



## Impacts of Sediment on Water Quality: Permitting

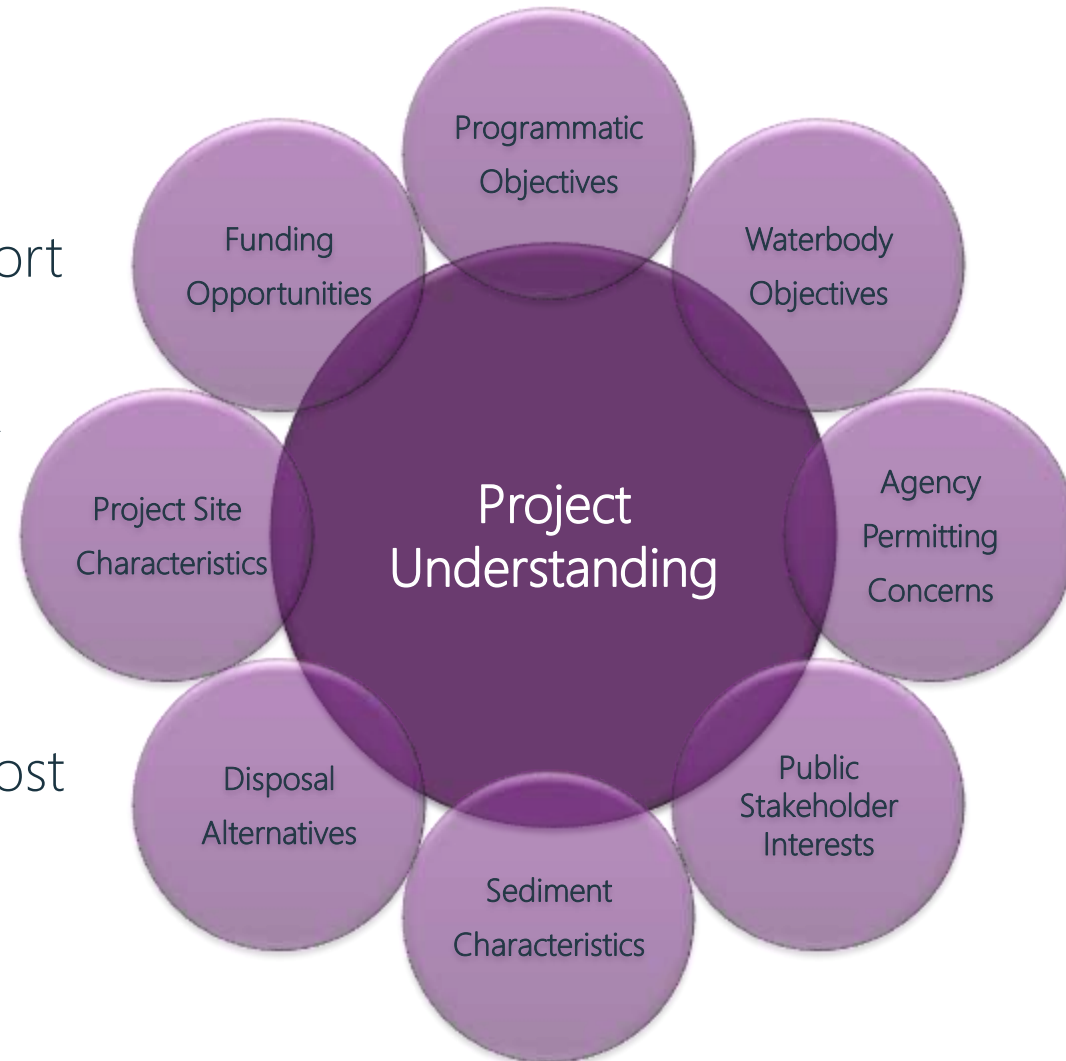


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Florida Stormwater Association  
2020 Fall Seminar  
September 18, 2020

# Environmental Muck Dredging's Unique Challenges

- **Permitting/Disposal Constraints**
- Data Collection
- Stakeholder/Public Support
- Planning & Design
- Dredging, Dewatering, & Disposal Design
- Sediment & Water Quality Issues
- Available Budget
  - Minimize Dredging Cost
  - Maximizing Environmental Restoration Benefit



# Permitting is almost always required for dredging

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# But it's a restoration project!

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That's great but there are no shortcuts

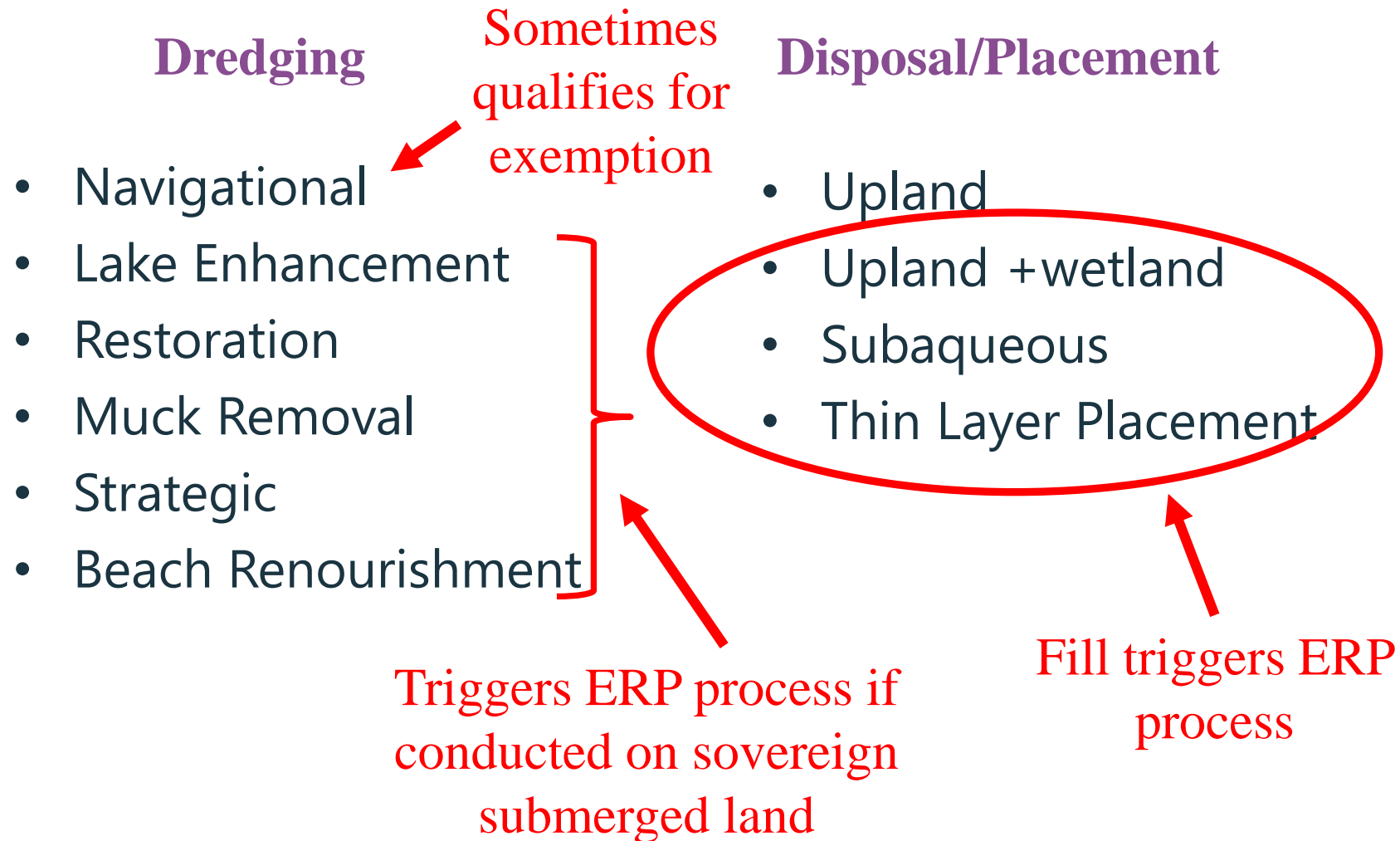
# When to Start?

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- After conceptual plans are developed, conduct a pre-application meeting with FDEP
- Information provided at the pre-application meetings streamline permitting at the 60% plan stage
- Submitting permit applications immediately after the 60% plan stage allows concurrent development of the bid package while the permit is under review
- Complex projects can take a LONG time to permit so be prepared
- Work with your regulators to develop a permit so you can minimize the time and effort required

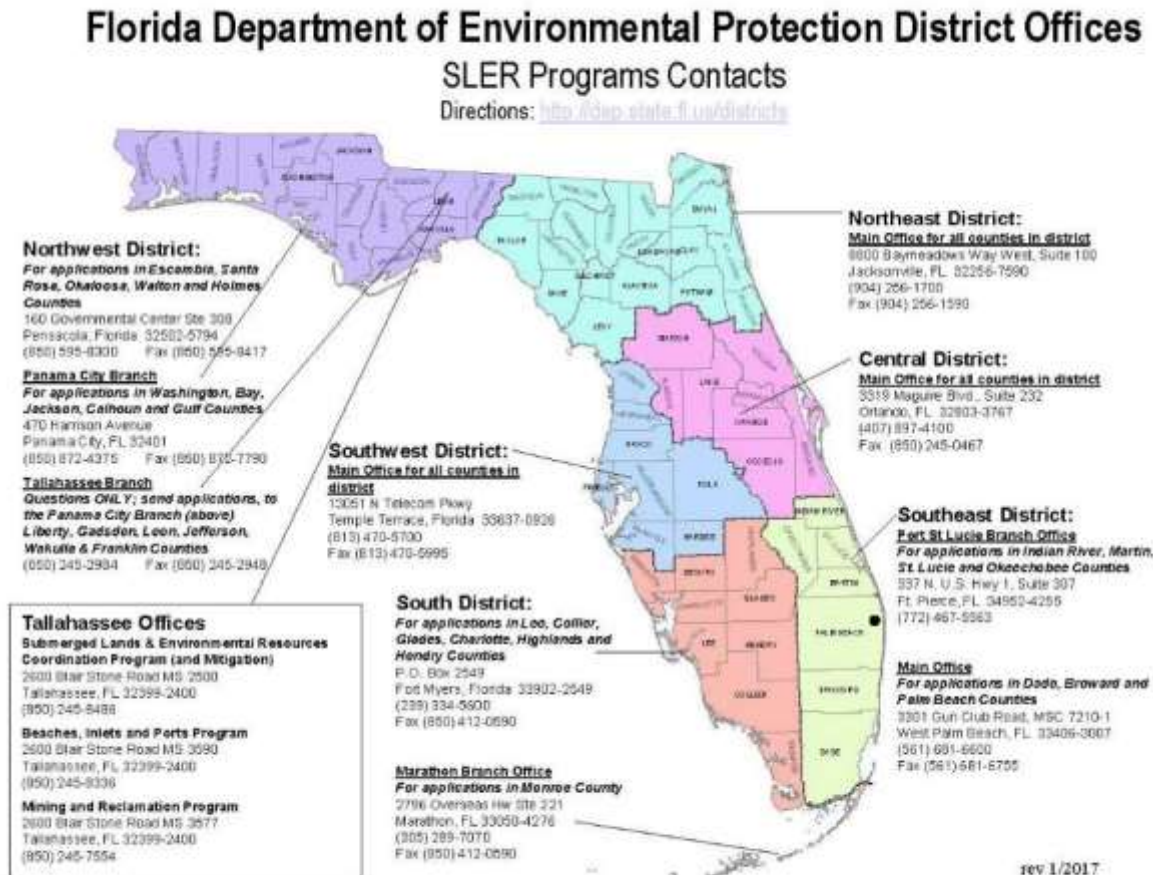


# Types of Dredging and Disposal/Placement Methods





# How do I know what kind of dredge permit I need?



Find your local  
FDEP District  
office and ask  
for your  
assigned dredge  
permit specialist



# Types of Dredge Environmental Resource Permits

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## Exemption

Usually granted for “maintenance dredging” projects in navigational channels.

Generally limited to 5 ft below MLW.

## General

Generally applies to smaller projects that fit one of several dozen categories.

Federal also offers a nationwide category.

## Individual / Conceptual

Typically applies to larger dredge projects and requires the most permitting effort.

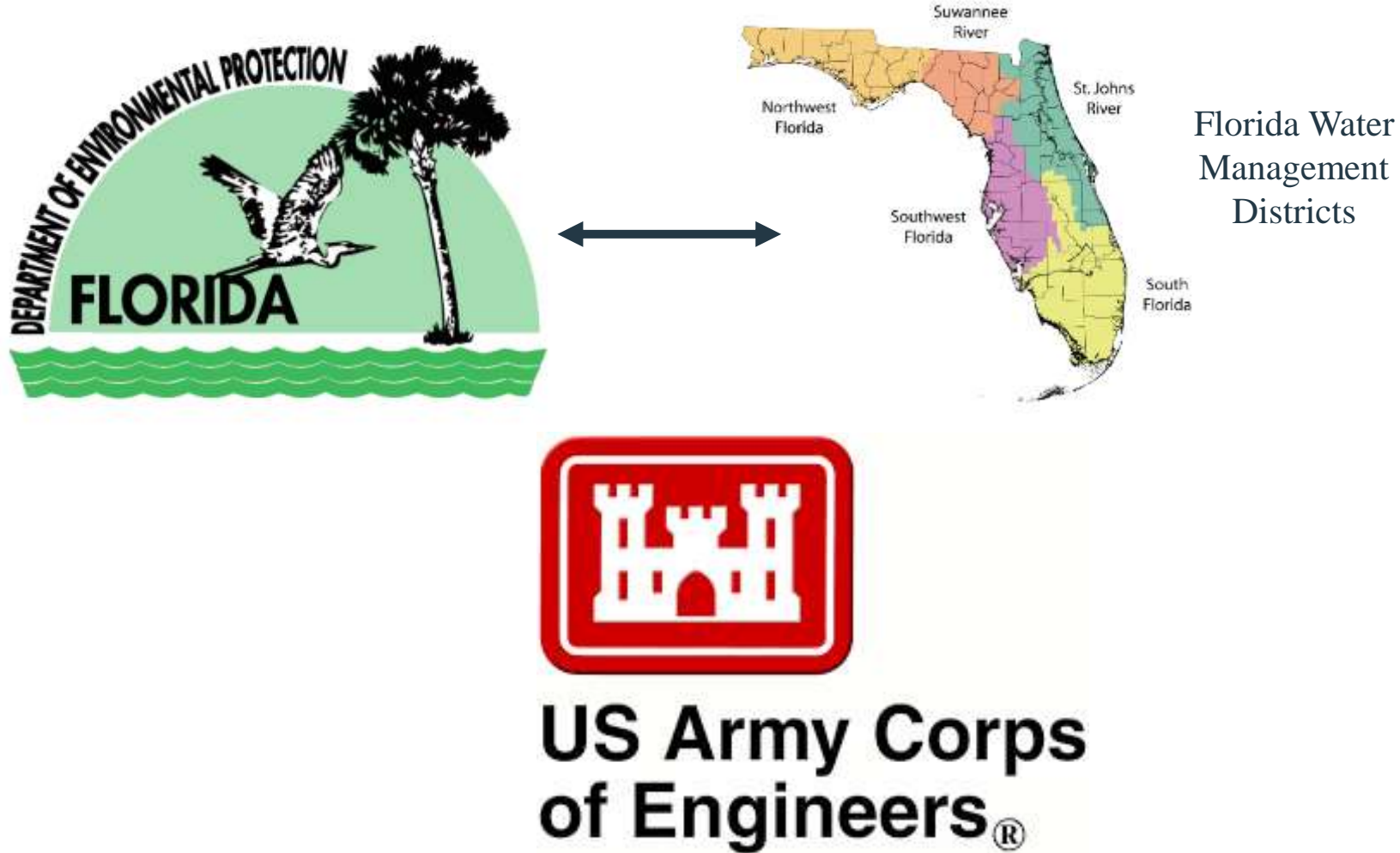
Permitting fees depend on project size.





# Key Agencies Regulating Dredging in Florida

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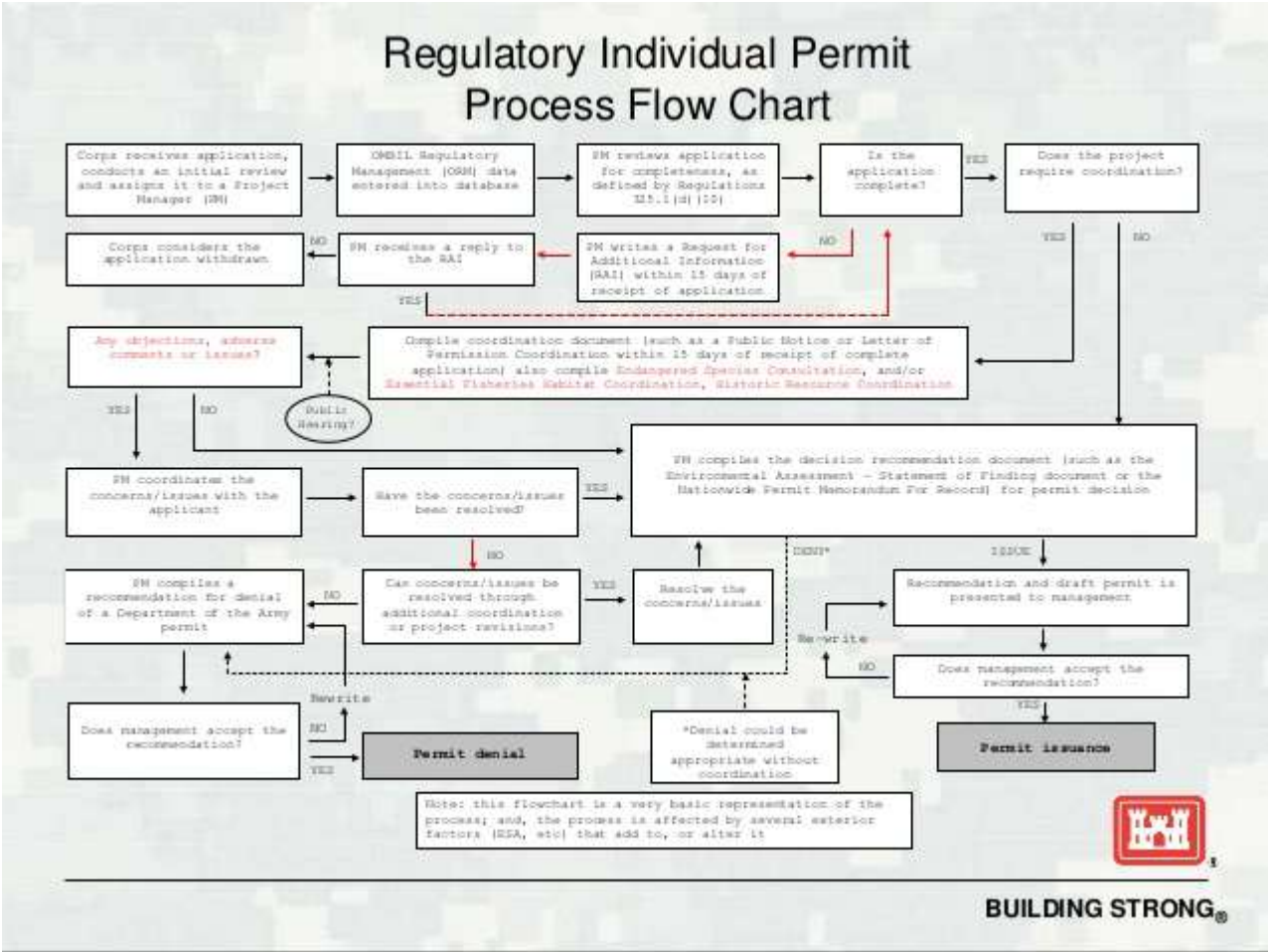


# Additional Key Federal and State Agencies

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# Dredge Permitting Can Be A Daunting and Lengthy Task!



Good planning  
and open  
dialogue with  
regulatory  
staff can  
streamline  
effort and  
reduce cost



# FDEP's Joint ERP Process (Online)

<https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/forms-environmental-resource>

Exemption for navigational maintenance

What Sections of the Application Must I Fill Out?								
Type of Activity	Section A	Section B	Section C	Section D	Section E	Section F	Section G	Section H
Fill in wetlands or waters for a single family residence?	Y	Y	N	N	N	N	N	N
Docks, shoreline stabilization, seawalls associated with a single family residence?	Y	Y	N	N	N	Y, as needed	N	N
Wetland impacts (other than association with an individual residence)?	Y	N	Y	N	N	N	N	N
Boating facilities, a marina, jetty, reef, or dredging?	Y	N	Y	Y	N	Y, as needed	N	N
Any work on state owned submerged land?	Y	N	Y	N	N	Y	N	N
Construction of a stormwater management system?	Y	N	Y, as needed	N	Y	N	N	N
Constructing a mitigation bank?	Y	N	Y	N	Y, as needed	N	Y	N
Creating a mine?	Y	N	Y, as needed	N	N	N	N	Y

Form	Title
62-330.060(1)	Request for Verification of an Exemption
62-330.060(1)	Request for Verification of an Exemption
62-330.060(1)	Notice of Intent to Use an Environmental Resource General Permit
N/A See associated section below	Joint Application for Individual And Conceptual Environmental Resource Permit/Authorization to Use State Owned Submerged Lands, Forms 62-330.060(1)
62-330.060(1) Sec. A	Section A: State-Owned Submerged Lands/Federal Dredge and Fill Permit
62-330.060(1) Sec. B	Section B: For Single-Family Projects
62-330.060(1) Sec. C	Section C: Supplemental Information for Works or Other Activities In, On, Over Wetlands and/or Other Surface Waters
62-330.060(1) Sec. D	Section D: Supplemental Information For Works or Activities Within Surface Waters (Other Than a Single Family Project)
62-330.060(1) Sec. E	Section E: Supplemental Information Required for Works or Other Activities Involving a Water Management System (Other Than a Single Family Project)
62-330.060(1) Sec. F	Section F: Application For Authorization to Use State-Owned Submerged Lands
62-330.060(1) Sec. G	Section G: Supplemental Information Required for Mitigation Banks
62-330.060(1) Sec. H	Section H: Supplemental Information for Applications for Environmental Resource Permits Involving Stormwater Management Systems for Mines
62-330.060(1) Attachments 1-3	Joint Application Form Instructions, Agency Contacts, and Application Fees
Supplemental Information for Federal Permitting	Completion of this form may help streamline the Corps of Engineers permitting process when an activity requires both a state and federal permit. Completion of this form is not required to apply for a state permit.



# Section A - Sovereign Submerged Land

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- Most restoration dredging involves sovereign submerged lands (SSL)
- FDEP makes a formal determination regarding SSL
- Applicant must demonstrate real property interest
- Removing mineral sand will trigger a severance fee requirement unless used for public purpose

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**Application for  
Individual and Conceptual Approval  
Environmental Resource Permit  
and Authorization to Use State-Owned  
Submerged Lands**

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Florida Department of Environmental Protection/  
Water Management Districts

Effective June 1, 2018





## Section C – Supplemental Information

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- This section includes the basic project information, wetland delineation details and the public interest test.
- Be careful because waterbodies that have accumulated enough sediment to support an emergent wetland will be may require mitigation if dredging occurs in that area
- Anticipated dredge methods should be described even if the method depends on bidding
- Look for prior permits and review old aerials in project area

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### **Section C: Supplemental Information for Works or Other Activities In, On, or Over Wetlands and/or Other Surface Waters**

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**Instructions:** This section is for applications that do not involve activities associated with an individual single-family residence, duplex, triplex, or quadruplex. For those activities, please use **Section B**. This form is to be completed if the proposed work or activity will occur in, on, over, or within 25 feet of a wetland or other surface water. The supplemental information required by this section is in addition to the information required by Section A of the application.





## Section C - Continued

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- All adjacent property owners within 500 ft are listed
- Environmental considerations and project plans must also be included in this section
- Avoidance and minimization discussions



# Section F – Use of State-Owned Submerged Lands

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- Similar to Section A

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## **Section F: Application for Authorization to Use State-Owned Submerged Lands**

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Instructions: If you were referred to this section from Section A, please provide the following additional information. Please note that if your proposed project is on state-owned submerged lands and the below requested information is not provided, your application will be considered incomplete. All items required under this section are in addition to those required under other sections, as applicable.



# Supplemental - Federal Permitting

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- FDEP provides a form for federal permitting, but generally USACE 404 dredge permit is submitted separately
- Communicate with your USACE regulator

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## **SUPPLEMENTAL INFORMATION FOR FEDERAL PERMITTING**

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### PRIVACY ACT STATEMENT

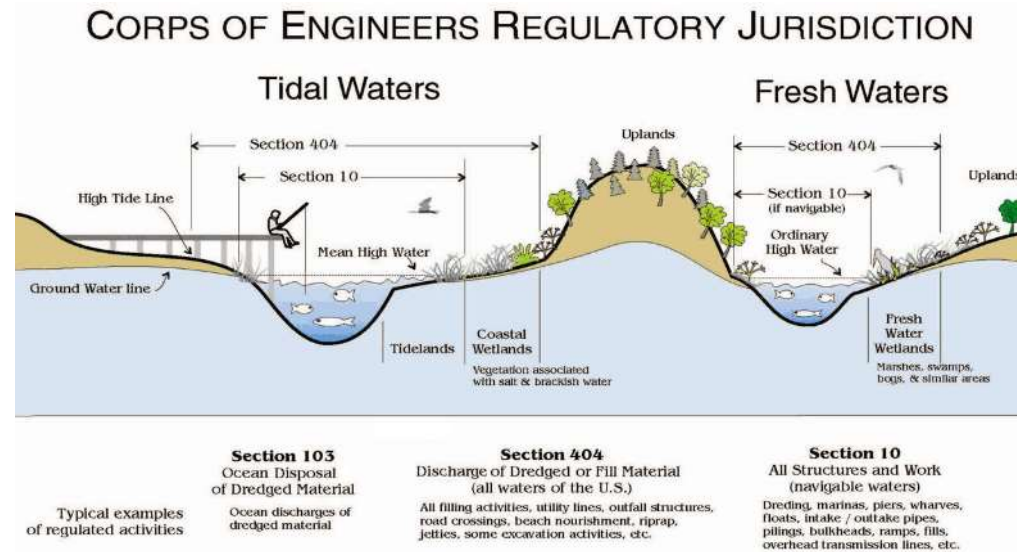
Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.

Federal authorization for activities in, on, under, or over wetlands or other surface waters is often required in addition to State of Florida authorization. Information on the federal program in Florida is available at the US Army Corps of Engineers (Corps), Jacksonville District, Regulatory Division home page (<http://www.saj.usace.army.mil/Missions/Regulatory.aspx>). The following information is necessary to facilitate the federal review of work affecting waters of the United States, including wetlands, and should be submitted in conjunction with Section A of the Joint Application for Individual and Conceptual Environmental Resource Permit/Authorization to Use State-Owned Submerged Lands/Federal Dredge and Fill Permit.



# The Federal 404 Dredge & Fill Permit Process

- United States Army Corps of Engineers (USACE)
- Required for Waters of the United States (WOTUS)
- Separate but similar to the FDEP ERP process
- Joint process, but it's a good idea to check with USACE to determine if an application should be submitted directly





# Biological Assessments / Evaluations (Federal)

- Also known as Section 7 Consultation
- Addresses potential impacts on listed species
- Effect Determination is made by USACE who initiates consultation with NMFS and USFWS



## Making Effect Determinations

- Be proactive...You can influence the consultation...
  - Consider the federal process in your design/application
  - List the species and DCH you considered
  - Consider direct/indirect effects, survey data, habitat suitability, species consultation areas
  - Use resources to accurately project effects
  - Remember there are limited survey windows for some species
- Ultimately USACE makes the determination and initiates consultation



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## Section 7 Consultation (Continued)

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- Be careful here because Section 7 consultation does not have response time requirements like FDEP does
- Archaeological consultation and coordination with Tribal Historic Preservation Office can take time





## Section 7 Consultation (Continued)

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- Be prepared to schedule project activities around times that will limit impacts to listed species
- Disposal method may also impact when project can be operational



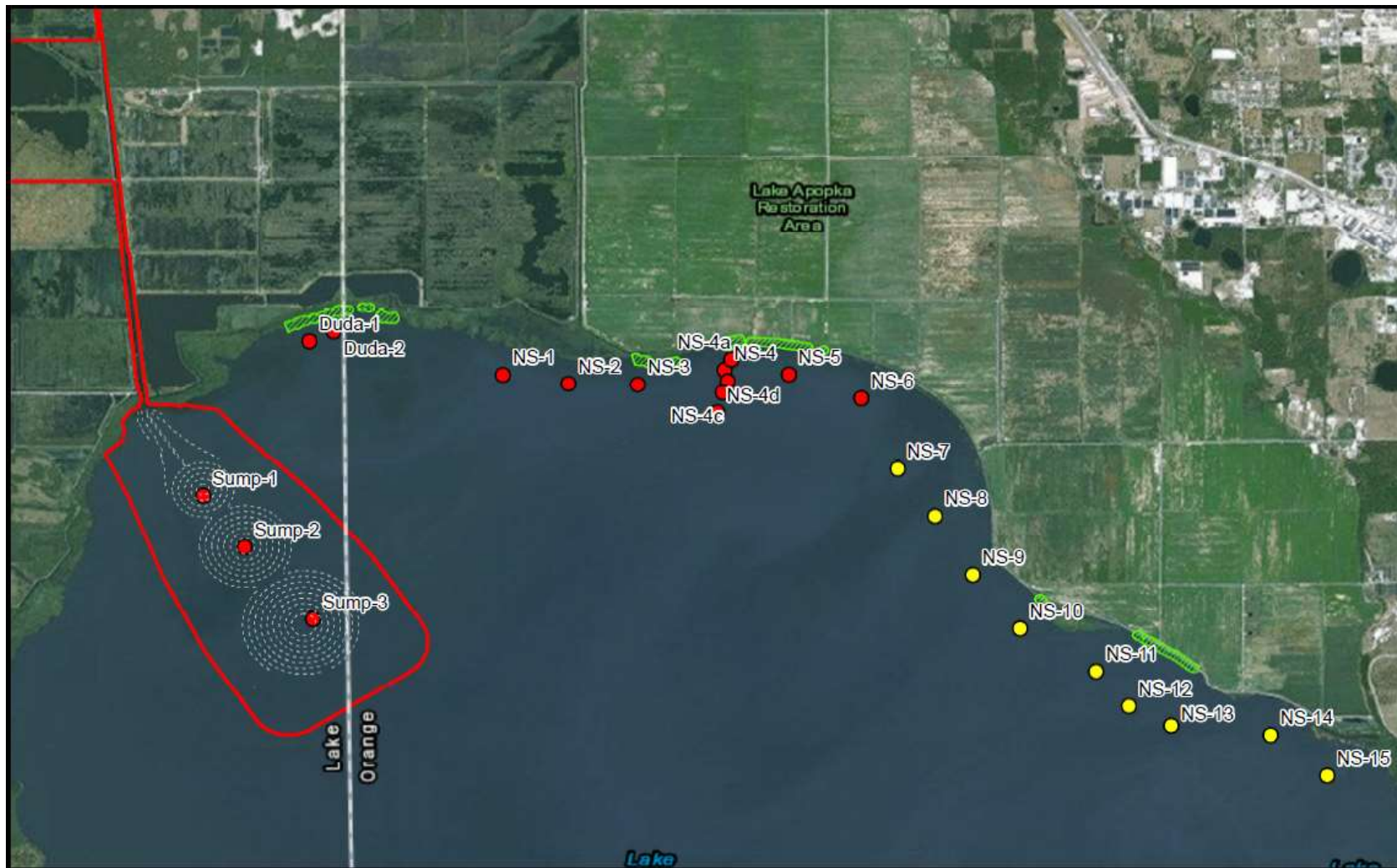
# Sediment Analyses

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- Sediment analyses are generally required for dredge ERPs
- Physical characterization is important for severance fee determination if material is being used for anything other than public purposes
- Contaminants of particular concern include heavy metals, organochlorine pesticides, PAHs, PCBs, and DDT
- Sediments are generally evaluated using the FDEP's Soil Clean-up Target Levels
- If SCTLs are exceeded, various leaching analyses are often required to determine the likelihood that the contaminant could migrate to the groundwater
- Elevated contaminants can sometimes be addressed by blending



# Sediment Sampling and Characterization



# Beneficial Reuse Can Facilitate Permitting

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- Dredged material may be used in agricultural applications
- Dredged material can sometimes be utilized to cover former agricultural “hot-spots” and facilitate restoration
- Hydraulically dredged sediments can be pumped many miles away
- DMMAAs can be re-purposed for public recreation areas
- Geotextile tubes can be used to stabilize shorelines



# Water Quality Considerations

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- Turbidity in return water and outside mixing zone must not exceed 27 NTU above background
- No increase in NTU for Outstanding Florida Waters
- Other water quality conditions must meet Class III standards as listed in Chapter 32-302 FAC
- FDEP requires evaluation of coagulants proposed for the dredge material disposal
- No provisions for typical nutrient concentrations, however, ammonia is part of FDEP's Class III standards and is often high in anoxic organic sediments
- Bioassays may be required and can be affected by ammonia



# Water Quality in Dredge Effluent

## Challenges

- N and P are not often addressed in dredge return water and there are no regulatory limits
- Dissolved nutrients (N and P) are of primary concern because they are highly available to algae
- Dissolved nutrients are the most challenging to remove
- Hydraulic dredge operations increase the amount of water requiring treatment
- Nutrient reduction processes can become the limiting factor for the entire operation unless the proper technology and capacity is selected





# Stakeholder Involvement

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- FDEP informs adjacent property owners
- USACE and FDEP post public Notice of Intent
- Public meetings
- Public comment
- Opportunity for permit challenges which may result in an administrative hearing



# Summary

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- Dredging project generally require permitting although exemptions are possible for navigational dredging
- Get to know your regulators and stay in contact with them throughout the permitting process
- Time the permit application accordingly with design and construction
- Carefully evaluate the options to minimize wetland impacts in both the dredge and disposal areas
- Get the public involved early in the process
- Be creative and find opportunities to provide multiple opportunities to improve environmental conditions when possible





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