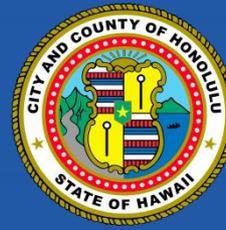


Clean Water Act § 404 & 401 Compliance for In-Stream Projects





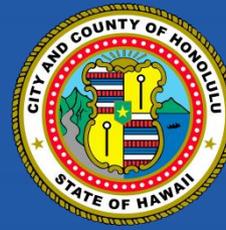
Introduction

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AECOM

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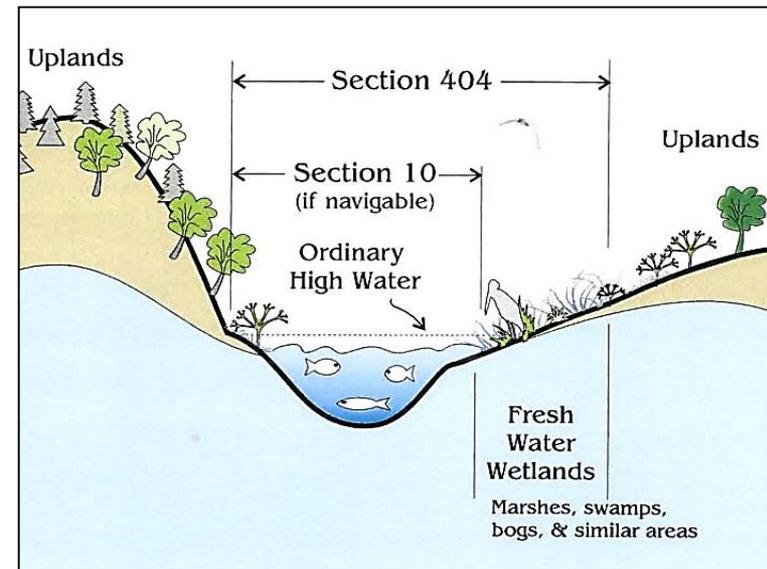
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Learning Objectives

- ❑ **Overview of Clean Water Act (CWA)**
 - 404 Permits
 - 401 Water Quality Certifications (WQC)
- ❑ **Contractor Responsibilities**
- ❑ **Avoiding Permit Compliance Issues**

CWA § 404 Permits

- ❑ Army Corps of Engineers
- ❑ Dredge and Fill in Waters of the U.S.
- ❑ Water of U.S. = streams, tidal waters, wetlands, etc.
- ❑ Dredge = removing material & pushing/moving material
- ❑ Fill = soil/sediment, rock(s)/rip-rap, sand/gravel bags, concrete, etc.
- ❑ Rivers and Harbors Act § 10 Permits – structures in or over navigable waters, including dredge and fill.



CWA § 404 Permits

Nationwide, Regional, and Individual Permits

- ❑ 54 Nationwide Permits (NWP)
 - 7 Revoked by Honolulu District (coal/mining, cranberry production, & water-based renewable energy generation)
 - NWP Examples:
 - #3 Maintenance
 - #13 Bank Stabilization
 - #14 Linear Transportation Projects
 - #25 Structural Discharges
 - #27 Aquatic Habitat Restoration
 - #33 Temporary Construction, Access, and Dewatering
 - Regional Condition: Permanent loss of waters from dredge and fill material < 0.10-acres
- ❑ Regional General Permits
- ❑ Individual Permits

CWA § 404 Permit

Federal Resource Agency Consultations



United States Fish & Wildlife Service (USFWS)

- Endangered Species Act (ESA)



National Marine Fisheries Service (NMFS)

- ESA
- Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat (EFH)



State Historic Preservation Division (SHPD)

- National Historic Preservation Act (NHPA)
- HRS Chapter 6E – Historic Preservation Review

CWA § 401 Water Quality Certification (WQC)

- ❑ Department of Health
– Clean Water
Branch (DOH-CWB)
- ❑ Required for all 404
Permits
- ❑ Certify discharges to
surface waters do not
violate State water
quality standards or
CWA.



*Nu'uanu Stream
Honolulu*

Contractor Responsibilities



*Hanalei River
Kaua'i*



CWA § 404 Permit Conditions

□ Permit Project Description

- Purpose, volume, and area of each specific type of fill
- Example: Hanalei River Project
 - Earthen berm = 1,288 CY of fill (684 CY rock and 604 CY soil) within 0.625 acres of the river
 - Rock vane and bank spurs = 36 CY of fill within 0.04 acres of the river
 - Temporary cofferdam of large boulders collected on-site and reused for construction of permanent improvements
- Review the 404 Permit Application



CWA § 404 Permit Conditions

- ❑ Permit Conditions
 - Project specific

- ❑ Nationwide Permit General Conditions and Honolulu District Regional Conditions
 - General conditions
 - Mostly addressed through project design, permitting, and project specific conditions
 - Examples: impacts to navigation, aquatic life movement, endangered species, historic resources, WQC, BMPs

CWA § 404 Permit

Common Permit Conditions

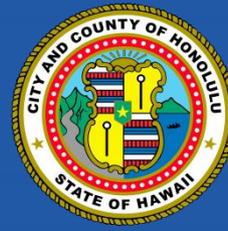
- Demarcate construction area
- Install, inspect, and maintain BMPs per construction plans
- Stop work during storm events (except to protect property and/or environment)
- Stabilize construction area prior to storm events
- Stockpile management - cover & perimeter controls
- Waste and debris management
- Equipment and vehicle maintenance, storage, fueling areas, distance from stream

CWA § 404 Permit Endangered Species Protection

Endangered Hawaiian Waterbirds



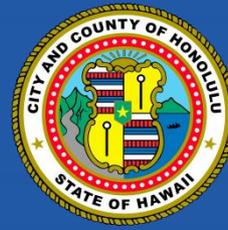
- ❑ Surveys and monitoring
- ❑ Report nests and chicks/ducklings to USFWS
- ❑ 100 foot buffers around all nests and young
- ❑ Stop work within 100 feet of waterbirds
- ❑ Submit annual report to USFWS



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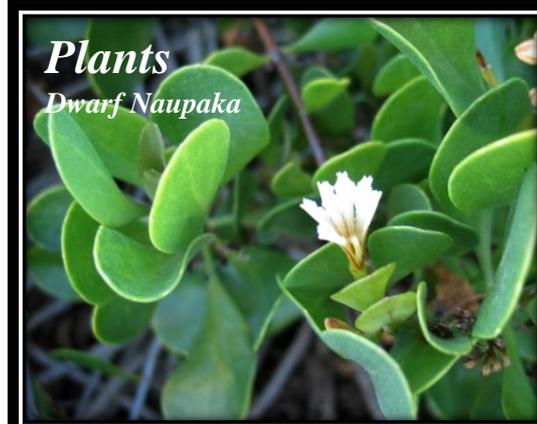
Poll Question #1

Has your work been delayed for birds?



CWA § 404 Permit

Threatened and Endangered Species Protection



- ❑ Hawaiian hoary bat - No trimming or removing woody vegetation over 15-ft. from June 1 to Sept. 15
- ❑ Plant surveys, buffer zones, minimize disturbed area
- ❑ Monk seal & sea turtle survey, monitor, and stop work within 150-ft.
- ❑ Monk seal critical habitat - 5 meters inland
- ❑ Yellow-faced bees and Hawaiian damselfly

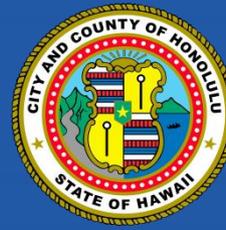
CWA § 404 Permit

Historic and Cultural Resources Protection

- ❑ Protection of known historic and cultural resources
- ❑ Stop work and protect any subsurface historic and cultural findings and contact the SHPD
- ❑ Archeological monitoring – may be required



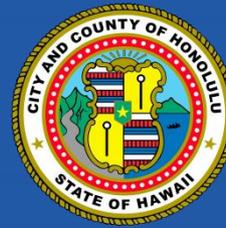
*'Anahulu River and Helemano Stream
North Shore*



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Poll Question #2

Has your work been delayed for historic or cultural resource(s)?



CWA § 401 WQC Conditions

- Comply with BMP Plan
 - Erosion and sediment control measures, soil stabilization, etc.
- No return flow from stockpiles to waters
- Biosocks are not allowed in-water (404 Permit)
- Stop work during storms or floods
- Comply with Applicable Monitoring and Assessment Plan/Program (AMAP)
- Photos before, during, and after completion of construction
- Submittal of laboratory results and photos to DOH, per AMAP

CWA § 401 WQC Conditions

- ❑ Stop work if water quality monitoring indicates exceedance of AMAP levels (State WQS, HAR 11-54)
- ❑ Report spills to DOH-CWB and DOH Office of Hazard Evaluation and Emergency Response (DOH-HEER)
- ❑ Records available on-site or field office (monitoring reports, disposal records, etc.)
- ❑ 401 WQC and application available on-site or field office
- ❑ Submit changes to BMPs, AMAP, or other info on file to DOH-CWB for review and comment
- ❑ Submit Solid Waste Disclosure Form for Construction Sites to DOH Solid and Hazardous Waste Branch (DOH-SHWB)

CWA § 401 WQC

Applicable Monitoring and Assessment Plan (AMAP)

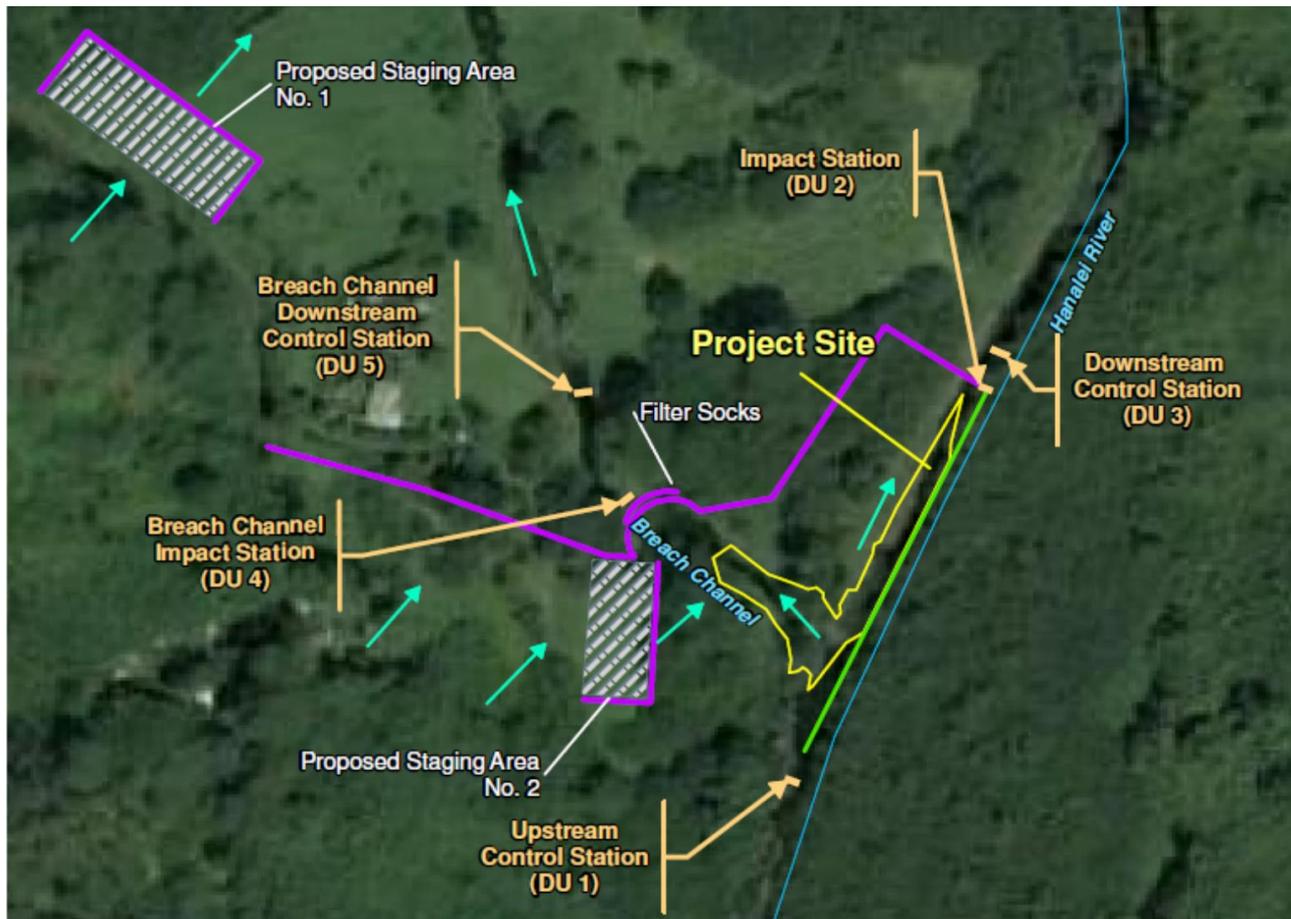
- ❑ Purpose – Determine impacts and effectiveness of BMPs
- ❑ Qualified sampler
- ❑ Pre, During, and Post Construction Monitoring
- ❑ Report results within 24 hours

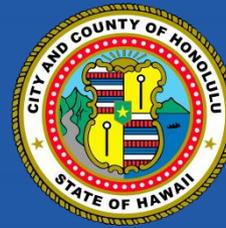
| Parameter | Analytical Method | Units | Wet Season Inland Water Criteria (November-April) | Dry Season Inland Water Criteria (May-October) |
|-------------|--------------------------------------|---------------|--|--|
| pH | SM 4500-H+ | Standard unit | 5.5 - 8.0 | 5.5 - 8.0 |
| Turbidity | EPA 180.1 | NTU | 5 | 2 |
| TSS | SM 2540D | mg/L/% | 20 | 10 |
| DO | SM 4500-O G/membrane electrode | mg/L | > 80% oxygen saturation at ambient temperature ^b | > 80% oxygen saturation at ambient temperature ^b |
| Salinity | Field test | ppt | < 0.5 ^c | < 0.5 ^c |
| Temperature | SM 2550-B | °C | ± 1 degree from ambient | ± 1 degree from ambient |

CWA § 401 WQC

Applicable Monitoring and Assessment Plan (AMAP)

Decision units (DUs)

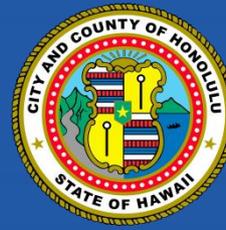




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Poll Question #3

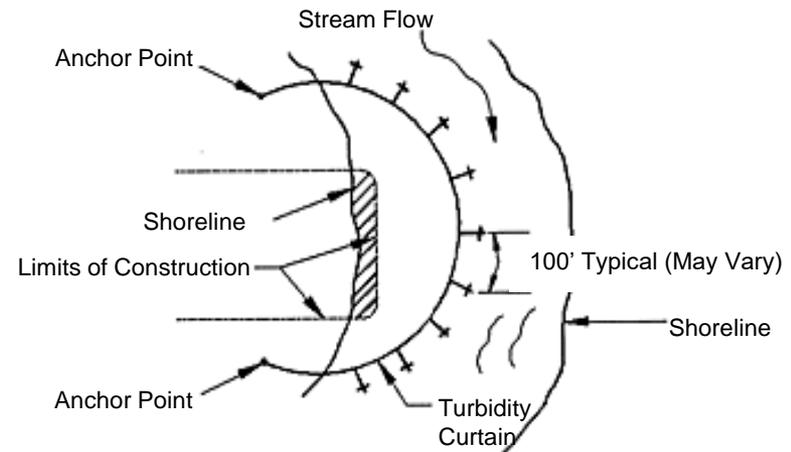
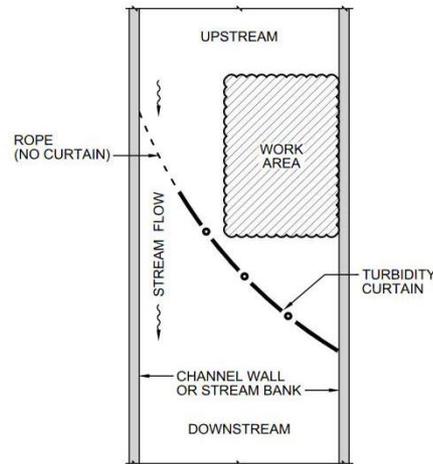
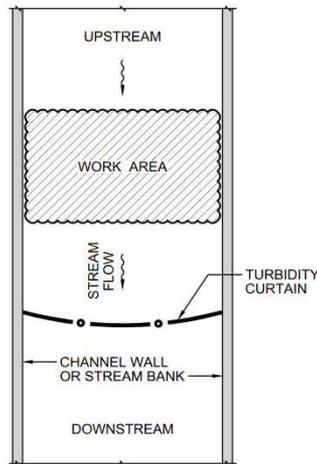
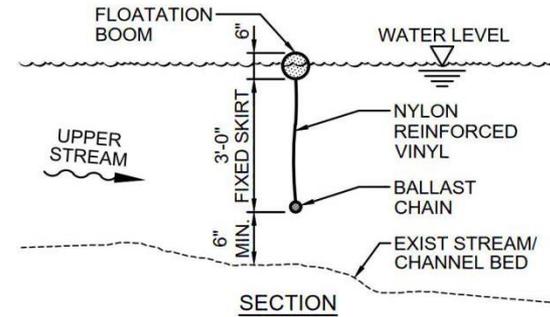
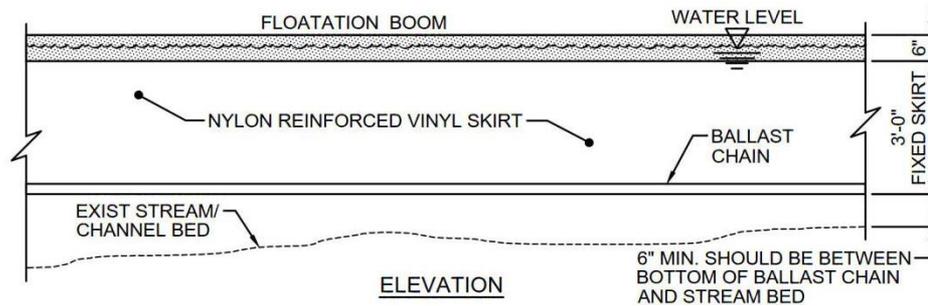
Has your work been delayed for water quality exceedances?



CWA § 401 WQC BMPs

Turbidity Curtains

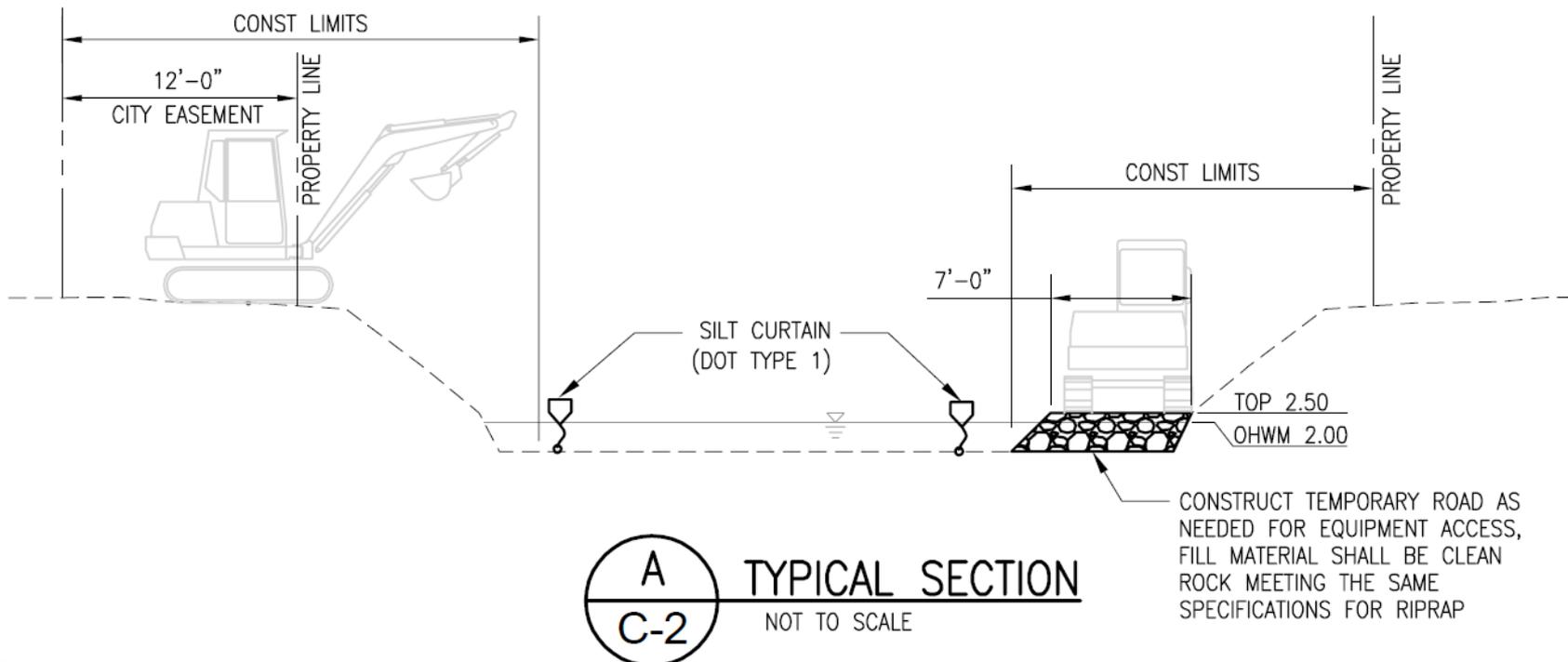
- ❑ Never allowed to fully block stream flow
- ❑ Backup curtains
- ❑ Best in slow, calm water
- ❑ Source of turbidity if improperly used



CWA § 401 WQC

Equipment in Streams

- ❑ Strongly discouraged, unless there is no other alternative
- ❑ Water stays below parts with oils and lubricants
- ❑ Clean equipment and vehicles



Avoiding Permit Compliance Problems



Avoiding § 404 & 401 Compliance Issues

- ❑ Read the permit, ask questions, raise flags
- ❑ Expiration date
- ❑ Only authorize the actions, structures, and fill listed
- ❑ Means, methods, and temporary works (fill) may not be authorized
 - Temporary access ramps
 - Removal of deposited sediment
 - Clean water diversion: sand/gravel bags, cofferdam, etc.
- ❑ BMPs ineffective / water quality exceedances
 - Back-up plans
- ❑ Comply with all conditions



Review Exercise

Please log into the following website:

www.kahoot.it

*Please wait for game code

Poll Question #4

Equipment Access

You need to get a small excavator into an intermittent stream with vertical concrete walls. Your 404 & 401 Permits allow for equipment in the stream under no flow conditions. How do you get your equipment into the stream?

- A. Build a temporary gravel surge ramp.
- B. Lower equipment into the stream with a crane.
- C. Pre-fabricate a wood or steel access ramp that you lower into the stream.

Poll Question #5

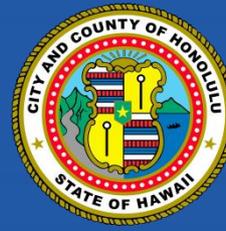
Turbidity Plume

During dredging of the stream channel you observe turbid water downstream of your work area, beyond the limits of your turbidity curtain. What would you do?

- A. Stop dredging, until the turbid water is no longer escaping the work area
- B. Continue dredging, the permits authorizes you to dredge the channel and some turbidity should be expected.
- C. Deploy a second turbidity curtain further downstream

Other Permits and Authorizations

- Coastal Zone Management Act (CZMA) Federal Consistency Determination
- Stream Channel Alteration Permit (SCAP)
- Rivers and Harbors Act § 10 Permits
- National Pollutant Discharge Elimination System (NPDES) Permit
- Conservation District Use Permit (CDUP)
- Special Management Area (SMA) Permit



Thank You!

- Questions?
- Tell me your stream construction stories

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