Permitting, Monitoring, and Best Management Practice Requirements for Stream Restoration Projects

Ecology, Restoration, and Management of Hawaiian Stream and Riparian Systems

Session VII – Watershed Approaches and Case Studies 10:10 – 10:30 a.m.

U.S. Army Corps of Engineers
Engineer Research and Development Center
Thursday, May 22, 2008
Windward Community College, Hale Akoakoa

Clean Water Branch Mission

... is to protect the public health of residents and tourists who recreate in and on Hawaii's coastal and inland water resources, and to also protect and restore inland and coastal waters for marine life and wildlife.



Clean Water Branch

- Responsible to implement Statewide water pollution control programs
- National Pollutant Discharge Elimination System Permit (NPDES)
- Section 401 Water Quality Certification (WQC)
- Polluted Runoff Control

Restoration of a Stream

- The Department of the Army (DA) Permit for in-water work triggers the requirement for a Section 401 WQC.
- Construction activities disturbing one (1) or more acres of land and/or discharges of construction dewatering effluent to State waters requires coverage under an NPDES Permit.

Laws and Regulations for Section 401 WQC

- Clean Water Act (CWA), Subsection 401(a)
- Code of Federal Regulations (CFR), Title 40, Section 121.16
- **33 CFR 325.2.b.1**
- Hawaii Revised Statutes (HRS), Section 342D-53
- Hawaii Administrative Rules (HAR), Chapter 11-54

What is "Certification"

"Water quality certification" or "certification" means a statement which asserts that a proposed discharge resulting from an activity will not violate applicable water quality standards. A water quality certification is required by Section 401 of the Act from any applicant for a federal license or permit to conduct any activity, including the construction or operation of facilities which may result in any discharge into navigable waters.

[HAR, 11-54-1]

Objective of Section 401 WQC

Ensure that CWA, Section 404 and all other Federally permitted discharge activities will not adversely impact the existing uses, designated uses, and applicable water quality criteria of the State receiving waters.

Definition of State Waters

"State waters," as defined by HRS, Section 342D-1, means all waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, ground waters, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded.

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Classification of State Waters

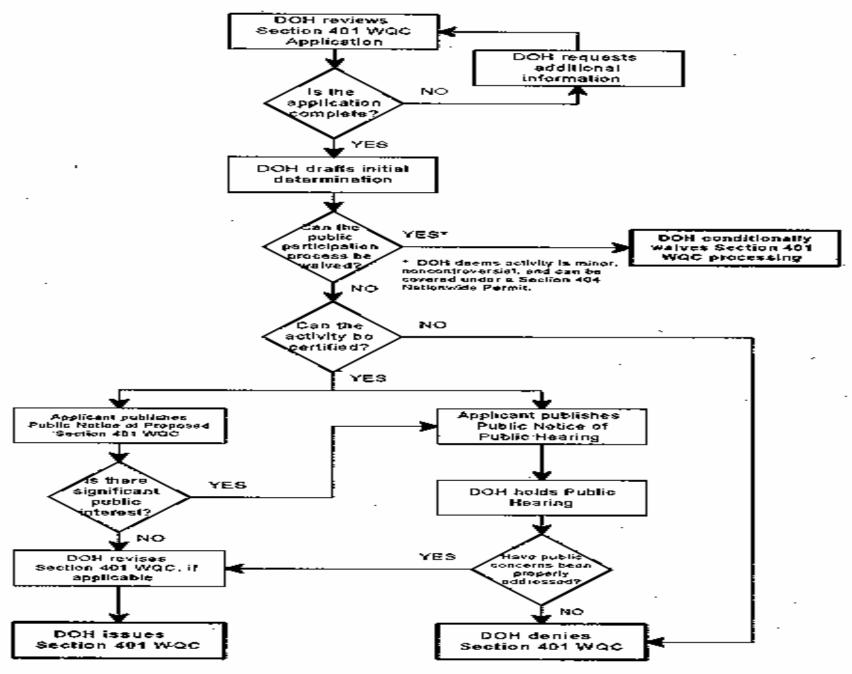
State surface waters are classified as either inland waters or marine waters.

- Inland waters may be fresh, brackish, or saline.
 (Class 1.a, 1.b and 2)
- All marine waters are either embayments, open coastal, or oceanic waters. (Class AA and A)

Individual Section 401 WQC

- Discharge initially enters either Class 1, Class AA waters, Estuaries, Embayments???
- 180 days to one (1) year to process after receipt of a complete application
- \$1000 Filing Fee
- Applicant responsible for publication fee
- Good for up to two (2) years

Section 401 Water Quality Certification Processing Flowchart



Section 401 WQC Coverage

- Up to 2 years from the issuance date of each individual verification letter issued by DOH
- On a case-by-case basis the validation may be administratively extended by the Director of Health
- Coverage may be modified or revoked by the Director of Health

Coverage Modification or Revocation

- Applicable water quality standards established before the activity is completed
- Violation of new water quality standards
- Violation or non-compliance with any existing water quality standards or condition(s) or requirement(s)
- **■** Failure to disclose all relevant facts

Best Management Practices For Section 401 WQC

- Silt curtain
- Silt fence
- Sand bags
- Stream diversions
- Berms
- Other methods to isolate and confine the construction activities

Monitoring for Section 401 WQC

- Basic water quality monitoring parameters which depend upon the type of project include:
 - Photo Documentation
 - pH
 - Turbidity
 - **Total Suspended Solids**
- Monitoring frequencies depend upon the type of project
- General Monitoring Guideline available at

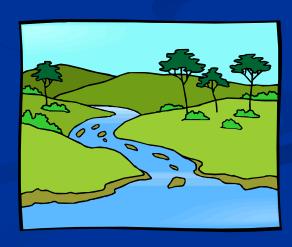
http://hawaii.gov/health/environmental/water/cleanwater/forms/pdf/matrix.pdf

General Monitoring Guideline for Section 401 Water Quality Certification Projects

Period of Construction Project	<1 to 4 Months					≥5 Months to <u>≤4 Year</u>					Construction Project Monitoring Frequency*		
Parameter to Monitor for "X" Months of "In-Water" Work	≤1	>1	2	3	4	≥5	1	<u>2</u>	<u>3</u>	<u>≤4</u>	Pre-	During	Post
Photo Documentation	٧										>	V	~
рН	>	~	~	~	>	/	>	>	١	>	~	~	9
Turbidity	>	>	>	~	>	/	>	>	١	>	>	~	V
Total Suspended Solids (TSS)	>	~	~	~	>	>	>	>	١	>	>	~	9
Dissolved Oxygen (DO)	>	/	1	1	>	>	>	1	>	>	>	~	$ \checkmark $
Salinity	>	/	1	1	>	>	>	/	>	>	>	~	9
Temperature	>	1	1	1	/	>	>	/	>	>	>	~	$ \checkmark $
Secchi Disc or Light Extinction	E	ES	ES	ES	E	ES	S	ES	ES	ES	æ	ES	æ
Biological Monitoring	X	×	×	×	×	×	×	×	×	×	×	×	×
Nitrate + Nitrite Nitrogen (NO ₃ NO ₂)	0	0	0	0	0	•	•	•	•	•	•	•	•
Total Kjeldahl Nitrogen (TKN)	0	0	0	0	0	•	•	•	•	•	•	•	
Ammonia Nitrogen (NH ₄)	0	0	0	0	0	•	•	•	•	•	•	•	•
Total Nitrogen (TN)	0	0	0	0	0	•	•	•	•	•	•	•	•
Ortho-Phosphate (PO ₄)	0	0	0	0	0	•	•	•	•	•	•	•	•
Total Phosphorus (TP)	0	0	0	0	0	•	•	•	•	•	•	•	
Chlorophyll ∝	0	0	0	0	0	•	•	•	•	•	•	•	•
Silicate	0	0	0	0	0	•	•	•	•	•	•	•	•
Pesticides, PAHs, metals, etc.	•	•	•	•	•	•	•	•	•	•	•	•	•
Other													

National Pollutant Discharge Elimination System (NPDES)

In 1974, the EPA delegated permitting authority to the Hawaii Department of Health Clean Water Branch



Laws and Regulations for NPDES

- CWA http://www.epa.gov/region5/water/cwa.htm
- 40 CFR http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200640 (revised July 1, 2006)
- HRS, Chapter 342D Water Pollution
 http://www.capitol.hawaii.gov/hrscurrent/Vol06_Ch0321-0344/HRS0342D
- HAR, Chapter 11-55 Water Pollution Control
- HAR, Chapter 11-54 Water Quality Standards http://www.hawaii.gov/health/about/rules/admrules.html

Types of NPDES Permit

- General permit
- Individual permit

NPDES General Permit

- Adopted as rules (HAR, Chapter 11-55)
- Similar nature of discharge
- Minor and Non-controversial
- Discharge initially enters either Class 2, Inland water or Class A, Marine water
- 30 days to process (with complete Notice of Intent)
- \$500 Filing Fee
- Good for up to five (5) years

The current General Permits will expire on October 21, 2012.

Individual NPDES Permit

- Discharge does not qualify for general permit coverage
- Discharge initially enters either Class 1,
 Inland Water, or Class AA, Marine Water
- Custom made (site-specific)
- 180 days or more to process (with complete application)
- **\$1,000** Filing Fee
- Applicant responsible for publication fee
- Good for up to five (5) years

Construction Storm Water

• Coverage under an NPDES storm water permit is required for construction activities, including clearing, grading and excavation, that result in the disturbance of one (1) or more acres of total land area.

Note: The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale.

Best Management Practices For NPDES

- Silt fence
- Sand bags
- Inlet protection
- Berms
- Other methods to prevent pollutants from being discharged to receiving State waters

How to Obtain Current Information

... the Latest NPDES Regulations, Applications, Forms and Guidelines?

Clean Water Branch Website

http://www.hawaii.gov/health/environmental/water/cleanwater/index.html

Upcoming Changes

- Web-based forms *
- Electronic Signatures
- Searchable online database
- Total Maximum Daily Loads and Waste Load Allocations
- Chargeable Filing Fee through ehawaii.gov *
- * Currently under development

Compliance

Helpful EPA Website Links

- Developing Your Stormwater Pollution Prevention Plan: A guide for construction sites (05/01/2007) http://www.epa.gov/npdes/swpppguide
- National Menu of Best Management Practices (BMPs) for NPDES Stormwater Phase II (10/27/2000) http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm
- Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices (01/08/2008) http://www.epa.gov/owow/nps/lid/costs07/
- EPA NPDES Website http://cfpub.epa.gov/npdes/index.cfm

Consequences of Non-Compliance

- Warning Letter Notice of Apparent Violation (NAV) or Notice of Potential Violation (NPV) letter
- Administrative / Civil Penalties Notice and Finding of Violation and Order (NFVO) - monetary penalties up to \$25,000 per day per violation.
- Criminal Enforcement monetary penalties up to \$50,000 per day per violation and jail time possible

The Clean Water Branch Goal

Keeping Hawaii's water clean for "Beneficial uses" which include...







recreation...













...and the protection and propagation of fish and aquatic life.











For More Information, Contact:

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http://www.hawaii.gov/health/environmental/water/cleanwater/index.html



Questions?

Thank you!

