
OVERVIEW OF THE EPA, THE CLEAN WATER ACT, AND WATER QUALITY STANDARDS

VIRTUAL WQS ACADEMY

FEBRUARY 2026

DISCLAIMERS

- This presentation does not:
 - Impose any binding requirements
 - Determine the obligations of the regulated community
 - Change or substitute for any statutory provision or regulatory requirement
 - Change or substitute for any Agency policy or guidance
 - Control in any case of conflict between this discussion and statute, regulation, policy, or guidance

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MODULE OVERVIEW

- The EPA: Mission and Structure
- History of the Clean Water Act
- Laws, Regulations and Guidance Related to Water Quality Standards (WQS)
- Water Quality Standards (WQS) Overview
 - Core Components of WQS
- Roles of States, Territories and Authorized Tribes, the Public, and the EPA
- Implementing WQS

WHAT IS THE ENVIRONMENTAL PROTECTION AGENCY (EPA)?

- Mission – Protect human health and the environment
- *A Regulatory Agency*
 - Regulatory responsibilities in air, water, solid waste, pesticides, radiation, toxic substances and hazardous waste
- *A Science Agency*
 - National and Regional laboratories perform scientific research to support regulatory actions
- *A Trust Agency*
 - Responsibility to federally recognized Indian Tribes to protect their lands and resources (in absence of another mutual agreement)

EPA HEADQUARTERS ORGANIZATIONAL STRUCTURE

Office of the Administrator

Office of Air and Radiation

Office of Chemical Safety and Pollution Prevention

Office of Enforcement and Compliance Assurance

Office of Finance and Administration

Office of General Counsel

Office of Inspector General

Office of International and Tribal Affairs

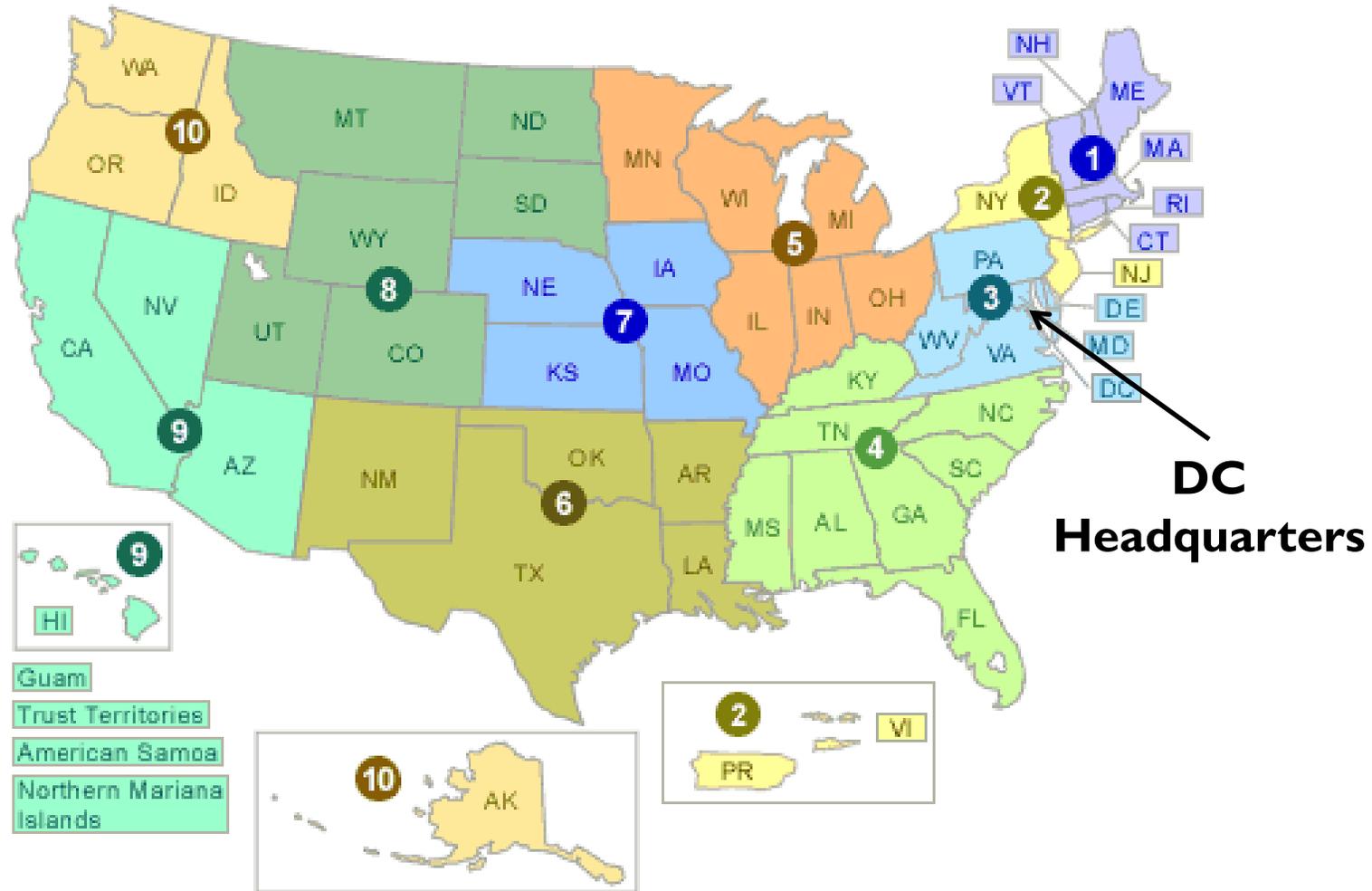
Office of Land and Emergency Management

Office of Research and Development

Office of Water

Last updated January 8, 2026

EPA REGIONAL OFFICES



EPA HQ: OFFICE OF WATER (OW)

- Implements:
 - Clean Water Act
 - Safe Drinking Water Act
 - Others (portions)
- Structure
 - Office of Ground Water and Drinking Water
 - Office of Wetlands, Oceans and Watersheds
 - Office of Wastewater Management
 - Office of Water Emergency Response and Cybersecurity



MAJOR ENVIRONMENTAL STATUTES THAT EPA IMPLEMENTS

- National Environmental Policy Act (NEPA)
- 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 Clean Water Act (CWA)**
 - The CWA gave EPA authority to develop the Water Quality Standards (WQS) regulation

HISTORY OF CWA AMENDMENTS



Cleveland's Cuyahoga river on fire



Cleveland Mayor
Carl Stokes on the
banks of the
Cuyahoga, 1969

- 1948: Federal Water Pollution Control Act (FWPCA).
- **1972: Major set of amendments, as amended to “Clean Water Act” (CWA).**
- 1981: Streamlined construction grants.
- 1987: Phased out construction grants, replaced with Clean Water State Revolving Fund.
- 2000: The “BEACH Act” amendments established a grant program to support monitoring and advisory programs at coastal marine and Great Lakes beaches. Also required research and development of recreational criteria by EPA.
- Today: The “Modern” Clean Water Act.

THE 1972 AMENDMENTS TO FWPCA: “CLEAN WATER ACT (CWA)”

- Established the basic structure for regulating pollutants discharged into the “waters of the US.”
- Made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions.
- Funded the construction of sewage treatment plants under the construction grants program.
- Required each state and territory to adopt water quality standards for all intrastate waters and provided for EPA review and approval or disapproval.
- Provided opportunities for meaningful public engagement.

WHY DOES THE CLEAN WATER ACT MATTER?



Ca. 1960s

present day

Cuyahoga River water quality improvements in recent years reflect the effects of requirements of the CWA 1972 amendments.

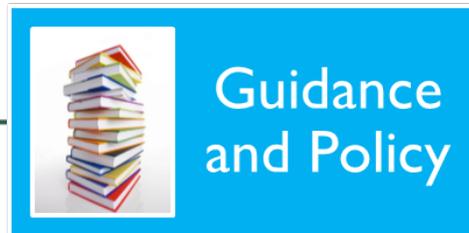


LAWS, REGULATIONS AND GUIDANCE RELATED TO WATER QUALITY STANDARDS

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WORKING TOWARD CWA GOALS: IT'S A HIERARCHY



- The Clean Water Act (CWA) is a statute.
 - Statutes are laws passed by Congress.
- The CWA gave EPA the authority to promulgate regulations.
 - These are rules to implement the statute.
 - This presentation will mention several of EPA's regulations under the CWA, including WQS (40 CFR 131), NPDES (40 CFR 122), and TMDL (40 CFR 130.7).
- EPA publishes guidance to assist states and authorized Tribes
 - Guidance does not have the force of law.

LAW: CLEAN WATER ACT (CWA)

- Objective: “restore and maintain the chemical, physical and biological integrity of the Nation’s waters” (CWA 101(a))
- 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 (CWA 101(a)(2))
- Cooperative Federalism- “It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources” (CWA 101(b))
- *A note on numbers and nomenclature...* “Clean Water Act” is at 33 U.S.C. §§ 1251-1387. 1251 = “101” (see crosswalk)

“WATERS OF THE UNITED STATES” AND THE CLEAN WATER ACT

- “Waters of the United States” is a threshold term in the Clean Water Act (CWA) that establishes the geographic scope of federal jurisdiction under the Act.
- CWA regulatory programs address “navigable waters,” defined in the statute as “the waters of the United States, including the territorial seas.”
- The CWA does not define “waters of the United States.”
- The EPA and the Department of the Army have defined “waters of the United States” by regulation since the 1970s.
 - On November 20, 2025, the agencies proposed a revised definition of “waters of the United States.”



For more information, please visit

<https://www.epa.gov/wotus>

WHY “WATERS OF THE UNITED STATES” MATTER

“Navigable Waters”: Waters of the United States, including the Territorial Seas



303
Water Quality
Standards & TMDLs



311
Oil Spill
Programs



401
State/Tribal
Certification



402
Pollutant
Discharge
Permits



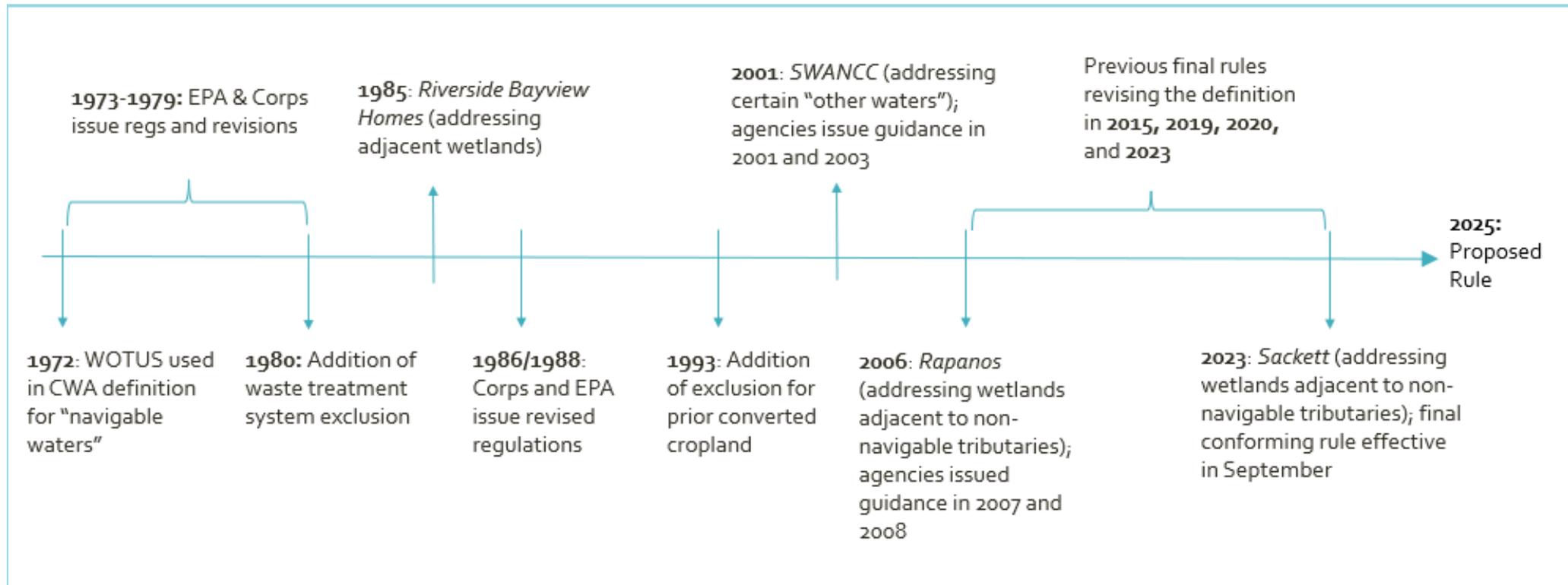
404
Discharge of
Dredged and/or
Fill Material

Definition of “Waters of the United States”

- Affects the extent to which CWA provides protection over waters for the listed programs
- Influences how States and authorized Tribes for certain CWA programs can implement those programs
- May influence how States and Tribes strategize for protecting their resources into the future—such as whether to pursue authorization for additional CWA programs

“WATERS OF THE UNITED STATES” OVER TIME

The definition of “waters of the United States” has been a subject of dispute and addressed in several major Supreme Court cases.



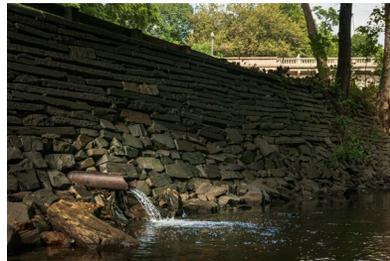
KEY CWA SECTIONS

The following are key sections that outline a portion of the major implementation programs. The first number of the section indicates the title of the Act in which that section is located.

- CWA 101 - Goals and Policy
- CWA 301 - Technology Based Effluent Limits
- CWA 302 - Water Quality Based Effluent Limits
- CWA 303 - Water Quality Standards and Implementation
- CWA 319 - Nonpoint Source Management
- CWA 401 - State/Tribal Certification
- CWA 402 - Point Source Permitting (NPDES)
- CWA 502 - Definitions: Navigable, Pollutant...
- CWA 510 - State/Tribal Authority
- CWA 518 - Indian Tribes

WHAT ACTIVITIES ARE REGULATED UNDER CWA?

- ‘Point source’ – regulated under CWA
 - Defined at CWA 502(14) “any discernable, confined and discrete conveyance including...any pipe, ditch, channel...[etc.] from which pollutants are or may be discharged.”
 - These discharges generally must be regulated in a manner consistent with state/Tribal WQS. For example, discharges of point source pollutants regulated under the National Pollutant Discharge Elimination System (NPDES) must be permitted and permit limits must be derived from and comply with WQS.



USEPA Photo by Eric Vance

- ‘Nonpoint source’ – *not regulated under CWA*
 - Any source of water pollution that does not meet the definition at CWA 502(14).
 - Polluted runoff from rain or snowmelt carrying natural and anthropogenic pollutants to waters. Examples include runoff from agricultural lands, stream erosion, unregulated urban runoff and atmospheric deposition.



USEPA Photo by Eric Vance

CWA'S TWO APPROACHES TO MAINTAIN AND PROTECT WATER QUALITY



Technology-based Approach

- **Goal:** Achieve a specific level of end-of-pipe performance.
- **Focuses on:** meeting limits derived from levels that EPA expects each type of industrial & municipal discharger to achieve for specific pollutants based on the performance of treatment and control technologies.
- Calculate technology-based effluent limits (TBELs) derived from federal effluent guidelines.
- CWA 301; 40 CFR 122.44(a) & (e); 40 CFR 125.3, 40 CFR 405-471

Water Quality-based Approach

- **Goal:** Meet water quality standards (WQS) in the receiving water.
- **Focuses on:** meeting limits based on what is needed to achieve water quality standards that apply to the ambient receiving water and are derived on a case-by-case basis.
- Calculate water quality-based effluent limits (WQBELs) derived from WQS which are applied to the waterbody.
- CWA 302; 40 CFR 122.44(d), 40 CFR 131-132



QUESTIONS?



WATER QUALITY STANDARDS

FEBRUARY 2026



CWA 303: BASIS FOR WATER QUALITY STANDARDS

- WQS define the water quality goals for a waterbody.
- WQS provide a regulatory basis for many actions, e.g.,
 - Reporting on water quality conditions and status.
 - Developing water quality-based effluent limits in National Pollutant Discharge Elimination System (NPDES) permits for point sources.
 - Setting targets for Total Maximum Daily Loads (TMDLs).

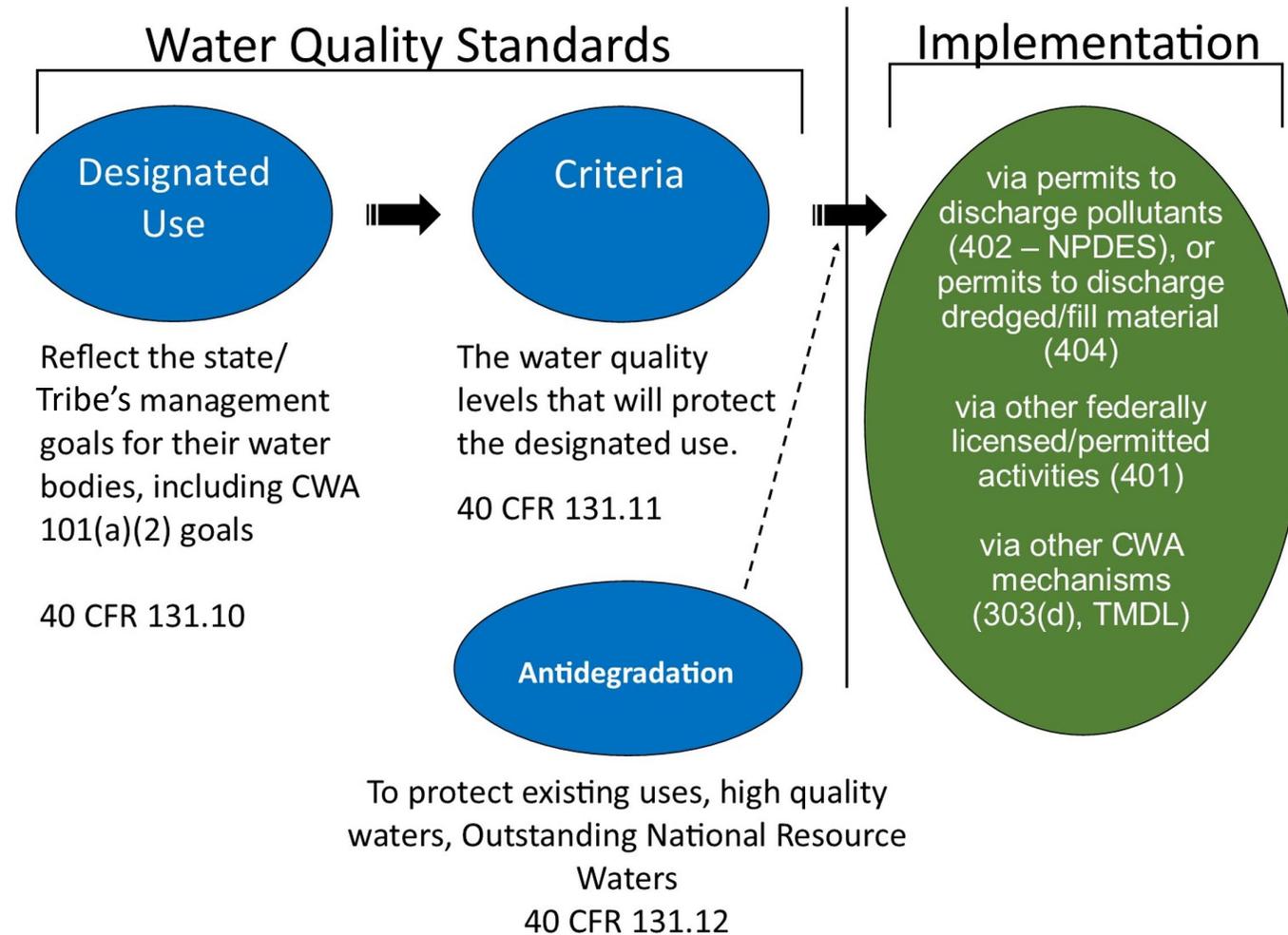
WATER QUALITY STANDARDS BASICS

- Water quality standards (WQS) are the core of water quality management programs.
- Consistent with CWA section 303(c), states, territories, and authorized Tribes adopt WQS to protect public health or welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act including sections 101(a) and 101(a)(2).
- The current federal regulation is in the Code of Federal Regulations (CFR) part 131, as well as part 132 for the Great Lakes area. The federal regulation implements the CWA by providing states and authorized Tribes with procedures for developing and revising WQS, and for EPA's review and approval or disapproval of state and Tribal WQS
- EPA-approved state and Tribal WQS can be supplemented by other state or Tribal programs.

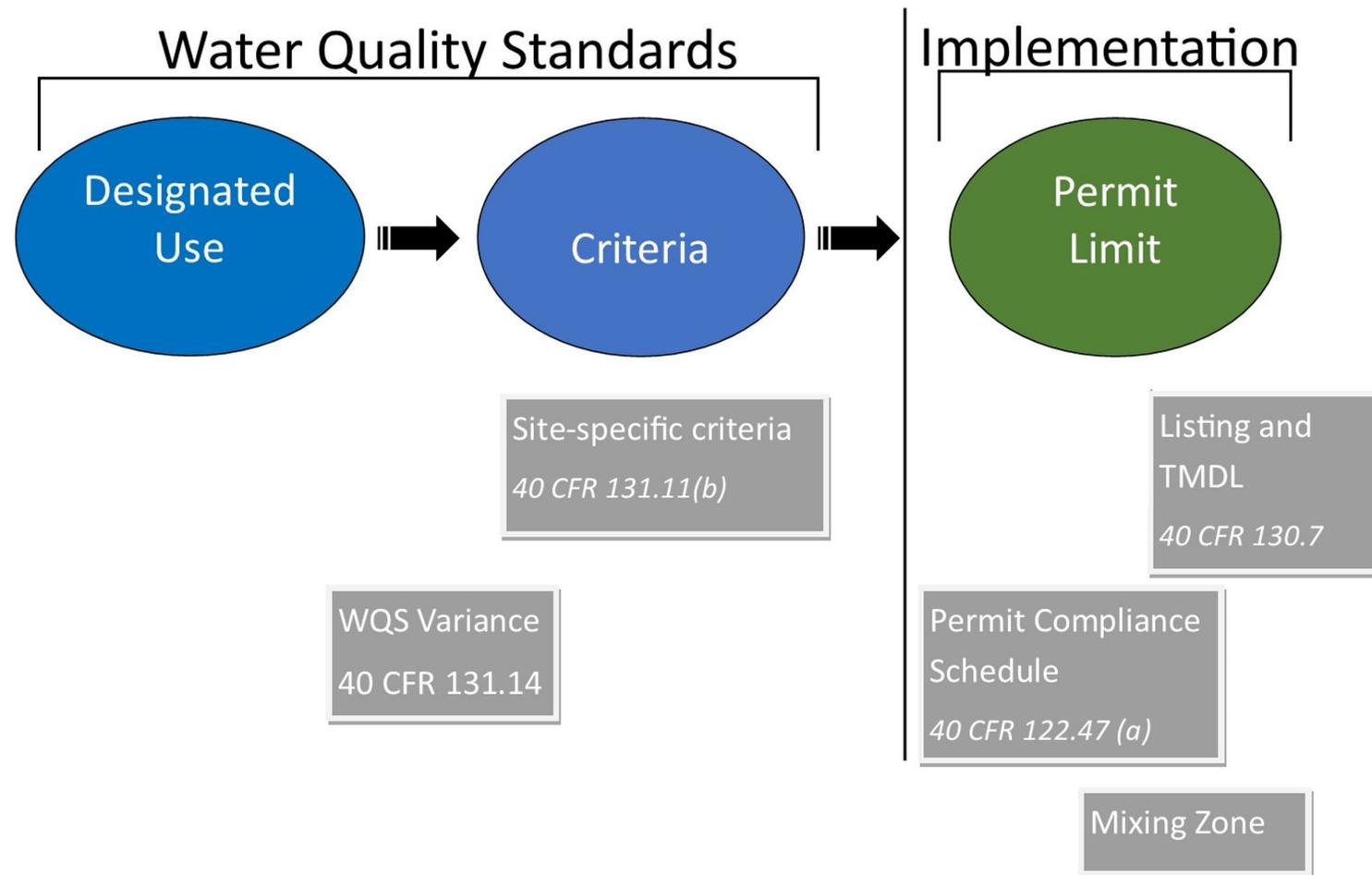
COMPONENTS OF WQS

- WQS consist of 3 core components:
 - Designated uses (sometimes known as “beneficial uses”),
 - Criteria to protect those uses, and
 - Antidegradation requirements.
- Additional components: general policies (e.g., low flow provisions, mixing zone policies) (40 CFR 131.13), WQS variances (40 CFR 131.14), compliance schedule authorizing provisions (40 CFR 131.15).

WATER QUALITY STANDARDS SCHEMATIC



A VARIETY OF TOOLS TO HELP MEET WQS





QUESTIONS?

UNDERSTAND THE ROLES

- States and authorized Tribes, which we often shorthand in presentation, but means:
 - States,
 - Territories (treated like states), and
 - Federally recognized Indian Tribes with “TAS” (treatment in a manner similar to a state): “Authorized Tribes”
- Community / public involvement
- EPA Regional Offices
- EPA Headquarters (Office of Water)

ROLE: STATES, TERRITORIES AND AUTHORIZED TRIBES

- States, territories and authorized Tribes have the primary authority to adopt, review and revise WQS. Consistent with CWA section 303(c), states and authorized Tribes must:
 - submit their WQS to EPA for review and approval or disapproval after adoption into their state or Tribe's regulations,
 - review their WQS triennially, and
 - conduct a public hearing to involve the public.
- They may adopt standards more stringent than recommended by EPA (CWA 510).
- Tribes may or may not assume responsibility for administering the program at their option. They may apply for "Treatment in a Similar Manner as a State" (TAS) for the purposes of administering EPA programs under CWA 518.

ROLE: COMMUNITY / PUBLIC INVOLVEMENT



- EPA encourages states and authorized Tribes to reach out to the local communities and learn how they use their waterbody and to keep those communities informed of any WQS issues. By engaging early and often, WQS decisions will best reflect the variables and needs of a local community which will benefit the public and the implementing agency.
- States and authorized Tribes can meaningfully engage community members during the decision-making process through mechanisms such as public meetings, webinars and public hearing.

ROLE: EPA REGIONAL OFFICES

- Delegated authority to approve or disapprove WQS:
 - Serve as primary contacts with states and Tribes for water programs.
 - Provide technical assistance in coordination with EPA Headquarters.
 - Request Administrator “determinations” under CWA 303(c)(4)(B)
 - EPA may promulgate WQS for a state/Tribe in any case where the Administrator determines new or revised standards are necessary to meet the requirements of the CWA (“Administrator Determination”)

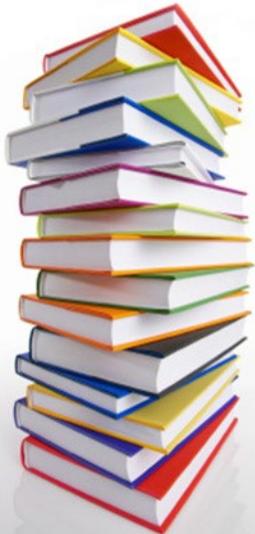
ROLE: EPA HEADQUARTERS (OW)

- Facilitate development of regulations and technical support documents
- Coordinate with and provide technical assistance to states and authorized Tribes.
- Develop and publish CWA 304(a) criteria recommendations (based on latest science)
- Provide concurrence on:
 - Disapprovals
 - Approvals that raise significant issues
- Lead development of promulgations
- Coordinate with the Office of Management and Budget

IMPLEMENTING WQS

A state, territory or authorized Tribe has adopted WQS into their regulations and EPA has approved them under 303(c). Now what?

WQS:
Theory, Plans, Process



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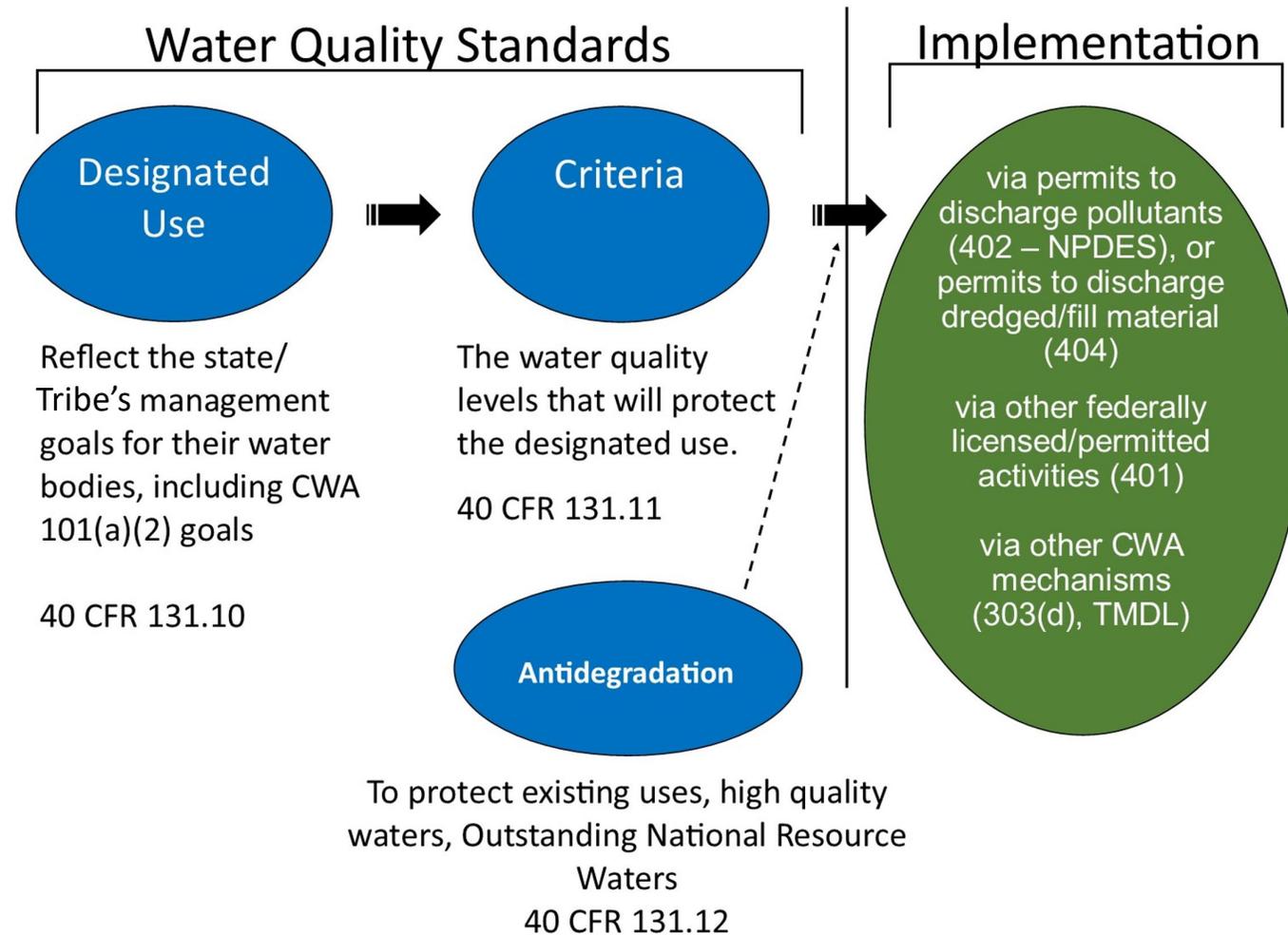


Implementation:
**Permits to discharge
or waterbody
assessment program**



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WATER QUALITY STANDARDS SCHEMATIC



IMPLEMENTING WQS

- NPDES permitting for point source dischargers
- Assessing waters for inclusion on state 303(d) list of impaired waters
- As target for calculating Total Maximum Daily Loads (TMDLs)
- Remember, other state and federal laws and regulations rely on WQS too!
 - Army Corps is required to take WQS into consideration when issuing dredge & fill (CWA 404) permits
 - CWA Section 401 certification

BACKGROUND: CWA SECTION 401

What is CWA Section 401?

Under CWA section 401, a federal agency may **not** issue a license or permit to conduct any activity that may result in any discharge into “waters of the United States,” **unless** the State or authorized Tribe where the discharge would originate either issues a CWA Section 401 water quality certification or waives certification.

Who is involved in CWA Section 401?



PROJECT PROPONENT

applicant for a federal license or permit, or the entity seeking certification



CERTIFYING AUTHORITY

a State or authorized Tribe where the discharge originates



All 50 States, the District of Columbia, and the territories



Tribes with “treatment in a similar manner as a State” (TAS) for section 401



EPA acts as the certifying authority where there is no authorized Tribe or State



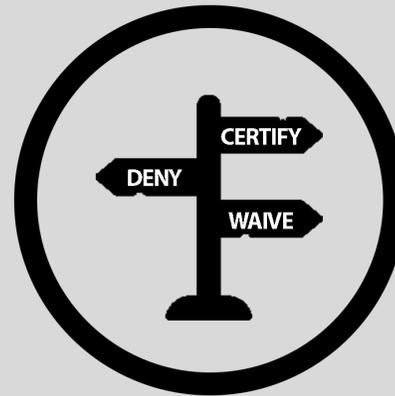
FEDERAL LICENSING OR PERMITTING AGENCY

any agency of the Federal Government to which application is made for a Federal license or permit that is subject to CWA section 401

BACKGROUND: TIMING IN THE CERTIFICATION PROCESS

Section 401(a)(1) provides certifying States and Tribes must act on a request for certification within a "reasonable period of time" (not to exceed **1 year**).

Certifying authorities may take one of four actions on a request for certification:



- Grant certification
- Grant certification with conditions
- Deny certification
- Waive certification

For more information on Section 401, please visit <https://www.epa.gov/cwa-401>

WATER QUALITY BASED APPROACH



OVERVIEW: TAKE HOME MESSAGES (I)

- The CWA 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.”
- Consistent with CWA section 303(c), states, territories and authorized Tribes adopt WQS to protect public health or welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act including sections 101(a) and 101(a)(2).
- The CWA and the WQS regulation are the basis for EPA’s review and approval of adopted state and Tribal water quality standards.
- States, territories and authorized Tribes, and EPA Regions and HQ, have important and unique roles in developing, adopting, implementing, reviewing and approving water quality standards.

OVERVIEW: TAKE HOME MESSAGES (2)

State/Tribal Water Quality Standards:

- Establish water quality goals for a waterbody
- Core components:
 - Designated Uses
 - Criteria
 - Antidegradation
- Provide the regulatory basis for controls beyond technology-based limits in permits
- Are used to determine attainment and non-attainment, for future TMDL development

USEPA photo by Danny Hart



QUESTIONS?