared this report following research conducted in line with an agreed-upon project scope. The focused review adhered to national evaluation standards, requiring thorough planning and execution to gather sufficient evidence supporting the findings and conclusions based on the review's objectives and scope. Staff believe the evidence obtained provides a reasonable basis for their findings and conclusions. Additionally, the Objectives, Scope, and Methodology section discusses the fieldwork procedures used while conducting the research and developing this report.

This staff report may contain recommendations for JLOSC to review and discuss. Committee members are not obligated to adopt the staff's recommendations and may modify, reject, or propose new ones. Final recommendations are determined during public meetings and adopted with an affirmative vote from 7 members. Once JLOSC adopts recommendations, the review progresses to the implementation phase, which may involve drafting legislation.

Next Steps

JLOSC will hold a public meeting to receive an overview of the staff report and accept public comment on the scope of the review.[1] Following this, the Committee will determine the appropriate next steps, which may include adopting recommendations or scheduling additional meetings for further discussion.[2]

[1] Public meeting notices found on the Committee's website and the State of Delaware's Public Meeting Calendar.

[2] 29 *Del. C.* § 10214.

OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

Evaluate the processes and procedures used for permit processing within the Department of Natural Resources and Environmental Control's Division of Water ("Division" or "agency"), specifically subaqueous lands permits, including dredging.

Scope

This focused review examined the Division's wetlands and subaqueous lands permit structure, encompassing staffing resources, permit processing procedures, and estimated processing timelines. The review also considered recent process updates that the agency has implemented, and potential future policy initiatives aimed at enhancing the protection of Delaware's wetlands.

Methodology

This evaluation was designed to examine the Division's Subaqueous Lands Permit structure. The goal was to provide JLOSC with insights into current processes and planned improvements. The methodology involved conducting fieldwork that included reviewing publicly available documents, observing the agency's most recent presentation before the Joint Finance Committee, and gathering feedback on constituent permit complaints from General Assembly staff.

Fieldwork Completed

- All available public documents and news articles.
- Related legislation.
- DNREC presentation to the Joint Finance Committee, February 18, 2025.
- Requested constituent permit complaint information from General Assembly staff.
    - Received 4 responses.
- Current subaqueous lands statute, Chapter 72, Title 7.
- Current regulations governing the use of subaqueous lands, 7 DE Admin. Code 7504.
- Related research regarding Delaware permitting.
    - Analysis of Delaware Permit Competitiveness, Delaware Business Routable, Ready in 6 Coalition, December 2019.
    - Delaware Investment Agenda, Delaware Business Roundtable, March 2024.
    - Government Efficiency and Accountability Review 2024 annual report to the Governor, November 2024.
- Related research regarding nontidal wetland permitting program:
    - 2021-2025 Delaware Wetland Program Plan, Delaware Department of Natural Resources and Environmental Control, 2020.
    - Options for a Nontidal Wetland Permitting Program – Report to the Governor and Legislature Prepared by Delaware Department of Natural Resources and Environmental Control, September 30, 2022, amended on September 29, 2023.[3]

[3] Senate Joint Resolution No. 2, 151st General Assembly, enacted in September 2021 and Senate Concurrent Resolution No. 86, 152nd General Assembly, passed June 2023.

REVIEW BACKGROUND

DNREC issues over 80 different types of permits through the following offices:

- Division of Water.
- Division of Watershed Stewardship.
- Division of Climate, Coastal and Energy.
- Division of Air Quality.
- Division of Waste and Hazardous Substances.
- Division of Fish and Wildlife.
- Division of Parks and Recreation.

The Division of Water issues the focus of this review, subaqueous permits, for projects involving activities in or near underwater lands. The application process includes site reviews and public notices for most projects, with a 20-day public comment period. Some approvals, like jurisdictional determinations, have shorter timelines as they don't require public notices. Complex projects, such as marinas, or those requiring public hearings, have longer processing times.

There have been historically long processing times, for which DNREC has identified the main processing issues to include staffing shortages and high turnover. Efforts to reform permitting processes are underway, and tools to improve transparency, such as allowing the public to track permit statuses, are expected soon.

REVIEW OBSERVATIONS

Wetlands and Subaqueous Lands Permit Application Form – Dredging

DNREC's Division of Water has over 100 permit types which include septic, wells, and dredging. This review focuses on the latter, which falls under the Division's Wetlands and Subaqueous Lands Permit structure. A completed wetlands and subaqueous lands permit application ("permit application") must be completed for the Division to grant a permit, lease, or authorization to an individual or organization.[4] This 6-page form requires multiple documents from the applicant, including scaled plan views, a copy of the property deed and survey, and full construction plans for "major projects."

The form must also be submitted with the appropriate fee[5] and forms listed in the appendices list.[6] These appendices include boat ramps, vegetative stabilization, marinas, stormwater management, and dredging.[7] In all, 18 application appendices fall under this specific permit structure, each with its own specific requirements. The permit application lists the following appendices:

A. Boat Docking Facilities.
B. Boat Ramps.
C. Road Crossings.
D. Channel Modifications/Dams.
E. Utility Crossings.
F. Intake or Outfall Structures.
G. Bulkheads.
H. Fill.
I. Rip-Rap Sills and Revetments.
J. Vegetative Stabilization.
K. Jetties, Groins, Breakwaters.
L. NONE.[8]
M. Activities in State Wetlands.
N. Preliminary Marina Checklist.
O. Marinas.
P. Stormwater Management.
Q. Ponds and Impoundments.
R. Maintenance Dredging.
S. New Dredging.

[4] Form last revised on March 28, 2017. It includes at least 1 dead link. Form available at: https://documents.dnrec.delaware.gov/Water/Wetlands/Permits/Wetlands-Application-Form.pdf and in Appendix A of this report.
[5] Current Division of Water Permit Fees available at: https://dnrec.delaware.gov/water/permit-fees.
[6] All appendix forms are available under the wetlands and subaqueous lands permits section of the DNREC website, available at: https://dnrec.delaware.gov/water/wetlands/permits.
[7] Appendix forms for maintenance and new dredging available in Appendix B of this report.
[8] Application skips letter L in the appendix list.

In the past, DNREC processed permit applications by using hard copies and applicants had to submit 3 complete copies of the entire application packet. DNREC has moved to an online registration system for its water permits in 2024.[9]

Additional Permit Application Requirements

Various scenarios trigger additional requirements for permit applicants. For example, a dredging or fill project might need federal approval to ensure the discharge of dredged materials will not violate the State Water Quality Standards established by the Environmental Protection Agency ("EPA") under the U.S. Clean Water Act. DNREC advises applicants to complete a permit application if their project requires water quality certification and to contact the office for assistance.

Additionally, page 2 of the permit application strongly encourages applicants to contact the United States Army Corps of Engineers ("Corps") to determine the Corps' specific permitting requirements. Authorization from the Corps is mandatory for any individual, company, corporation, or governmental body proposing construction or fill activities within waters of the United States. The Corps holds authority over all construction within tidal and navigable waters, including adjacent wetlands. While a permit may not be necessary in all cases, the Corps encourages applicants to obtain a permit, as the penalty for not obtaining one and then running afoul of the U.S. Clean Water Act could result in penalties of up to $25,000 per day of violation.[10]

Applicants might also need to obtain a lease for certain subaqueous projects. Subaqueous lands within the boundaries of Delaware constitute an important state resource and require protection against uses or changes which may impair the public interest in the use of tidal or nontidal waters.[11] Therefore, if a project infringes on the public's right to enjoy the subaqueous area, an applicant will most likely need to lease the area from the state. Unless a recorded survey plot or registered deed specifies otherwise, ownership of state lands and the calculation of lease fees start from the mean low water line. For subaqueous lands lease projects, the applicant must sign and notarize the lease before returning it to DNREC for the Cabinet Secretary's signature. The fully signed lease then needs to be recorded at the relevant county's Recorder of Deeds Office. Owners of leases can request redeterminations of mean water lines from DNREC at any time.[12]

Application Processing Procedures

When an application is received, it is assigned to a Wetlands and Waterways Section scientist who reviews the application and visits the site. Most projects require a public notice, which involves sharing project details in newspapers and on the DNREC website,

[9] It is unclear if all 19 appendices are accepted online. DNREC's Wetlands and Subaqueous Lands Permits section points users to its online portal. There, users are greeted with 2 options for logging in, 1 for personal projects and 1 for enterprise projects. Both portals state that "water permits" would be available in 2024.

[10] Corps frequently asked questions available at: https://www.nap.usace.army.mil/Missions/Regulatory/FAQs.aspx##Who

[11] 7 *Del. C.* § 7201.

[12] Available at: https://documents.dnrec.delaware.gov/Water/Wetlands/Jurisdictional-Determination-and-Map-Change-Request.pdf.

followed by a 20-day period for public feedback or requests for hearings.[13] Some approvals don't require public notice and are processed faster.[14]

After the public comment period, the scientist conducts a final review which includes consideration of feedback. If approved, permits or certifications are issued. For leases, additional steps include signatures, notarization, and recording the lease with the county.

Some projects require public hearings, such as if the grant or lease is for more than 20 years or requested by the public or DNREC Secretary.[15]

Estimated turnaround times are not included on the permit application. Projects and their requirements vary greatly and evaluating the processing times used for dredging and subaqueous land permits requires looking into other required permits and public hearing processes. The DNREC website states the following processing estimates:

- Projects without public notice take 1–4 weeks.
- Projects with public notice take 60–90 days.
- Complex projects like marinas or those requiring multiple public notice periods take longer, often take 4–6 months.

Staffing

As of April 2025, there are 17 employees working under the director for the Division of Water. There are currently 2 vacant positions: 1 Program Manager I position under Commercial and Government Services, and 1 Lab Manager II position in the Environmental Laboratory.

Tidal and Nontidal Wetlands

While this focused research looked specifically at current subaqueous lands permit processes, it is worth mentioning DNREC's efforts to create a unified permitting process that captures tidal and nontidal wetlands.

According to a September 2023 report, "Delaware is the only state in the mid-Atlantic region without a state-level nontidal wetland regulatory program."[16] This report highlights changing protections on the federal level, which leads to situations where areas have no protection, and confusion in the current permitting process which leads to high costs. State laws currently manage tidal wetlands and large nontidal wetlands (400+ acres), controlling activities like construction, dredging, and excavation. Federal and state programs coordinate on water regulation, with Delaware ensuring surface water quality using certifications and aligning its policies with federal coastal management rules. However, these programs are not yet part of a unified wetland protection system. A combined program for tidal and nontidal wetlands, subaqueous lands, and coastal management would improve efficiency, public engagement, and water protection statewide.

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[13] 7 *Del. C.* § 7209.

[14] Statewide activity approvals, jurisdictional determinations, and letters of authorization do not require a public notice period and have an abbreviated processing time.

[15] 7 *Del. C.* § 7208.

[16] Options for a Nontidal Wetland Permitting Program SJR 2 – Report to the Governor and Legislature Prepared by DNREC September 30, 2022, September 29, 2023 (Amended) available at: https://legis.delaware.gov/Committee/Sunset/2024_JLOSCReviews.

Processing Delays and Improvements

At DNREC's February 2025 Joint Finance Committee Hearing, newly appointed DNREC Secretary Gregory Patterson acknowledged historical issues with permit processing delays that have frustrated the public. He explained that permits are a priority, and staffing challenges have been an issue due to significant turnover over the past year. Secretary Patterson discussed permitting reform efforts and highlighted his previous experience in the Governor's office, where he worked with the Division of Water on a Government Efficiency and Accountability Review ("GEAR").

GEAR started work in 2020 expanding its efforts to improve business-related permitting processes based on recommendations from the Delaware Business Roundtable. A project charter was created to tackle bottlenecks, starting with a two-phase initiative. This initiative identified a key process within DNREC with a subaqueous permitting prototype project for boat docking facilities. Secretary Patterson explained that another GEAR project was set to launch in August 2024 with DNREC permitting, however the loss of critical personnel meant that those assigned to the project had to shift focus to manage permit processing.

In 2025, progress is expected as DNREC is working on permitting reform and aims to prioritize the project queue more effectively and improve the applicant experience by allowing for application tracking.

Secretary Patterson stated that DNREC has received complaints and concerns regarding with the Division of Water and therefore he created 2 new performance measures for septic and subaqueous permits. He presented the following data that was current in fiscal year 2025:

- **% septic permits processed within 20 working days = 75.6%**
- **% subaqueous permits processed within 120 working days = 35%**

On the topic of nontidal wetlands, Secretary Patterson stated that 15 full time employees were in the fiscal note last year to create this program but he does not want this to be another permit the public is frustrated by and he knows permitting is an area they are struggling with, mentioning that there was $150K appropriated last year for DNREC to look into it.

DNREC continues to focus on subaqueous permits and hopes to show progress as improvements are implemented. As mentioned in this report, subaqueous permits are now submitted online, and recent updates include applicant ability to check on their application's process through the online portal.

JLOSC STAFF FINDINGS AND RECOMMENDATIONS

Finding #1

The Department of Natural Resources and Environmental Control is under new leadership with the appointment of Secretary Patterson by Governor Matt Meyer. During DNREC's February 2025 presentation to the Joint Finance Committee, the department highlighted permit reform—particularly within the Division of Water—as a top priority. Notable improvements in applicant services include the introduction of online application submissions and real-time status tracking. A DNREC progress update in 2026 would be helpful to understand progress and future needs for permit processing.

Recommendation #1 – Agency Update.

JLOSC may consider requesting a presentation from DNREC in January 2026 to provide updates on permitting processes, including any legislative needs the department has identified. JLOSC staff will supply an update form and presentation guidelines. As this topic is of mutual interest to members of the Joint Finance Committee, JLOSC staff will extend an invitation for them to attend the presentation.

Appendix A

WETLANDS AND SUBAQUEOUS LANDS SECTION PERMIT APPLICATION FORM

For Subaqueous Lands, Wetlands, Marina and 401 Water Quality Certification Projects

State of Delaware
Department of Natural Resources and Environmental Control
Division of Water

Wetlands and Subaqueous Lands Section

APPLICATION FOR APPROVAL OF
SUBAQUEOUS LANDS, WETLANDS, MARINA
AND WATER QUALITY CERTIFICATION PROJECTS

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

Application Instructions:

1. Complete each section of this basic application and appropriate appendices as thoroughly and accurately as possible. Incomplete or inaccurate applications will be returned.

2. All applications must be accompanied by a scaled plan view and cross-section view plans that show the location and design details for the proposed project. Full construction plans must be submitted for major projects.

3. All applications must have an original signature page and proof of ownership or permitted land use agreement.

4. Submit an original and two (2) additional copies of the application (total of 3) with the appropriate application fee and public notice fee* (prepared in separate checks) to:

Department of Natural Resources and Environmental Control
Wetlands and Subaqueous Lands Section
89 Kings Highway
Dover, Delaware 19901

*Application and public notice fees are non-refundable regardless of the Permit decision or application status.

5. No construction may begin at the project site before written approval has been received from this office.

Helpful Information:

1.	Tax Parcel Information:	New Castle County	(302) 395-5400
		Kent County	(302) 736-2010
		Sussex County	(302) 855-7878
2.	Recorder of Deeds:	New Castle County	(302) 571-7550
		Kent County	(302) 744-2314
		Sussex County	(302) 855-7785

3. A separate application and/or approval may be required through the Army Corps of Engineers. Applicants are strongly encouraged to contact the Corps for a determination of their permitting requirements. For more information, contact the Philadelphia District Regulator of the Day at (215) 656-6728 or visit their website at: http://www.nap.usace.army.mil/Missions/Regulatory.aspx.

4. For questions about this application or the Wetlands and Subaqueous Lands Section, contact us at (302) 739-9943 or visit our website at: http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx. Office hours are Monday through Friday 8:00 AM to 4:30 PM, except on State Holidays.

APPLICANT'S REVIEW BEFORE MAILING

DID YOU COMPLETE THE FOLLOWING?

_____ Yes BASIC APPLICATION

_____ Yes SIGNATURE PAGE (Page 3)

_____ Yes APPLICABLE APPENDICES

_____ Yes SCALED PLAN VIEW

_____ Yes SCALED CROSS-SECTION OR ELEVATION VIEW PLANS

_____ Yes VICINITY MAP

_____ Yes COPY OF THE PROPERTY DEED & SURVEY

_____ Yes THREE (3) COMPLETE COPIES OF THE APPLICATION PACKET

_____ Yes APPROPRIATE APPLICATION FEE & PUBLIC NOTICE FEE
(Separate checks made payable to the State of Delaware)

Submit 3 complete copies of the application packet to:

Department of Natural Resources and Environmental Control
Wetlands and Subaqueous Lands Section
89 Kings Highway
Dover, Delaware 19901

Before signing and mailing your application packet, please read the following:

The Department requests that the contractor or party who will perform the construction of your proposed project, if other than the applicant, sign the application signature page along with the applicant in the spaces provided. When the application is signed by the contractor as well as the applicant, the Department will issue the Permit to both parties. For Leases, the contractor will receive a separate construction authorization that will make them subject to all of the terms and conditions of the Lease relating to the construction

Section 1: Applicant Identification

1. Applicant's Name: _____ Telephone #: _____
   Mailing Address: _____ Fax #: _____
   _____ E-mail:_____
   _____

2. Consultant's Name: _____ Company Name: _____
   Mailing Address: _____ Telephone #:_____
   _____ Fax #:_____
   _____ E-mail:_____

3. Contractor's Name: _____ Company Name: _____
   Mailing Address: _____ Telephone #:_____
   _____ Fax #: _____
   _____ E-mail:_____

Section 2: Project Description

4. Check those that apply:
☐ New Project/addition to existing project? ☐ Repair/Replace existing structure? (If checked, must answer #16)

5. Project Purpose (attach additional sheets as necessary):
_____
_____
_____
_____

6. Check each Appendix that is enclosed with this application:

☐	A. Boat Docking Facilities	☐	G. Bulkheads	☐	N. Preliminary Marina Checklist
☐	B. Boat Ramps	☐	H. Fill	☐	O. Marinas
☐	C. Road Crossings	☐	I. Rip-Rap Sills and Revetments	☐	P. Stormwater Management
☐	D. Channel Modifications/Dams	☐	J. Vegetative Stabilization	☐	Q. Ponds and Impoundments
☐	E. Utility Crossings	☐	K. Jetties, Groins, Breakwaters	☐	R. Maintenance Dredging
☐	F. Intake or Outfall Structures	☐	M. Activities in State Wetlands	☐	S. New Dredging

Section 3: Project Location

7. Project Site Address: _____ County: ☐ N.C. ☐ Kent ☐ Sussex
   _____ Site owner name (if different from applicant): _____
   _____ Address of site owner: _____
   _____

8. Driving Directions:_____
   _____
(Attach a vicinity map identifying road names and the project location)

9. Tax Parcel ID Number: _____ Subdivision Name: _____

WSLS Use Only: **Permit #s:** _____ _____ _____ _____

Type **SP** ☐ **SL** ☐ **SU** ☐ **WE** ☐ **WQ** ☐ **LA** ☐ **SA** ☐ **MP** ☐ **WA** ☐

Corps Permit: SPGP 18 ☐ **20** ☐ **Nationwide Permit #:** _____ **Individual Permit #**_____
Received Date: _____ **Project Scientist:** _____
Fee Received? Yes ☐ **No** ☐ **Amt: $**_____ **Receipt #:** _____
Public Notice #: _____ **Public Notice Dates: ON** _____ **OFF**_____

Section 3: Project Location (Continued)

10. Name of waterbody at Project Location: _____ waterbody is a tributary to: _____

11. Is the waterbody: ☐ Tidal ☐ Non-tidal Waterbody width at mean low or ordinary high water _____

12. Is the project: ☐ On public subaqueous lands? ☐ On private subaqueous lands?*
☐ In State-regulated wetlands? ☐ In Federally-regulated wetlands?

*If the project is on private subaqueous lands, provide the name of the subaqueous lands owner:

_____

(Written permission from the private subaqueous lands owner must be included with this application)

13. Present Zoning: ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industrial ☐ Other

Section 4: Miscellaneous

14. A. List the names and complete mailing addresses of the immediately adjoining property owners on all sides of the project (attach additional sheets as necessary):

_____
_____
_____
_____

B. For wetlands and marina projects, list the names and complete mailing addresses of property owners within a 1,000 foot radius of the project (attach additional sheets as necessary):

_____
_____
_____
_____

15. Provide the names of DNREC and/or Army Corps of Engineers representatives whom you have discussed the project with:

_____ _____ _____
_____ _____ _____

A. Have you had a State Jurisdictional Determination performed on the property? ☐ Yes ☐ No
B. Has the project been reviewed in a monthly Joint Permit Processing Meeting? ☐ Yes ☐ No
*If yes, what was the date of the meeting? _____

16. Are there existing structures or fill at the project site in subaqueous lands? ☐ Yes ☐ No
*If yes, provide the permit and/or lease number(s):

_____ _____ _____

*If no, were structures and/or fill in place prior to 1969? ☐ Yes ☐ No

17. Have you applied for or obtained a Federal permit from the Army Corps of Engineers?
☐ No ☐ Pending ☐ Issued ☐ Denied Date: _____

Type of Permit: _____ Federal Permit or ID #: _____

18. Have you applied for permits from other Sections within DNREC?
☐ No ☐ Pending ☐ Issued ☐ Denied Date: _____ Permit or ID #: _____

Type of permit (circle all that apply): Septic Well NPDES Storm Water

Other: _____

Section 5: Signature Page

19. Agent Authorization:

If you choose to complete this section, all future correspondence to the Department may be signed by the duly authorized agent. In addition, the agent will become the primary point of contact for all correspondence from the Department.

I do not wish to authorize an agent to act on my behalf ☐

I wish to authorize an agent as indicated below ☐

I, _____, hereby designate and authorize _____
(Name of Applicant) (Name of Agent)
to act on my behalf in the processing of this application and to furnish any additional information requested by the Department.

Authorized Agent's Name: _____ Telephone #: _____
Mailing Address: _____ Fax #: _____
_____ E-mail: _____
_____

20. Agent's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

_____ _____
Agent's Signature Date

21. Applicant's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application. I grant permission to authorized Department representatives to enter upon the premises for inspection purposes during working hours.

_____ _____
Applicant's Signature Date

_____
Print Name

22. Contractor's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge, and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

_____ _____
Contractor's Name Date

_____
Print Name

MAINTENANCE DREDGING OR EXCAVATING

- If dredged material is to be placed in a disposal site, a separate map showing the location of the disposal site should be attached. This drawing must indicate the proposed retention levees, weirs, spillways, and/or devices for retaining the materials.

- Bottom samples to determine heavy metals or other toxic materials must be taken and analyzed if deemed necessary by the DNREC staff. The responsibility, as well as the expense incurred for obtaining and analyzing these samples, must be borne by the applicant.

- If maintenance dredging is to be done, evidence of previous dredging must be provided. Any previously issued permit with drawings which indicates the date the dredging occurred, the area involved and dredging depth constitutes acceptable proof.

- Please make sure answers to all of the questions in this appendix correspond to information on the application drawings.

1. How many cubic yards of material will be MAINTENANCE DREDGED or excavated channelward of the:

   a. Tidal waters: mean high water line? _____ cu. yds.
      mean low water line? _____ cu. yds.
   b. Non-tidal waters: ordinary high water line?_____ cu. yds.

Does this account for the total volume of proposed dredging for the project? _____Yes _____No
If there is new dredging associated with this project (dredging beyond previously authorized dimensions) please fill out appendix S for new dredging.

2. What will be the dimensions of the dredged or excavated area relative to mean low water (for tidal areas only) or ordinary water level (for non-tidal areas only)?
   _____ length _____ depth _____ base width _____ top width

3. What are average existing depths in area of proposed dredging? _____ft. (mlw/ohw)
   Include a survey of proposed and existing depths on application drawings.

4. What is the proposed dredging depth in relation to surrounding bathymetry? _____ft.(mlw/ohw)
   Indicate both proposed depths and surrounding depths on attached drawings.

5. By what method(s) (hydraulic, clamshell or other) will the dredging be done? If other, explain:

6. What is proximity of the dredging project to the nearest creek bank or banks? _____ ft.
   What are existing land uses along this bank(s)?

   Describe the existing shoreline along this bank (vegetation, rip-rap, bulkhead, etc.).

7. Describe characteristics of the material to be disposed including:
   a. Physical nature of material (i.e. sand, silt, clay, etc.). Give percentages of various fractions if available.

   b. Chemical composition of material - Many areas have sediments with high concentration of pollutants (chemicals, organics etc.) which may be re-suspended or reintroduced into the water. For heavily industrialized sites, a chemical analysis of this material should be provided (if applicable).

   c. What are the dewatering properties of material to be disposal of?

8. How will the dredged or excavated material be transported to its disposal area?

9. Land Disposal Areas.

   a. Describe dimensions, characteristics and exact locations of the proposed dredged material disposal site (provide photographs, directions to, and complete plans of disposal site).

   b. Describe method of dredged material containment (embarkment, behind bulkhead, etc.)

   c. What type of leachates will be produced by the spoil material and what is planned for the protection of groundwater?

   d. Disposal site coordinates _____ latitude _____ longitude

   e. What methods will be used to ensure that spoil water does not adversely affect water quality both during construction and after completion of the project?

   f. Describe present land use of the disposal site.

10. Water Disposal Areas/ Beneficial Use Projects
    Describe methods to be used for water disposal including volumes and site selection, and containment (if applicable). Include Fill or Wetland Appendix if applicable.

11. Describe the existing water characteristics at the site, including chemical analysis for water quality.

12. Identify the dredging and disposal schedule to ensure that operations do not degrade water quality during times of anadromous fish migration.

13. Has an Erosion and Sediment Control Plan been approved by the designated plan approval agency for the project? An Erosion and Sediment Control Plan is required for any project disturbing more than 5,000 square feet of uplands. Final approved plans must be received by this office prior to permit issuance.

____ Yes ____ No ____ Not required

Important time of year restriction information:

Please be advised that all dredging in the Inland Bays must be undertaken between September 1 and December 31 in order to protect summer and winter flounder and other aquatic species. Dredging in other Delaware waters may also be subject to certain time of year restrictions in order to protect fish and wildlife. Contact DNREC for more specific information regarding the restrictions that may apply within your project area.

NEW DREDGING PROJECTS

Please make sure that answers to all of the questions in this appendix correspond to the information on the application drawings.

CLASSIFICATION OF CREEK TO BE DREDGED (for projects in the Inland Bays only)

1. How is the creek classified according to the State dredging program's classification system? Is it open to dredging, open to dredging but requiring further study, or restricted due to environmental sensitivity? See example "Classification System" on page 7 of this application. For further explanation, refer to Section 2.0 of the "Goals and Objectives - Creek Evaluation Dredging Criteria" dated April, 1986.
    a. **Step One:** If the creek to be dredged is "restricted", an application cannot be accepted.
    b. **Step Two:** If the creek is "open" to dredging, the applicable parts of this application must be completed.
    c. **Step Three:** If the creek is "open" to dredging but requiring further analysis, submit information request as part of procedure outlined on page 4 and further explained in Section 2.4 of the Dredging Study.
2. SITE LOCATION OF DREDGING PROJECT
    a. Locate the project site with respect to the county, creek, tributary (enclose 8 ½" x 11" map).

3. DESCRIPTION OF DREDGING PROJECT
    a. How many cubic yards of material will be dredged or excavated channelward of the:

    Tidal waters: mean high water line? _____ cu. yds.

    mean low water line? _____ cu. yds.

    Non-tidal waters: ordinary high water line?_____ cu. yds.

    b. What are the proposed dimensions of the dredged area relative to mean low water or ordinary high water?

    _____ length _____ depth _____ base width _____ top width

    c. What are average and range of existing depths in area of proposed dredging? _____ft. (mlw/ohw)

    Include a survey of proposed and existing depths on application drawings.

    d. What is the proposed dredging depth in relation to surrounding bathymetry? _____ft.(mlw/ohw)

    Indicate both proposed depths and surrounding depths on attached drawings.

    a. Describe the other details of the proposed project including the equipment to be used, place and method of disposal, etc. Detail is important.

4. PURPOSE OF PROPOSED DREDGING PROJECT

    a. Define the purpose and need of the proposed dredging project. Who will benefit?

    b. Submit color photos of site and bordering upland with explanation of the views shown (prints only).

5. How often will maintenance dredging be required? _____ What measures are being taken to reduce the frequency of dredging.

ENVIRONMENTAL CONSIDERATIONS OF THE DREDGING PROJECT

A sediment analysis must be performed in accordance with the attached sampling plan.

6. CHARACTERIZE THE SUBSTRATE TO BE DREDGED

    a. What is the chemical composition of the material to be dredged? Does the substrate contain more pollutants relative to known clean bay sediments of similar composition? Attach Lab Reports and Analyses

    b. What is the physical composition of the substrate? State percent of sand, gravel, mud, silt. Does it contain shell fragments?

7. CHARACTERIZE THE UNDERLYING SUBSTRATE TO BE EXPOSED BY THE PROJECT

    a. Is the underlying substrate (material at proposed dredging depth) of similar physical composition and chemical quality as material to be dredged? _____ Yes _____ No

    b. Project the expected turbidity levels and area of effect (extent of plume) based on the percent of silt, sand, and gravel in the dredged material.

8. CHARACTERIZE THE BIOLOGICAL COMMUNITY IN THE AREA TO BE DREDGED

    a. Characterize how the area is utilized by shellfish and finfish and potential temporary and/or permanent impacts to these species.

    b. Identify the practices proposed to reduce impacts to aquatic species and the potential for degradation of water quality (turbidity curtain, time of year restrictions, etc.). Dredging in Delaware waters may be subject to certain time of year restrictions in order to protect fish and wildlife.

    c. What are the major benthic (bottom dwelling) species found at the area to be dredged?

    d. Characterize the subaquatic vegetation and other vegetation at or near the project site.

9. CHARACTERIZE THE EXISTING WATER QUALITY

   a. Determine the classification of the stream according to state water quality criteria. Will the dredging project cause violations of the water quality criteria? Will designated water uses be affected?

   b. Determine levels of dissolved oxygen (D.O.) in and around the project area. Measure D.O. at the water/substrate interface during worst case conditions (i.e. summer morning).

10. IMPACT TO THE BOTTOM CONTOURS OF THE BAY OR CREEK

   a. What is proposed dredging depth in relation to surrounding bathymetry? Provide map showing surrounding depths.

   b. Will the project change flow or circulation patterns in the bay or creek? Will shoaling patterns be altered?

   c. Describe the impact to sediment transportation along the shoreline and the potential for depriving adjacent shorelines of sediment?

11. IMPACT TO SURROUNDING LANDS

   a. What is the proximity of the dredging project to the nearest creek bank or banks?

   b. What are the existing land uses along this bank(s)?

   c. What is the shoreline composition adjacent to the proposed dredging and the areas immediately up and downstream (wetland, vegetated bank, rip-rap, bulkhead eroding bank)?

12. What measures will be taken during the dredging operation to minimize environmental impact?

CONSIDERATIONS FOR DISPOSAL OF DREDGED MATERIALS

13. What are your plans for disposing of dredged material (i.e., upland disposal, wetland creation, island creation, etc.)? What alternatives have you considered?

14. When do you plan to conduct your dredging/disposal operation (approximate dates of operation)?

15. Describe the characteristics and location of the proposed dredged material disposal site? What is the present use of the disposal site? Please identify both temporary dewatering/stockpiling areas as well as the permanent disposal area and pipeline route if applicable.

16. CHARACTERISTICS OF THE DREDGED MATERIAL

1. Based on sediment analysis required or other known factors, does the material contain any contaminants?

a. What is the bulking factor of the material (e.g., how much will material increase in volume during dredging and disposal operation based on material composition, material water holding capacity and dredging method)?

b. What is the settling rate of the dredged material?

c. What is the mounding ability of the material being disposed of?

17. CONSIDERATIONS FOR HABITAT DEVELOPMENT

a. Does similar habitat already exist in the area proposed for development?

b. What is the depth of water at mean low water (for water disposal for marsh or island creation)?

c. What is the salinity of water at the proposed site of development?

d. What is the salinity of water from which material is being dredged?

e. Is the composition of the dredged material similar to the substrate at the site of habitat development?

f. What are the biological characteristics of the site proposed for development? Are there oyster bars, spawning grounds, submerged aquatic vegetation, or other fragile ecosystems which require temporary or permanent protection? These sites should be avoided for habitat development.

g. What are the wind and current conditions at the site? Do they change seasonally?

h. Will habitat development interfere with any existing commercial or recreational activities?

i. Is there enough material to achieve desired elevations? Is the potential site of development large enough to accommodate the dredged material?

j. Who is the owner of the site proposed for development? Who will maintain the new habitat?

k. What types of wildlife are to be attracted to the site? Will the food and habitat needs be met?

l. What measures will be taken to reduce potential environmental impact?

18. CONSIDERATIONS FOR UPLAND DISPOSAL

a. What is the distance from the dredging operation to the proposed site of disposal?

b. What method of disposal is to be utilized (i.e., pipeline discharge, barge, hopper, etc.)?

c. Describe the proposed method of containment for the dredged material.

d. How much acreage is required for the quantity of material being disposed of?

e. Provide an engineering drawing of the proposed disposal facility. Include dimensions of the sediment to be contained in this dredging event. (Length, width, depth)

f. What measures will be taken to reduce potential environmental impact?

g. What is estimated life of the dredge spoil disposal site?

h. Are there any wells within 300 feet of the disposal site? If yes, show location of adjacent wells on disposal area plan.

19. If required, has an Erosion and Sediment Control Plan been approved by the designated plan approval agency for the project? An Erosion and Sediment Control Plan is required for any project disturbing more than 5,000 square feet of uplands. Final approved plans must be received by this office prior to permit issuance.

____ Yes _____ No ____ Not required

20. SAMPLING PLAN FOR NEW DREDGING PROJECTS

1. Physical and Chemical Analysis of Sediment

a. Particle size distribution and percent solids analysis on core samples taken to depth of proposed dredging. Percentage sand, silt and clay should be given based on:

sand: Greater than or equal to 0.0625mm

silt: Less than 0.0635mm but greater then 0.0039mm

clay: Less than 0.0039mm

b. Bulk sediment analysis (mg/lg) core samples taken to depth of proposed dredging for parameters as determined by the Department.

c. Elutriate analysis (mg/l) on core samples taken to depth of proposal dredging for parameters as determined by the Department. Dredge site water should be used for the dilution water.

d. Surface water analysis (mg/l) on one composite sample from the dredging area for parameters as determined by the Department.

2. Biological Sampling

e. Benthic Invertebrate survey based on minimum of three surface grab samples or benthic dredge. Organisms should be identified to genus-level species where possible.

f. Description of emergent and submerged vegetation in or adjacent to the proposed dredging area.

Important Notes:

The number of samples is dependent on size of area to be dredged and suspected pollution level. As a general rule, a minimum of three sampling stations should be established.

If sediment contaminants are shown to exist at levels of concern by the above analyses, a bioassay may be required. Suspected contaminated sediment proposed for upland disposal should be subjected to an EP Toxicity analysis.

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CLASSIFICATION OF CREEK TO BE DREDGED (for Inland Bays)

Step One: Environmental Classification	**Areas of Restricted Dredging**	
Objective: Classify as areas where dredging should be restricted creeks, creek segments, and open water areas with high environmental sensitivity. Factor One: Bodies of water and associated shorelines which have been designated as state natural areas, or which are totally contained in or where more than 50% of the shoreline borders a wildlife refuge or state/federal/parkland. Factor Two: Creek segments whose shorelines are dominated by wetland vegetation and which have open water channels equal to or less than 40 feet in width. Factor Three: Creek segments where the presence of rare and endangered species has been identified either in-stream or along the shoreline. Factor Four: Creek segments where at least 30% of the land area within ¼ mile of the water's edge is contained in designated wetlands and is less than 50% developed as moderate density residential development. *Creeks less than 40 feet in width (headwaters and tributaries) and other areas not designated on the maps should not be considered for dredging by the state	**<u>Upstream reaches of:</u>** Vines Creek Pepper Creek Herring Creek • Hopkins Prong • Burton Prong • Guinea Creek Wilson Creek White Oak Creek • Johnson Branch Collins Creek • Joshua Prong Simon Glade • Edgar Creek White Creek Arnell Creek Dirickson Creek Emily Gut Love Creek Lingo Creek Drum Creek Roy Creek Lee Joseph Creek Love Creek Blackwater Creek Miller Creek	**<u>Segments of:</u>** Drum Creek Dirickson Creek Love Creek Dorman Branch Lingo Cove Joshua Cove Sloughs Gut Collins Creek Joshua Prong Edgar Prong Stump Creek Swan Creek Island Creek Warwick Gut Emily Gut Lingo creek Other small unnamed creeks/guts *May list more creek segments as the presence of both state and federally designated rare and endangered species are identified.
Step Two: Classification by Water Use and Dredging History	**Areas Open to Dredging**	
Objective: To further segregate creeks into those which are characterized by intensive use and a recent dredging history and those which are less used and have not been previously dredged. Those areas which are both intensively used and have a recent dredging history will then be classified as being open to dredging. Factor One: Is the waterbody, creek or creek segment consistently and intensively used as and access route to, or between the following types of boating activities: • Recreational boating, including sailing and excursions • Recreational or commercial fishing, including shellfishing • Water skiing, jet skiing, etc. • Commercial transportation (i.e. hauling of commodities) • Access channel connecting major water use areas Factor Two: Has the water area, creek or creek segment been dredged by the State of Federal government within the last 10-15 years?	Assawoman Canal and approach channels to be dredged for navigation purposes only. Future development projects requiring access to Assawoman Canal, structures that conflict with navigation and projects which degrade water quality will be prohibited. Indian River Navigation Channel Lewes & Rehoboth canal Massey's Ditch Rehoboth Bay Navigation Channel As a general policy, the State should not dredge artificially constructed dead-end lagoons unless it is for environmental rehabilitation or ther are overriding concerns. If dredging is requested by incorporated communities, cost/benefit analysis should be conducted.	
Step Three: Generators and Attractors of Boat Traffic	**Areas Requiring Further Analysis**	
Objective: To further segregate the group remaining after Step II into those areas with or without navigational demand. The criteria used to determine navigational demand is the presence of generators and/or attractors of boat traffic as defined below. Factor One: The presence of a marina with one of the following characteristics: • Publicly accessible marina with more than 25 slips • Significant proportion of vessels using marina have drafts exceeding 4'and lengths exceeding 25'. • Publicly accessible boat launching ramp • Private marina with more than 100 slips Factor Two: The presence of a residential subdivision, campground or trailer park with more than 50 units and which has either and accompanying marina, or whose parcels front on boat channel Factor Three: The presence of waterfront recreational, industrial or commercial activities that are regularly visited by vessels with drafts exceeding 2'. Factor Four: At least 50 percent of the land area located within ½ mile of the creek or creek segment is developed at a minimum as moderate density residential. (i.e. at least one dwelling unit acre). If at least one of the factors is present, classify as Level I; if none of the factors are present, classify as Level II. Level I creeks are higher priority projects as they satisfy the navigational demand criteria. Level II creeks exhibit little current demand or use.	**<u>Level I Creek Segments</u>** Love Creek (up to first bridge) Arnell Creek (mouth only) Lingo Creek Pepper Creek (up to Holland Pt.) Vines Creek (up to Ballast Pt.) Dirickson creek Roy Creek Herring Creek Burton Prong Hopkins Prong Wilson Creek (mouth only) Lee Joseph Creek (mouth only) **<u>Level II Creek Segments</u>** Bald Eagle Creek White Oak Creek (mouth only) Beach Cove Vines Creek (from Ballast Pt. to first bridge) *These are only portions of the creeks listed under each level as illustrated on the set of maps accompanying this report *These requirements were developed for marinas near the creek mouths on the bays. The marina size and facility requirements increase the farther upstream it is located due to related dredging costs and environmental impacts.	