Module 2
Overview of EPA, the Clean Water Act, and Water Quality Standards

- What will we learn in this Academy?
- Who plays what roles in protecting water quality?
- What is the Clean Water Act?
- What are Water Quality Standards?
Overview

- EPA - Mission and Function
- Key Environmental Laws
- Office of Water - what we do
- EPA Regions - what they do
- What do states and tribes do
- The Clean Water Act (CWA)
- How are Laws, Regulations and Policy different?
- Two approaches to water quality control
- Water Quality Standards (WQS) Overview
- Where do WQS apply?
- California WQS
What is EPA?

- **Mission** - Protect Human Health and safeguard the natural environment
  - Tools: Laws enacted by Congress and the implementing regulations
- A Regulatory Agency
  - Regulatory Responsibilities in Air, Water, Solid Waste, Pesticides, Radiation, Toxic Substances and Hazardous Waste
    - No single “Environmental Statute”
- A Science Agency
  - Laboratories, Office of Research and Development
EPA: Where?
EPA What?: Seven Major Environmental Statutes

- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
- Clean Air Act (CAA)
- Toxic Substances Control Act (TSCA)
- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA)
- Safe Drinking Water Act (SDWA)
- Federal Water Pollution Control Act (FWPCA), or the Clean Water Act (CWA)
EPA Structure
EPA HQ: Office of Water (OW)

- Implements:
  - Clean Water Act
  - Safe Drinking Water Act
  - Others (portions)

- Structure
  - American Indian Environmental Office
  - Office of Ground and Drinking Water
  - Office of Wetlands Oceans and Watersheds
  - Office of Wastewater Management
  - Office of Science and Technology (OST)
WQS: Who Plays?

- States, Territories and Indian Tribes with Program Authorization
- EPA Regions
- EPA Headquarters (Office of Science and Technology) (OST)
WQS: States, Territories and Authorized Tribes

- Adopt, review and revise water quality standards and implementation procedures in a public process (Section 303(c))
  - May adopt standards more stringent than recommended by EPA (Section 510)
- May certify that federally licensed activities that may result in any discharge to their waters meet WQS (Section 401)
States, Territories and Authorized Tribes, Continued

- Monitor waters and assess status for 305 (b) and 303 (d) reports

- Issue National Pollutant Discharge Elimination System (NPDES) discharge permits (generally)

- Tribes: Obtain program authorization
EPA Regions

- Primary contacts with States and Tribes for Water Programs
- Provide Technical Assistance
- Consult with Services under Sec. 7 of ESA
- Approvals, disapprovals under 303 (c)(4)(a)
- Request Administrator “findings” under (4)(B)
EPA Headquarters (OST)

- Facilitates development of regulations and policies that guide regional review (with Regions and States)
- Provides 304(a) recommendations
- Provides informal concurrence on:
  - disapprovals
  - approvals that raise significant issues
- Leads development and financing of promulgations
- Coordinates with OMB
The Clean Water Act

- Objective: “restore and maintain the chemical, physical and biological integrity of the Nation’s waters”

- Interim goal: “water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water”, wherever attainable
Clean Water Act: History

- Rivers and Harbors Act of 1899
  - permits
- Water Pollution Control Act of 1948
  - technical assistance to states
- Water Pollution Control Act of 1956
  - financial assistance to states for treatment plants
- Water Quality Act of 1965
  - first federal water quality standards program, for interstate water
- Clean Water Restoration Act of 1966
- Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act)

- Section 101 - Goals and Policy
- Section 301 - Technology Based Effluent Limits
- Section 302 - Water Quality Based Effluent Limits
- Section 303 - WQ Standards and Implementation
- Section 304 - Information and Guidelines
- Section 305 - Water Quality Inventory
- Section 306 - National Performance Standards
- Section 307 - Toxics and Pretreatment Standards
- Section 308 - Inspection, Monitoring and Entry
- Section 309 - Enforcement
Clean Water Act: Provisions (cont’d)

- Section 316 - Thermal Discharges
- Section 319 - Nonpoint Source Management
- Section 320 - National Estuary Program
- Section 401 - State/Tribal Certification
- Section 402 - Point Source Permitting (NPDES)
- Section 404 - Dredge and Fill Permitting
- Section 505 - Citizen Suits
- Section 510 - State/Tribal Authority
- Section 516 - Reports to Congress
- Section 518 - Indian Tribes
CWA: Technology Based Approach (Section 301)

- Effluent limits for industrial dischargers to surface waters and Publicly Owned Treatment Works (POTWs)

- Effluent Limits for Publicly Owned Treatment Works (“secondary treatment”)

- Based on performance of treatment and control technologies, not impacts to receiving waters
Water Quality Based Approach

- Determine Protection Level (EPA Criteria/State WQS)
  - Conduct WQ Assessment (Identify Impaired Waters)
    - Set Priorities (Rank/Target Waterbodies)
      - Evaluate Appropriateness of WQS for Specific Waters (Reaffirm WQS)
        - Define and Allocate Control Responsibilities (TMDL/WLA/LA)
          - Establish Source Controls (Point Source, NPS)
            - Monitor and Enforce Compliance (Self Monitoring, Agency Monitoring)
              - Measure Progress
What are Laws?

- Passed by Congress, signed by the President
- Published in the United States Code (U.S.C.) (http://www.gpoaccess.gov/)
- Clean Water Act is 33 U.S.C. 1251-1587
What are regulations? (1)

- Have the force and effect of law
- A “must”
- Involves “notice and comment” rulemaking
- May involve Office of Management & Budget (OMB)
- Agency develops rationale and proposed regulation and publishes it and requests comment in the Federal Register (FR): http://www.regulations.gov
What are regulations? (2)

- Agency considers all comments, revises proposed regulation accordingly, and publishes final rule.

- Once regulation is published in Federal register as a Final Rule, it is Codified by being published in the Code of Federal Regulations (CFR) (http://www.gpoaccess.gov/)
What are regulations? (3)

- 50 volumes in the Code of Federal Regulations, called Titles, each focused on a particular subject

- Almost all environmental regulations are at Title 40 “Protection of Environment”

- http://www.gpoaccess.gov/

- Basis for disapproval of water quality standards
What is Guidance or Policy?

- “should”
- notice and comment not required
- not binding on Agency or Public
- may involve OMB Review
- not a basis for disapproval
- Governed by section 553 of the Administrative Procedure Act: http://www.archives.gov
- example: http://www.epa.gov/waterscience/standards/policy.htm
Water Quality Standards
(see 40 CFR 131.3)

- Provisions of State/Tribal (or Federal) Law
  - Designated Uses
  - Criteria to protect those uses
  - Antidegradation policy

- Water Quality Standards are to:
  - Protect public health or welfare
  - Enhance the quality of the water
  - Serve the purposes of the Act
Water Quality Standards, cont’d
(see 40 CFR 131.3)

- Water Quality Standards
  - Establish water quality goals for a waterbody
  - Provide a regulatory basis for controls beyond technology-based limits
Water Quality Standards

- **Designated Uses** *(40 CFR 131.10)*

- **Criteria to protect those uses** *(40 CFR 131.11)*

- **Antidegradation Policies + Implementation Procedures** *(40 CFR 131.12)*

- **Implementation Policies** *(40 CFR 131.13)***
Designated Uses
(40 CFR 131.10)

- Protection and propagation of fish, shellfish and wildlife
- Recreation in and on the water
- Public water supply
- Agriculture
- Industry
- Navigation
- Others
Water Quality Criteria
(40 CFR 131.3, 131.11)

- Discussed in Sections 304(a) and 303(c) of the Act
- A concentration, level or narrative statement
- Represent a level of water quality that supports a particular use
- When criteria are met, water quality will protect the designated use
Water Quality Criteria
1 Word – 2 Meanings

- Scientifically defensible guidance developed and published by EPA per CWA § 304(a)
  - Basis for Federal promulgation when necessary

- Adopted part of State/Tribal WQS
  - Section 303(c)
Antidegradation Policies
(40 CFR 131.12)

Maintain and Protect
Water Quality For Outstanding National Resource Waters

Higher Quality Water Protection

Existing Uses and WQ to Maintain Them

Discussed in Module 14 (Antidegradation)
General policies
(40 CFR 131.13)

- States and authorized tribes may include in their standards policies affecting application and implementation, such as:
  - Mixing zones
  - Low flows
  - Variances

- Subject to EPA review and approval
WQS: States and Authorized Tribes

- Have the primary authority to adopt, review and revise water quality standards (Section 303(c) of the CWA)
- May adopt standards more stringent than recommended by EPA (Section 510 of the CWA)
- May certify Federally licensed activities that result in discharge to waters of the US (Section 401 of the CWA)
State/Tribal Submittal Must Include:
(40 CFR 131.20(c))

- Use(s) for each waterbody
- Criteria sufficient to protect those uses
  - With methodologies for any site specific criteria
- An antidegradation policy and implementation methods consistent with 40 CFR 131.12
- Certification that the standards were duly adopted according to state or tribal law
- Other general supporting information
Federal Promulgations
(40 CFR 131.22)

- If EPA disapproves AND
- If state or tribe does not adopt specified changes within 90 days...
- THEN the EPA Administrator must promptly propose and promulgate a replacement standard
- OR in any case where the Administrator determines new or revised standards are necessary to meet the requirements of the CWA
Waters of the U.S.

- Used or maybe susceptible for use in interstate or foreign commerce
- Interstate Waters
- Other waters, the use, degradation or destruction of which could affect such commerce
- Impoundments of waters so defined
- Tributaries of the above
- the Territorial Sea
- Wetlands adjacent to the above
Overview: Take Home Messages

- States, Territories and Authorized Tribes have important and unique roles in developing, adopting, reviewing and approving water quality standards.

- The Clean Water Act features both Technology Based and Water Quality Based approaches to pollution control.

- The Act itself, and regulations developed by notice and comment rulemaking, are the basis for EPA’s review and approval of adopted state and tribal water quality standards.
Overview: Take Home Messages (2)

- The Clean Water Act establishes a national goal of "water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water", wherever attainable.
Overview: Take Home Messages (3)

- **State/Tribal Water Quality Standards:**
  - Establish water quality goals and targets for a waterbody
  - Are used to determine attainment and non-attainment
  - Provide the regulatory basis for controls beyond technology-based limits.