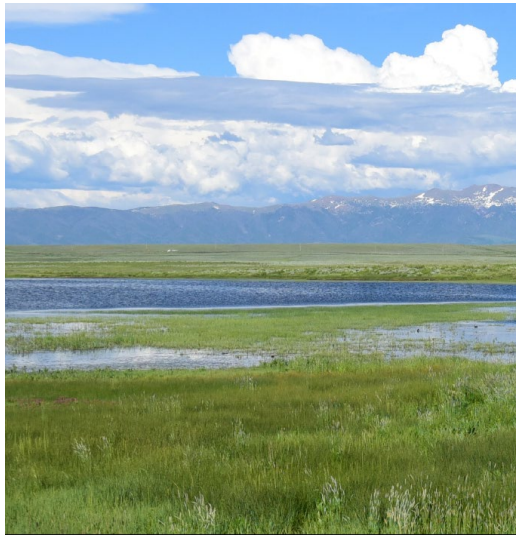


Wetland WQS and CWA Section 404



Virtual WQS Academy

June 2024

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- 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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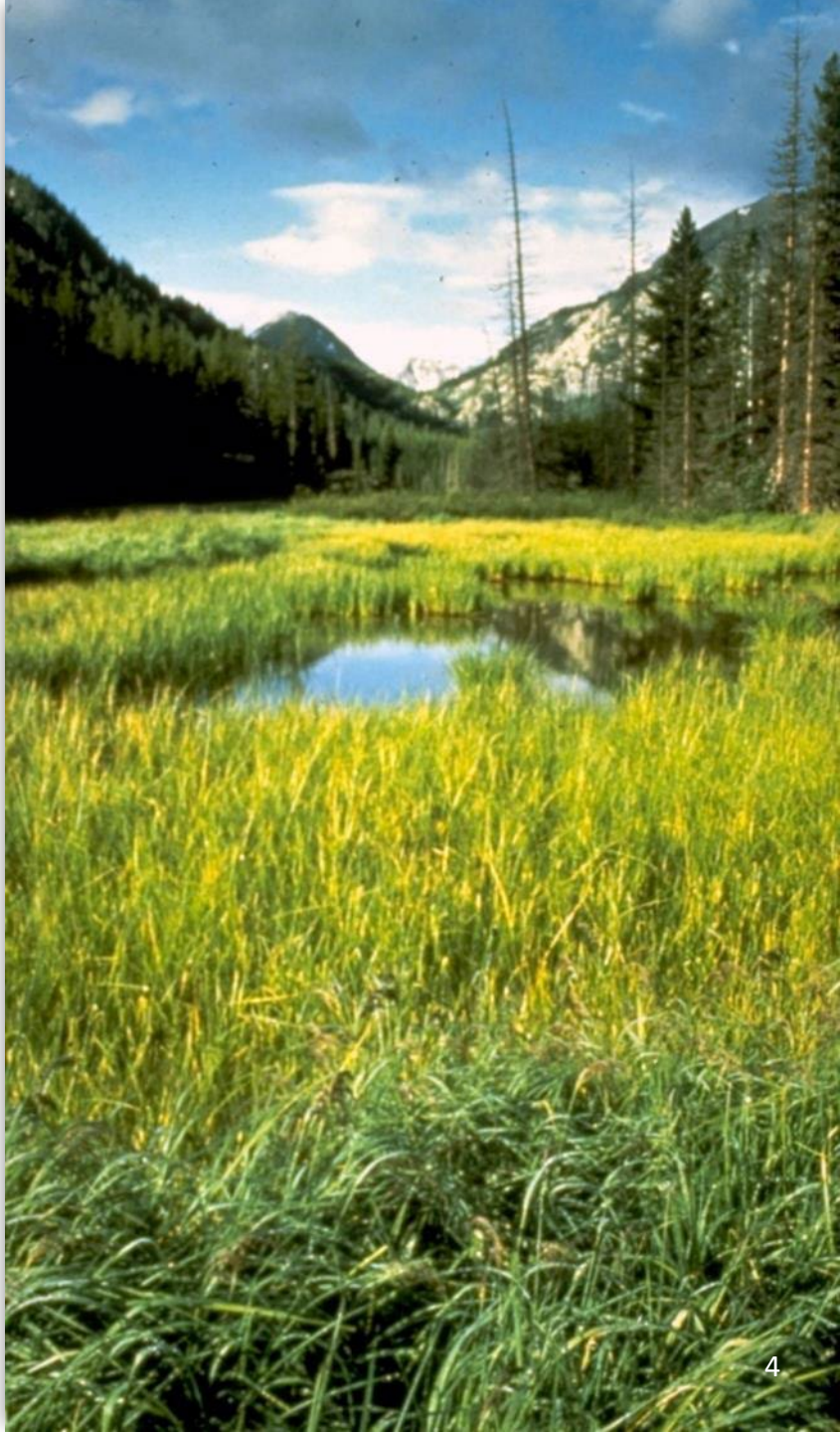
Overview

- Wetlands overview
- Streams and Other Waters
- CWA Section 404 program
  - What does it require?
  - How does it work?
- Wetlands and water quality standards
- Knowledge Check

General Wetland Types

- **Marshes**
  - **Tidal marshes**
  - **Nontidal**
    - **Freshwater marshes**
    - **Wet meadows and prairies**
    - **Prairie potholes**
    - **Playas**
    - **Vernal Pools**
- **Swamps**
  - **Forested Swamps**
  - **Shrub Swamps**
    - **Mangrove Swamps**
- **Bogs**
- **Fens**



Distinguishing Features of Wetlands

- Presence of water, either at surface or within the root zone.
- Unique soil conditions that differ from adjacent uplands (hydric soils).
- Support vegetation adapted to wet conditions (hydrophytes).

Forested Swamps

Tidal Marshes

Vernal Pools

Prairie Potholes

Why are These Resources Important?

- Fish and wildlife habitat
- Flood protection
- Erosion control
- Water quality
- Drinking water
- Recreation/education opportunities

Wetland Status and Trends

- Wetlands in lower 48.
  - 220 million acres in 1700
  - 116.4 million acres 2019
- Rate of loss decreased between 1950s and early 2000s.
  - 1972 – Clean Water Act
  - 1989 – President Bush established “no net loss” goal for wetlands
- Recent trends:
  - Loss of vegetated wetlands to uplands and non-vegetated wetlands
  - Increase in non-vegetated wetlands masks overall change in wetland acreage
  - Continued loss in coastal areas

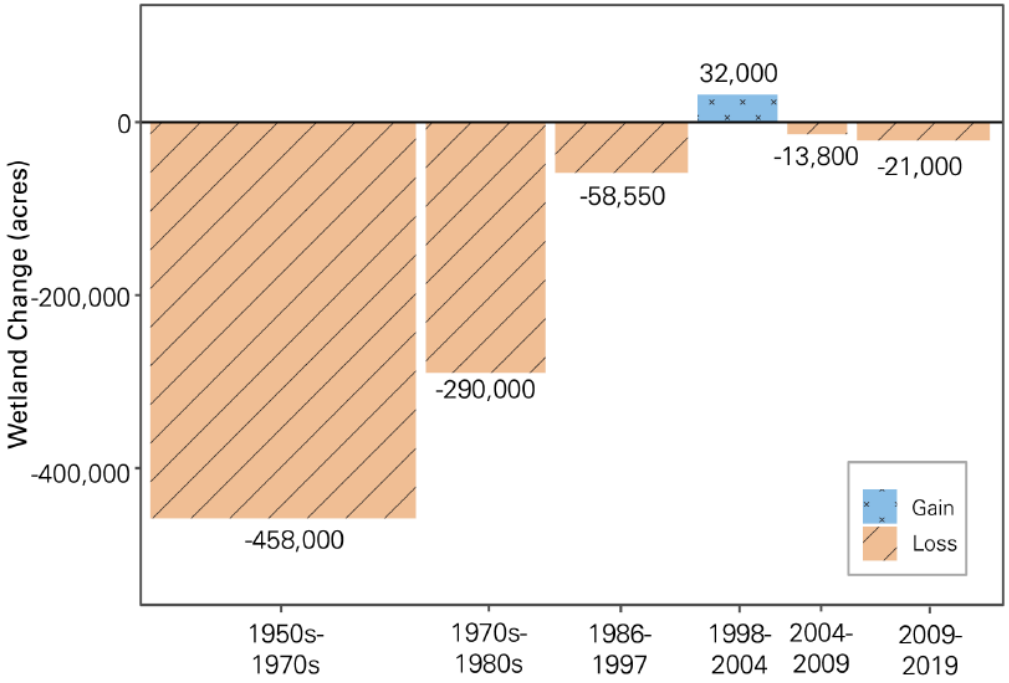
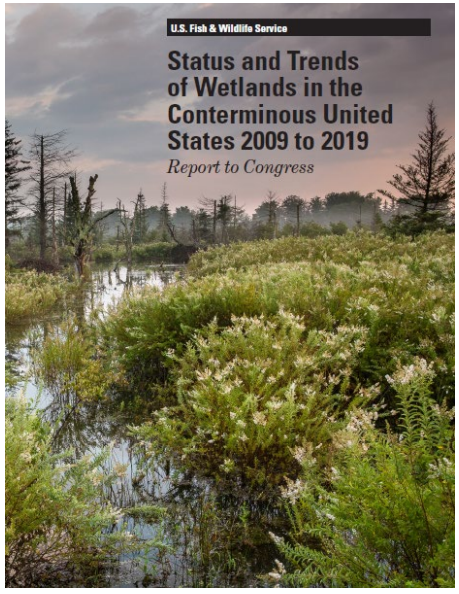


Figure 5. Average annual net wetland gain or loss across Wetlands Status and Trends study periods. Width of bars represents length of study period.



USFWS Status and Trends of Wetlands 2009 – 2019

https://www.fws.gov/program/national-wetlands-inventory/wetlands-status-and-trends

Not All Wetlands are Subject to the CWA

See Waters of the United States presentation and website: https://www.epa.gov/wotus

Wetland 4: View to the East

Identification of Streams and Other Waters

- Non-tidal waters
  - Ordinary High Water Mark (OHWM) – see https://www.erdc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training/
  - Adjacent wetlands

- Tidal waters
  - High Tide Line – maximum height reached by the rising tide, encompasses spring high tide but not storm surge
  - Adjacent wetlands

Three Key Points About CWA Section 404 and Wetlands

Section 404's permit program for discharge of dredge/fill material affects all WUS, not just wetlands.

Jurisdictional wetlands are protected by all CWA programs, not just Section 404.

Water Quality Standards for wetlands likely will look different than for other waters.

Basic Premise of Section 404

- Permit is required for discharge of dredged or fill material into WUS.
- No discharge permitted if:
  - practicable alternative exists that is less damaging to the aquatic environment, OR
  - if Nation's waters would be seriously degraded.

Applying for a 404 permit

- Delineate all wetlands and other waters on project site (verified by the Corps).
- Determine if the project requires a permit.
- Get a 401 certification or waiver.
- Send a permit application to the Corps (or authorized State/Tribe).

Agency Permit Processing

- Determination of permit type.
  - General permits: nationwide, regional, and programmatic.
  - Individual permits: standard permits and letters of permission.
- Public notice and solicitation of comments.
  - Except for projects with minimal impacts.
- Corps reviews application and comments and includes conditions to ensure compliance.
  - Environmental and public interest review.
- Permit issued, application withdrawn, or application denied.
  - Permit issuance contingent on 401 certification and coastal zone consistency determination.
  - Permits are subject to EPA review and veto.

Permit Application Review

- CWA Environmental review (404(b)(1))
  - No practicable alternatives
    - "practicable" if capable of being done, taking into account cost, existing technology, and logistics in light of overall project purposes.
  - No significant degradation
  - Sequencing: avoid, minimize, compensate for impacts

Permit Application Review, continued

- Corps' Public interest review
  - Cumulative and individual impacts on economics, energy, aesthetics, general environmental concerns, flood damage, etc.
- Other considerations
  - National Environmental Policy Act
  - National Historic Preservation Act
  - Endangered Species Act

Must be in compliance with 404(b)(1)Guidelines, and not contrary to the public interest.

Section 404(f) Exemptions

- Exempts from permit requirements specific activities that would otherwise require a permit - unless “recaptured”
  - Established (ongoing) farming, silviculture, and ranching activities.
  - Maintenance (but not construction) of drainage ditches.
  - Construction and maintenance of irrigation ditches.
  - Construction and maintenance of farm or stock ponds.
  - Construction and maintenance of farm and forest roads, in accordance with best management practices.
  - Maintenance of structures such as dams, dikes, and levees.

Wetland Water Quality Standards

- CWA Section 303(c)(2)(A) requires states to adopt water quality standards for waters to “protect the public health or welfare” and “enhance the quality of water”. No distinctions are made between wetlands and other waters.
- Water quality standards are necessary to ensure that provisions of the CWA currently applied to other surface waters are also being applied to wetlands.

Benefits

- **Permitting** – Standards provide a clear basis for making water quality based permitting decisions under CWA Sections 402 and 404 and other state and tribal programs;
- **Water quality certification** – Standards are the basis for states and tribes to approve, condition, or deny certifications under CWA Section 401 programs. Wetlands-specific WQS provide a stronger basis for 401 certifications and conditions;
- **Monitoring, Assessment and Reporting** – Standards provide a benchmark against which monitoring data can be used to assess and report on wetlands function and/or condition (i.e.,303(d)305(b) integrated reports); and
- **Restoration and Protection** – States and tribes can use standards as a basis for guiding restoration and protection efforts and gauging their effectiveness.

Key Differences Between Wetlands and Other Waters & Ways WWQS May Look Different

- Differences in reversibility of impacts, restoration techniques, cost of restoration. Stopping pollution will not restore many wetlands damaged by draining, filling, or flooding.
- Differences in role of wetlands in protecting other waters from pollution versus role of wetlands as critical waters with many functions in their own right. This requires consideration in the implementation of an antidegradation policy.
- Numbers of wetland water bodies number in the hundreds of thousands or millions versus thousands or tens of thousands for other waters. This favors adoption of standards for classes of wetlands rather than individual wetlands.
- Sensitivity to small changes in precipitation and water levels. This makes establishment of biocriteria challenging and means that multiple field measurements may be needed over the course of a year or over several years in order to characterize wetland biota, hydrology, other characteristics.

More Ways WWQS May Look Different

- DU's and narrative criteria that reflect unique wetland functions.
- Different numeric criteria especially for constituents such as DO and pH.
- Antidegradation policy/implementation may include requirements for sequencing (akin to 404(b)(1)), no net loss, and compensation.

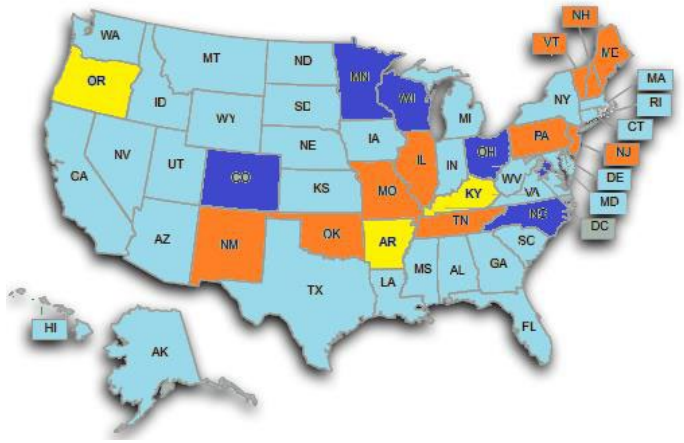
States with WWQS Elements

From ELI's *State Wetlands Protection: Status, Trends, & Model Approaches*, 2008

Figure 3-A. Wetland-specific water quality standards.

State	Water Quality Criteria (narrative and/or numeric)	Designated Use	Anti-degradation Policy	Citation
California	X	X		Various regional water quality control plans[82]
Colorado	X	X		5 COLO. CODE REGS. § 1002 *et seq.*
Florida		X	X	FLA. STAT. ANN. § 403.061; FLA. ADMIN. CODE § 62-302.
Hawaii	X			HAW. CODE R. § 11-54-2.
Illinois			X	ILL. ADMIN CODE tit. 35, § 302, 303.
Iowa		X		IOWA ADMIN. CODE r. 567-61.1 *et seq.*
Maine			X	ME. REV. STAT. ANN. tit. 38, § 464.
Minnesota	X			MINN. R. § 7050.
Nebraska	X	X		NEB. DEPT. OF ENV. QUALITY, tit. 117, Chp. 7.
North Carolina	X	X		N.C. ADMIN. CODE 02B.0231.
Ohio	X	X	X	OHIO ADMIN. CODE §§ 3745-1-50 – 3745-1-54.
Wisconsin	X			WIS. ADMIN. CODE § NR 103.
Wyoming	X			Ch. 1 of Wyoming Water Quality Rules and Regulations § 12.

Note: The data contained in this figure is a characterization of the programmatic element(s) available in the individual states; in no way should this characterization be viewed as drawing any conclusions about the implementation or effectiveness of the state program element(s). The information represented is considered current as of summer 2007.



https://www.nawm.org/publications/nawm-publications/state-and-regulatory.html

https://www.eli.org/research-report/state-wetland-program-evaluation-phase-iv

Templates for Developing Wetland Water Quality Standards

About These Templates | How To Use The Templates

Template for Designated Uses | Template for Criteria | Template for Antidegradation

Template for Designated Uses

For [all] [depressional] [estuarine] [lacustrine] [lacustrine fringe] [marine] [mineral flats] [organic flats] [palustrine] [riverine] [slope] [state-defined] [tidal fringe] wetlands, as defined by the [Cowardin] [HGM] [state-defined] classification scheme, the uses to be protected include but are not limited to: [baseflow discharge] [cultural opportunities] [flood flow attenuation] [groundwater recharge] [indigenous floral and faunal diversity and abundance†] [nutrient cycling] [organic carbon export/cycling] [protection of downstream water quality‡] [recreation†] [resilience against climatic effects] [sediment/shoreline stabilization] [surface water storage] [water-dependent wildlife†] to the extent that such [uses] [functions] [values] occur as represented by [established baselines.] [reference wetlands.] [reference standard wetlands.] [least impacted wetlands.] [least human-altered wetlands.] [state-specific standards.]

†Absent a UAA, if uses specified in §101(a)(2) or subcategories of such uses are not selected, such uses must be included elsewhere in the state's standards.

‡If protection of downstream water quality is not selected, such a provision must be included elsewhere in the state's standards (per 40 CFR §131.10(b)).

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Related Info

- What is a wetland?
- Why are wetlands important?
- Wetlands and Climate Change

- Information About Water Quality Standards and their Development
  - WQS Handbook
  - WQS Academy

Templates for Developing Wetland Water Quality Standards

About These Templates | How To Use The Templates | Template for Designated Uses

Template for Criteria | Template for Antidegradation

Template for Criteria

all | depressional | estuarine | lacustrine | lacustrine fringe | marine | mineral flats

organic flats | palustrine | riverine | slope | state-defined | tidal fringe wetlands, as defined

by the Cowardin | HGM | state-defined classification scheme, shall maintain biological

physical | chemical | hydrological conditions - as determined by established baselines

least-human-altered wetlands | least-impacted wetlands | reference-standard wetlands

reference wetlands | state-specific standard - including, but not limited

to: base flow, flow regime, and wetland hydroperiod

chemical, nutrient, and dissolved oxygen regime of the wetland

conditions favorable to protection and propagation of threatened, endangered, and at-risk species

conductivity | floristic quality | integrity of species diversity, abundance, and zonation

normal movement of fauna | pH of wetland waters | salinity | size and shape

soil type and horizon structure | water currents, erosion, or sedimentation patterns

water levels or elevations | water temperature variations .

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Templates for Developing Wetland Water Quality Standards

About These Templates | How To Use The Templates | Template for Designated Uses | Template for Criteria | **Template for Antidegradation**

Template for Antidegradation

Tier I: For all wetlands, using the Cowardin | HGM | state-defined classification scheme, there shall be no degradation of existing uses.

Tier II: Using the Cowardin | HGM | state-defined classification scheme: there shall be no net loss to the water quality, functions | values | area | ecological integrity of high quality depressional | estuarine | lacustrine | lacustrine fringe | marine | mineral flats | organic flats | palustrine | riverine | slope | state-defined | tidal fringe | [choose no specific type] wetlands, unless, after satisfying state antidegradation provisions including avoidance, minimization, and mitigation/replacement requirements, it is determined that allowing degradation is necessary to accommodate important social or economic development in the area in which the wetlands are located.

Tier III: There shall be no loss to the water quality functions | values | area | ecological integrity of wetlands designated as outstanding national resource waters, as per state Tier III requirements.

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Wetland Water Quality Resources

- EPA's Narrative Templates for Wetland Water Quality Standards
  https://www.epa.gov/wqs-tech/templates-developing-wetland-water-quality-standards

- EPA's Wetland Water Quality Standards Website
  https://www.epa.gov/wetlands/wetland-water-quality-standards

- EPA's Water Quality Standards for Wetlands: National Guidance (1990)
  https://www.epa.gov/cwa-404/national-guidance-water-quality-standards-wetlands

Also see module handout for websites

KNOWLEDGE CHECK QUESTION #1:

What are the three characteristics that are used to delineate a wetland?

a) Hydric Water, Hydrophytic Vegetation, and Hydric Elevation
b) Hydric Soils, Hydrophytic Vegetation, and Hydrology
c) Hydric Soils, Nutrient Cycling, and Waterfowl
d) Hydric Soils, Hydric Elevation, and Amphibians

KNOWLEDGE CHECK QUESTION #2: In order for the Corps of Engineers to issue a permit under CWA Section 404, a project must:

Check all that apply

a) Be economically feasible

b) Comply with the CWA section 404(b)(1)Guidelines

c) Result in more waterfowl breeding grounds

d) Not be contrary to the public interest

e) Discharge dredge or fill material into waters of the United States

KNOWLEDGE CHECK QUESTION #3: TRUE OR FALSE

The discharge of dredge or fill material into any wetland or stream in the US requires authorization under CWA section 404.

KNOWLEDGE CHECK QUESTION #4: Water Quality Standards for Wetlands may look different from other Water Quality Standards because:

a) Stopping pollution will not restore many wetlands damaged by draining, filling, or flooding.

b) Wetlands sensitivity to small changes in precipitation and water levels mean monitoring may need to extend across seasons or even years.

c) Numeric criteria for constituents such as DO and pH will need to be different than other waters and different across classes of wetlands.

d) All of the above