Southwest Tribal Clean Water Act Training – Intermediate Water Quality Standards: Common Tribal Interests

Isleta Pueblo, March 6, 2024, NAWM / EPA

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Agenda

- WQS Basics Refresher
- Common Tribal WQS Interests
  - Triennial Review of WQS
    - Requirements, Timelines and Submitting to EPA
    - EPA CWA § 304(a) Criteria Recommendations and Tribal Updates
    - Ammonia and WQS Variances
  - Designated Uses and Resegmenting Waterbodies
    - Resegmenting Waters, Cultural Uses
    - Seasonal Uses and Secondary Contact Recreation
  - Wetland WQS

Water Quality Standards (40 CFR Part 131)

- Must Contain:
  - Designated Uses for all surface waterbodies

    (e.g., CWA 101(a)(2): Rec, Aq. Life & Non-101(a)(2): Agriculture, Public Water Supply)
  - Criteria (numeric & narrative) to protect those uses
  - Antidegradation policy and procedures to preserve water quality

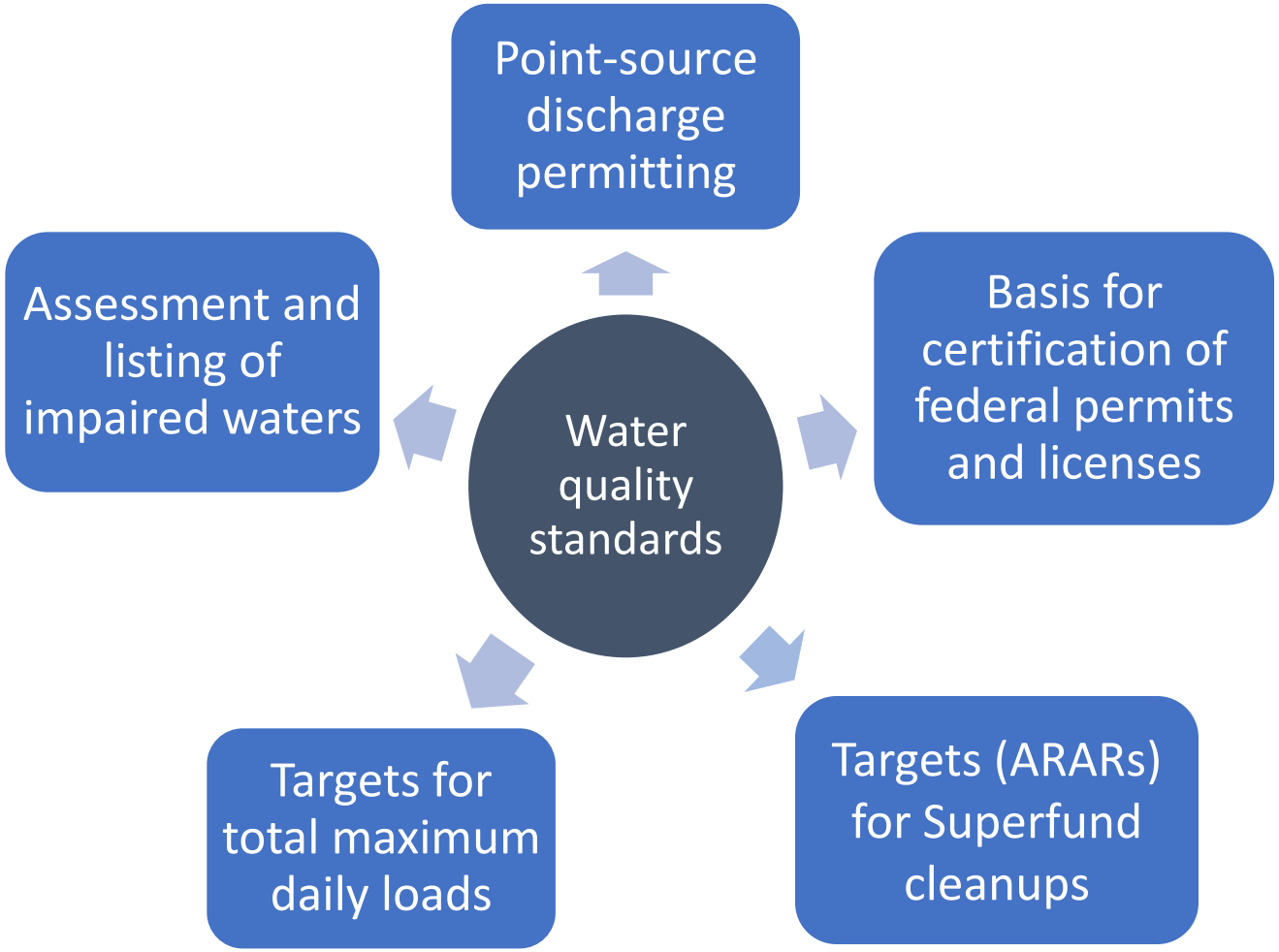
- Optional General Policies – (e.g., mixing zone & low flow policies), WQS variances, compliance schedule authorizing provision

- WQS Apply to “waters of the U.S.”
- Triennial Review of WQS

Why are WQS important?

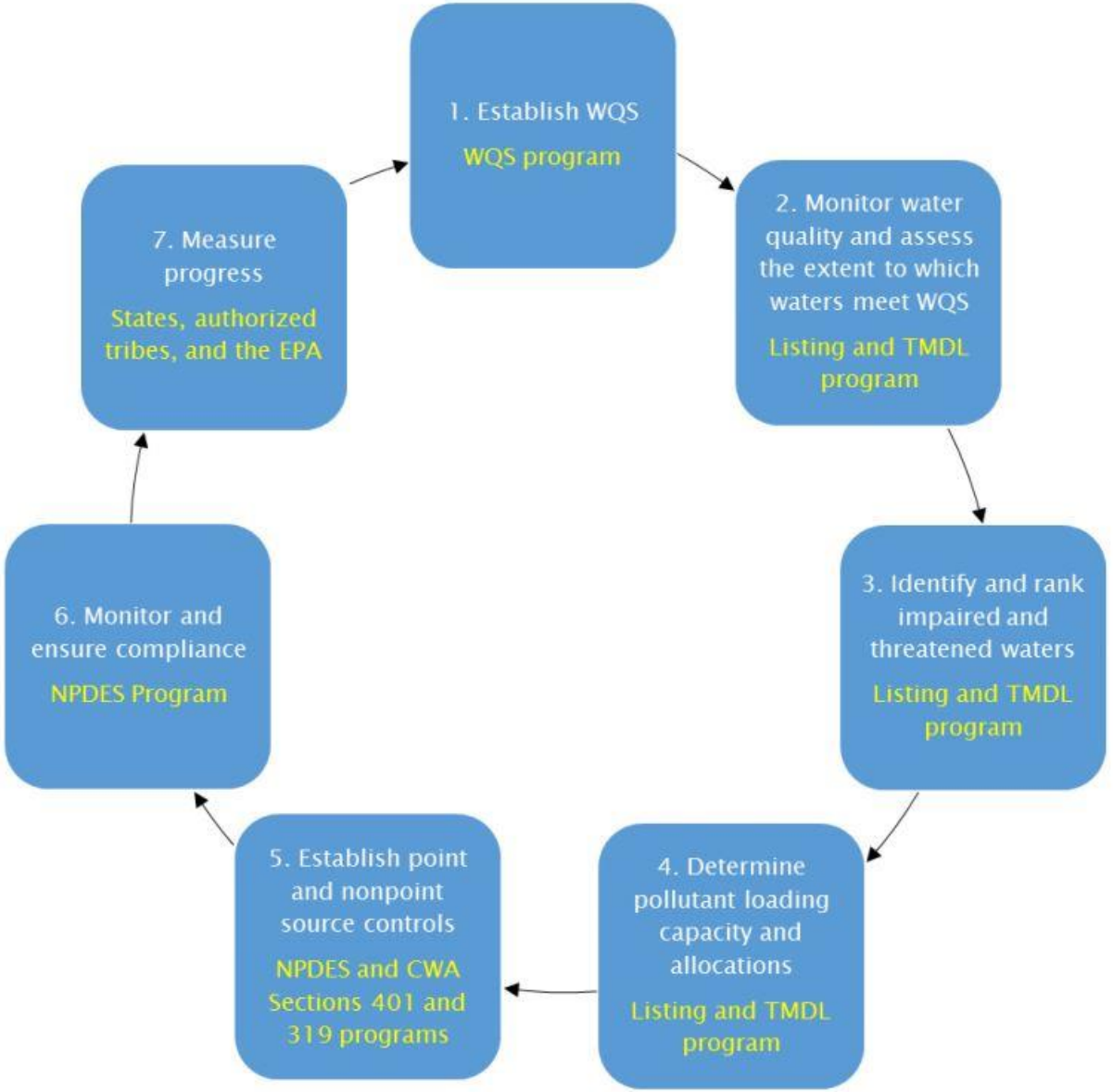
- Establish water quality goals for each specific water body and communicate these goals to the public.
- Identifying water quality goals helps identify the criteria necessary to meet these goals.
  - criteria are generally the regulatory basis for assessment & attainment decisions, CWA § 401 Certifications, TMDLs, NPDES permit limits, etc.
- Fundamental building blocks for all CWA protections

WQS Connections to Implementation Programs



Why review and revise your WQS?

Iterative Water Quality-Based Approach to Pollution Control



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CWA § 303(c)(1) & 40 C.F.R. § 131.20 Requirements

At least once every 3 years, must conduct a WQS review and hearing

- Hold a public hearing with at least 45 days' notice for the purpose of reviewing applicable WQS
- Re-examine water bodies that do not include 101(a)(2) uses and revise if new information indicates those uses are attainable
- Provide an explanation if not adopting criteria for pollutants for which EPA has published new or updated 304(a) recommendations
- States/tribes submit review results and supporting analyses to the EPA within 30 days of final action to adopt & certify WQS

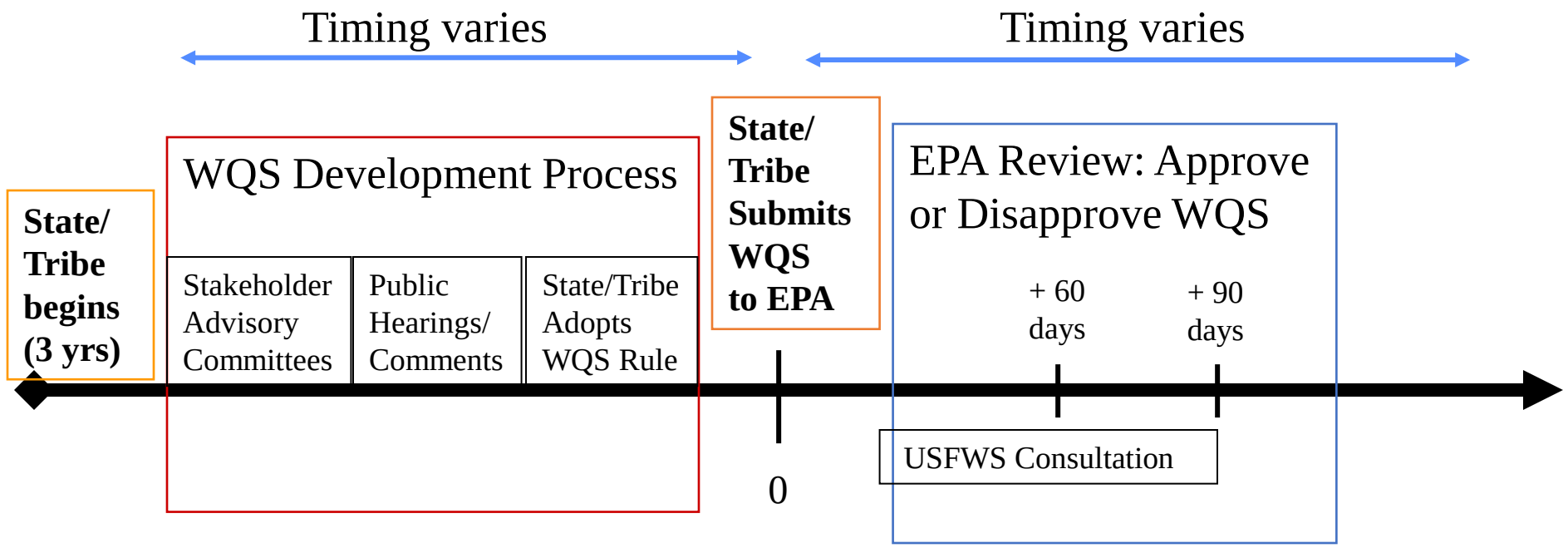
WQS Development Process

1) Tribe/state reviews WQS and supporting information
   - Data collection and analysis (use your data review, analysis & assessments)
   - Involve other resource agencies – internal and external
   - Workgroups and involving interested parties and community
   - Public outreach, information posting and meetings

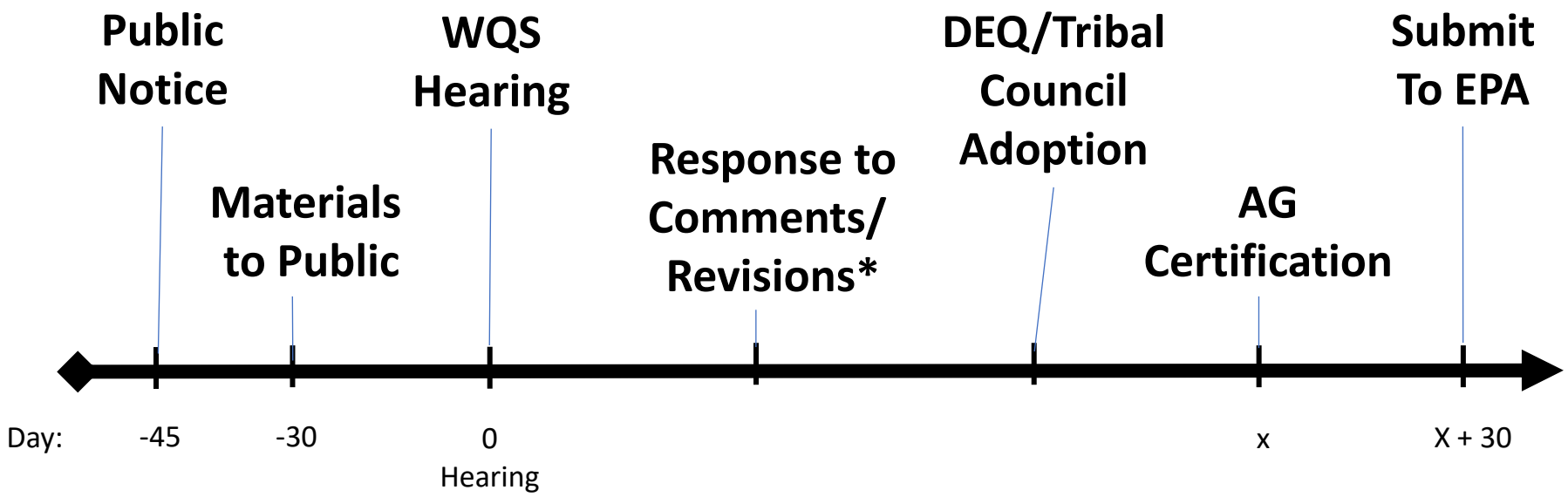
2) Tribe/state adopts new & revised WQS
   - At least one public hearing required
   - Rulemaking – typically Tribal Council adoption

3) Tribe/state submits new & revised WQS to EPA

Water Quality Standards Development and Review and Rulemaking Process



WQS Rulemaking Process Timeline



* Repeat previous steps if necessary

Criteria

- Represent a level of water quality that supports ("protects") a particular designated use.
  - The criteria must protect the most sensitive use (usually aquatic life or human health).
- Criteria must:
  - Be derived based on risk, not costs
  - Be based on sound scientific rationale
- Forms of Criteria
  - Numeric – should be based on either:
    - EPA's CWA § 304(a) national recommended water quality criteria,
    - 304(a) guidance modified to reflect site-specific conditions, or
    - Other scientifically defensible methods
  - Narrative (e.g., "no toxics in toxic amounts," "free from X,")
    - Where numeric criteria cannot be established
    - To supplement numeric criteria
  - Biological
- Types
  - Aquatic life, human health, recreational, nutrient, site-specific

EPA CWA § 304(a) Criteria Recommendations and Tribal Updates

- Visit EPA Criteria Websites:

  - Aquatic Life: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table

  - Human Health: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table

  Carefully compare your criteria values to recommendations - “detail oriented”

  What’s new?

  see right side column: “Publication Year” with arrow 

Ammonia and WQS Variances

- Lagoon wastewater treatment systems are great. However, they generally do not remove ammonia at low temperatures.
- EPA's 2013 ammonia criteria recommendations protecting aquatic life are challenging for lagoon systems when operating in low temp.s

Criterion Duration	1999 Criteria	2009 Draft Updated Criteria	2013 Final Updated Criteria
Acute (1-hr. avg.)	24 mg/l	19 mg/l	17 mg/l
Chronic (30-day rolling avg.)	4.5 mg/l *	0.91 mg/l *	1.9 mg/l *
*Not to exceed 2.5 times the criterion continuous concentration as a 4-day average within a 30-day period.			
Criteria frequency: Not to be exceeded more than once in three years on average.			

Considerations

- Ammonia
  - Toxic to aquatic life so many tribes want stringent controls.
  - Always good to review Discharger Monitoring Reports (DMRs) data.
  - Advance conversations with tribal departments and leaders.
  - Consider possible ammonia variances for Reservation facilities.

- Related Criteria Issues
  - Fish-tissue-based criteria and sampling.
  - Multi-parameter criteria (e.g., requiring pH, Temp., DOC) and datasets necessary to implement these criteria.

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Designated Uses & Resegmenting Waterbodies

- Jump right in?

- Take a break and come back in 5 minutes?

What are WQS Designated Uses





- Uses specified in state or tribal WQS for each water body or segment
- Establish WQ goals for a specific water body
- Functions and/or activities supported by a specific level of water quality.





CWA Section 101(a)(2) Designated Uses

101(a)(2) uses

- *Protection and propagation of fish, shellfish and wildlife…and recreation in and on the water*
- "Fishable, swimmable"
- Aquatic life & Recreation
- Cultural?

- **101(a)(2) uses are presumed attainable** UNLESS demonstrated otherwise through a use attainability analysis (UAA)

Non-101(a)(2) uses

- Public water supply
- Agriculture
- Industry
- Navigation
- Cultural?

- **Non-101(a)(2) uses are *not* presumed attainable** and can be removed through either a "use and value demonstration" or a UAA

“Rebuttable Presumption”: attainability of “fishable/swimmable” uses for all surface waters

- EPA interprets its regulations to require that WQS protect uses specified in CWA Section 101(a)(2) unless a state/authorized tribe demonstrates otherwise through a use attainability analysis (UAA), effectively creating a rebuttable presumption of attainability.

- States and authorized tribes have primary role in designating uses and in weighing evidence regarding their attainability.

Designated Uses protecting cultural practices

- **CWA 101(a)(2) Uses**
  - Protection of Fish, Wildlife, Resource
  - Recreation

Fishing and collection activities

*Ceremonial and Cultural practices

- **Unique Non 101(a)(2) Uses**
  - Wild Rice protection
  - Wetlands for Cultural Practices
  - Frogging
  - Sweats

*Cultural or Ceremonial uses could be (101(a)(2) or non-101(a)(2))

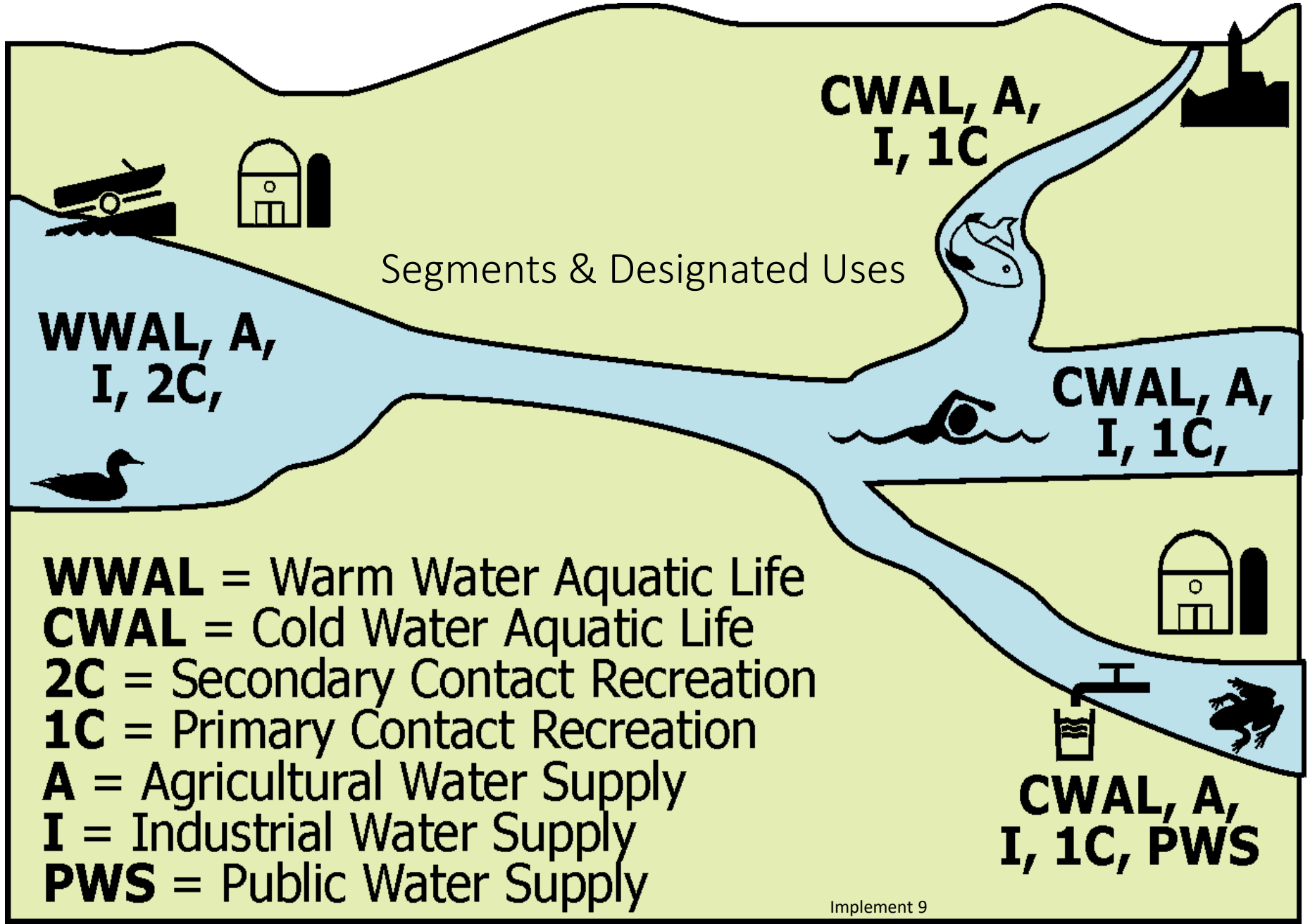
Cultural Use Considerations

- What is the exposure to tribal members or a resource?
  - E.g., protecting individuals from arsenic during sweats, or a culturally significant riparian plant.
- Seasonality or repeated/ continuous exposure?
- Tribal comfort level around disclosure of information?
- Narrative and/ or numeric criteria sufficient to protect individuals or resource?
- May be helpful to review cultural uses adopted by other tribes.

Considerations in (Re)Segmenting a Watershed

- Existing uses, land and water use patterns, and water body goals
- Changes in habitats or physical conditions – e.g., reservoirs v. streams, mainstem rivers v. tributaries, dams and water temperature / chemistry
- Start simple (whole watersheds as segments) or more complex. Remember, states/tribes have broad discretion and WQS are iterative (reviewed every 3 yrs.) and evolve over time.

WQS: Segments & Designated Uses



Implement 9

Use Sub-Categories

- Recreation: primary contact (Rec 1)/ secondary contact* (Rec 2)
  - EPA released methodology to develop Rec 2 criteria.
  - Must demonstrate Rec 1 is not existing/ attainable.
- Aquatic life: cold water/ warm water/ Aq Life no fish*
- Agriculture: livestock watering/ irrigation

- Sub-categories may apply seasonally. E.g., seasonal:
  - primary contact during summer/ secondary during winter, or
  - spring-fall Irrigation/ winter Non-Irrigation

* any use sub-category that applies less stringent criteria requires a supporting use attainability analysis (UAA)

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WQS to Protect Wetlands

- Identify wetland resources
- Identify sensitive species and tolerances
- Consider whether numeric and/ or narrative criteria should be sufficiently protective
- Consider expanding existing WQS components to cover wetlands

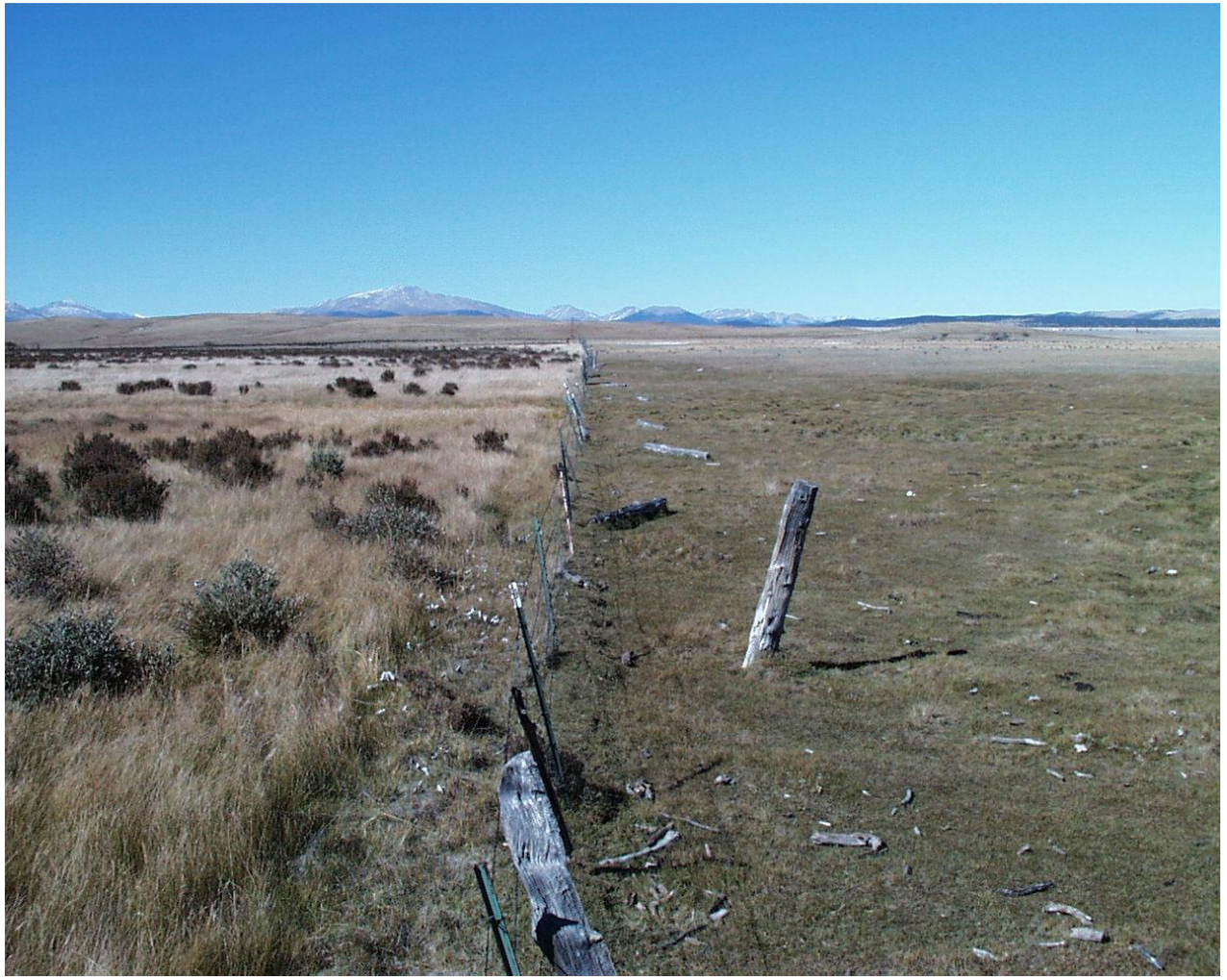
Ute Ladies Tresses, Spiranthus diluvialis

Bullrush (Scirpus maritima) in wetland north of Roy, Montana

Identify Presence and Extent of Tribal Wetlands

- Identify whether there are significant wetland and riparian plants, and any stressors
  - Can you develop numeric &/ or narrative criteria sufficient to protect sensitive species, and to varied/ constant exposures throughout the year?

Simple Measures for Agriculture & Plant Usage



- Sometimes narrative criteria are sufficient to protect these uses

Specific WQS components that can help protect wetlands

- Identify wetlands as “Waters of the Tribe” in WQS definitions
- Explicitly apply narrative criteria and antidegradation provisions to include wetland protection
- Develop and apply numeric criteria where needed/ appropriate

Questions?