



# ALTERNATIVE RESTORATION APPROACHES

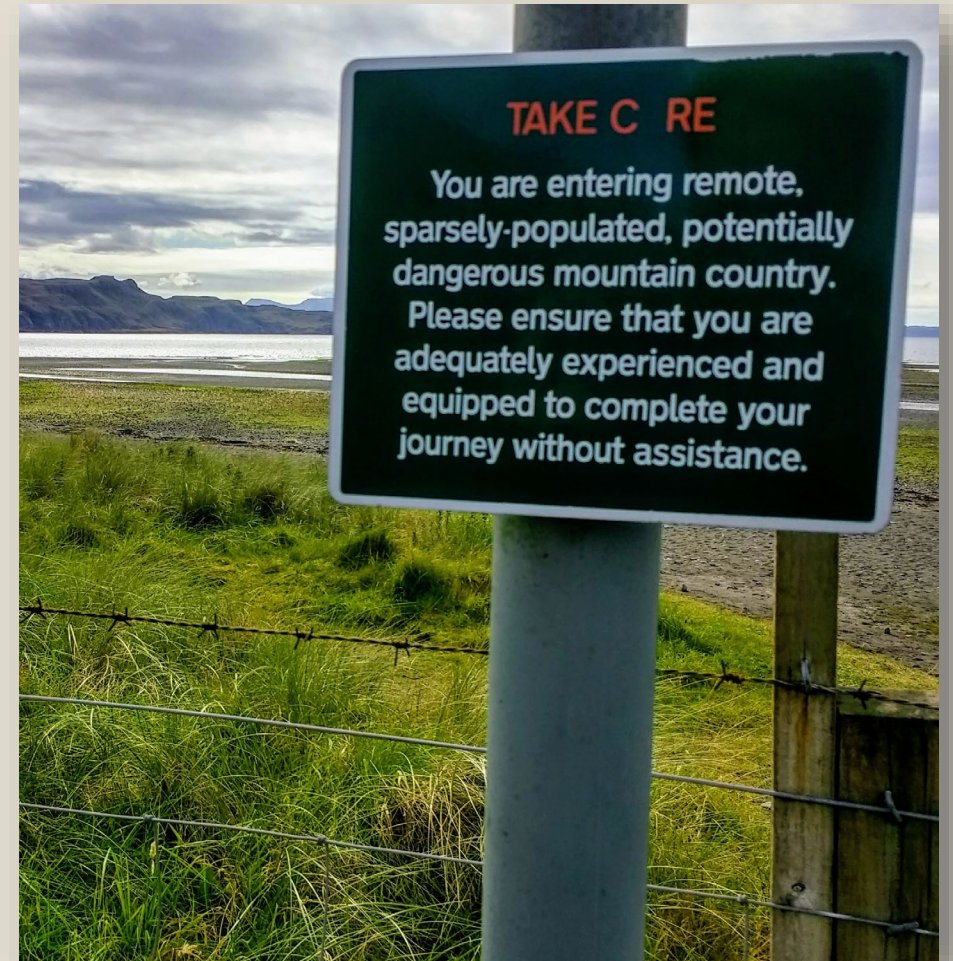
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# A Refresher on “5-alt”

- Voluntary **Plan** for Restoration, Developed in Advance of a TMDL
  - *“Near-term Plan, or Description of Actions, with a Schedule and Milestones, that is more immediately beneficial or practicable to achieving WQS”*
  - Guidance Provided in 2016 Integrated Report Memo
  - “Accepted” by EPA for Tracking Purposes
- Integrated Report **Subcategory** Indicates:
  - Restoration Activities are Taking Place
  - Waterbody may be Assigned a Lower Priority for TMDL Development

# Topics of this Presentation

- Elements of a 5-alt plan
- Overview of Accepted 5-alt Plans
- 5-alt Considerations and Best Practices
- Incorporating 5-alt into Other Water Programs
- Q & A



# 5-alt Plan Elements\*

- **Identification of specific impaired water segments** or waters addressed by the alternative restoration approach, **and identification of all sources** contributing to the impairment.
- Analysis to support why the State believes that the implementation of the alternative **restoration approach is expected to achieve WQS.**
- An Action Plan or Implementation Plan to document: a) **the actions to address all sources—both point and nonpoint sources, as appropriate—necessary to achieve WQS** (this may include e.g., commitments to adjust permit limits when permits are re-issued or a list of nonpoint source conservation practices or BMPs to be implemented, as part of the alternative restoration approach); **and, b) a schedule of actions designed to meet WQS with clear milestones and dates**, which includes interim milestones and target dates with clear deliverables.
- **Identification of available funding opportunities** to implement the alternative restoration plan.

\*From EPA's 2016 Integrated Reporting & Listing Guidance

# 5-alt Plan Elements\*, cont.

- Identification of all **parties committed, and/or additional parties needed**, to take actions that are expected to meet WQS.
- An estimate or projection of the time **when WQS will be met**.
- **Plans for effectiveness monitoring** to: demonstrate progress made toward achieving WQS following implementation; identify needed improvement for adaptive management as the project progresses; and evaluate the success of actions and outcome.
- **Commitment to periodically evaluate the alternative restoration approach** to determine if it is on track to be more immediately beneficial or practicable in achieving WQS than pursuing the TMDL approach in the near-term, and if the impaired water should be assigned a higher priority for TMDL development.

\*From EPA's 2016 Integrated Reporting & Listing Guidance

# 5-Alt Tracking and Summary Project

Last fall, EPA started a project to...

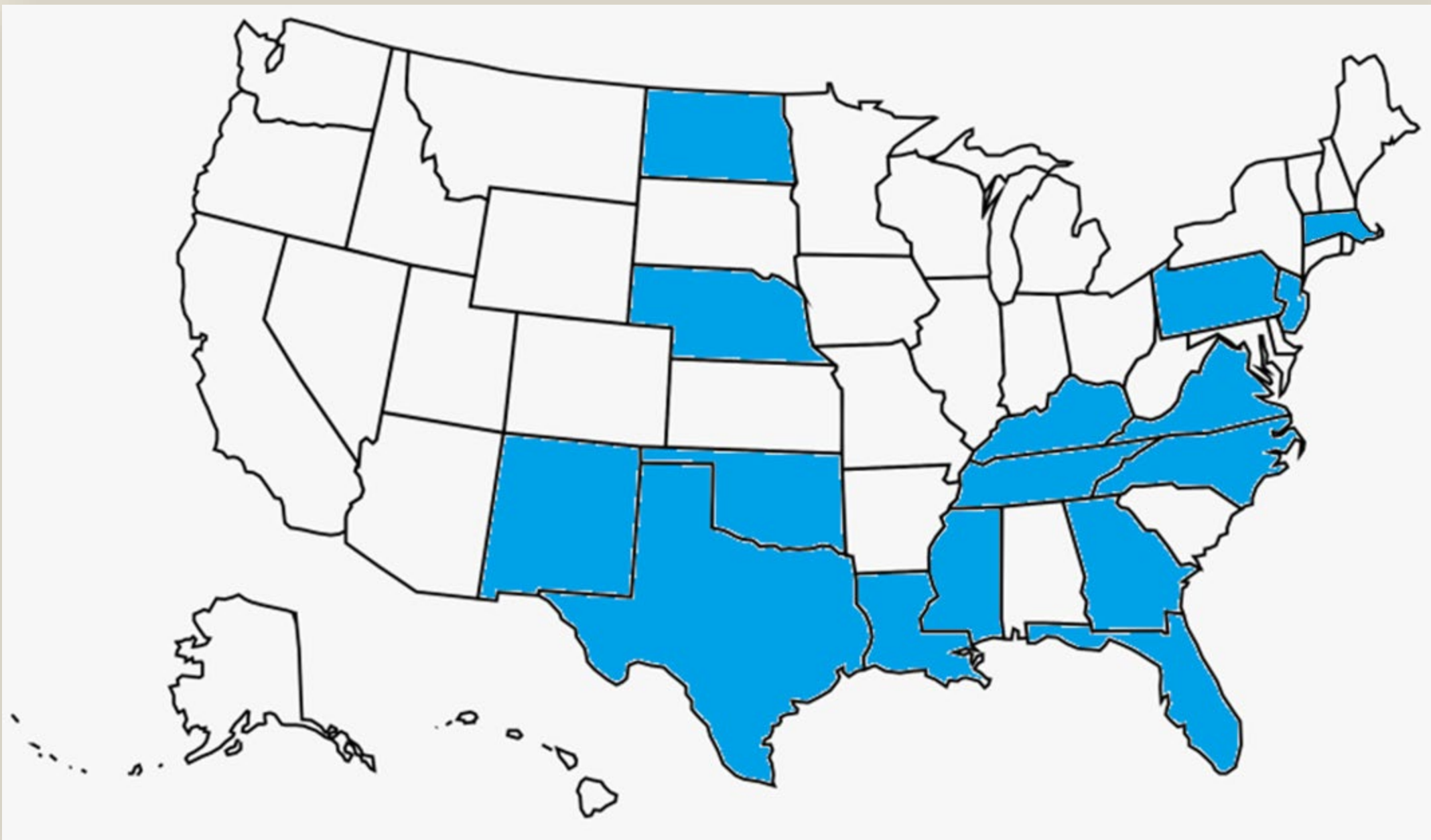
- Capture the universe of accepted 5-alt plans;
- Collect state and Regional SOPs on plan development and review;
- Review documents for commonalities and best practices;
- Identify examples with monitoring plans and follow-up actions;
- Communicate success of 5-alt as a restoration tool; and
- Evaluate processes for ongoing 5-alt tracking.

# *Estimate* of 5-alts Accepted as of May 2020

- 16 States with Plans (7 EPA Regions)
- 45 Plans
- 197 Waterbody-Impairments\*
- Top Impairments Identified in Accepted Plans:
  - Pathogens
  - Nutrients
  - Low Dissolved Oxygen



\*Does not include PA Sediment plan addressing 402 waters





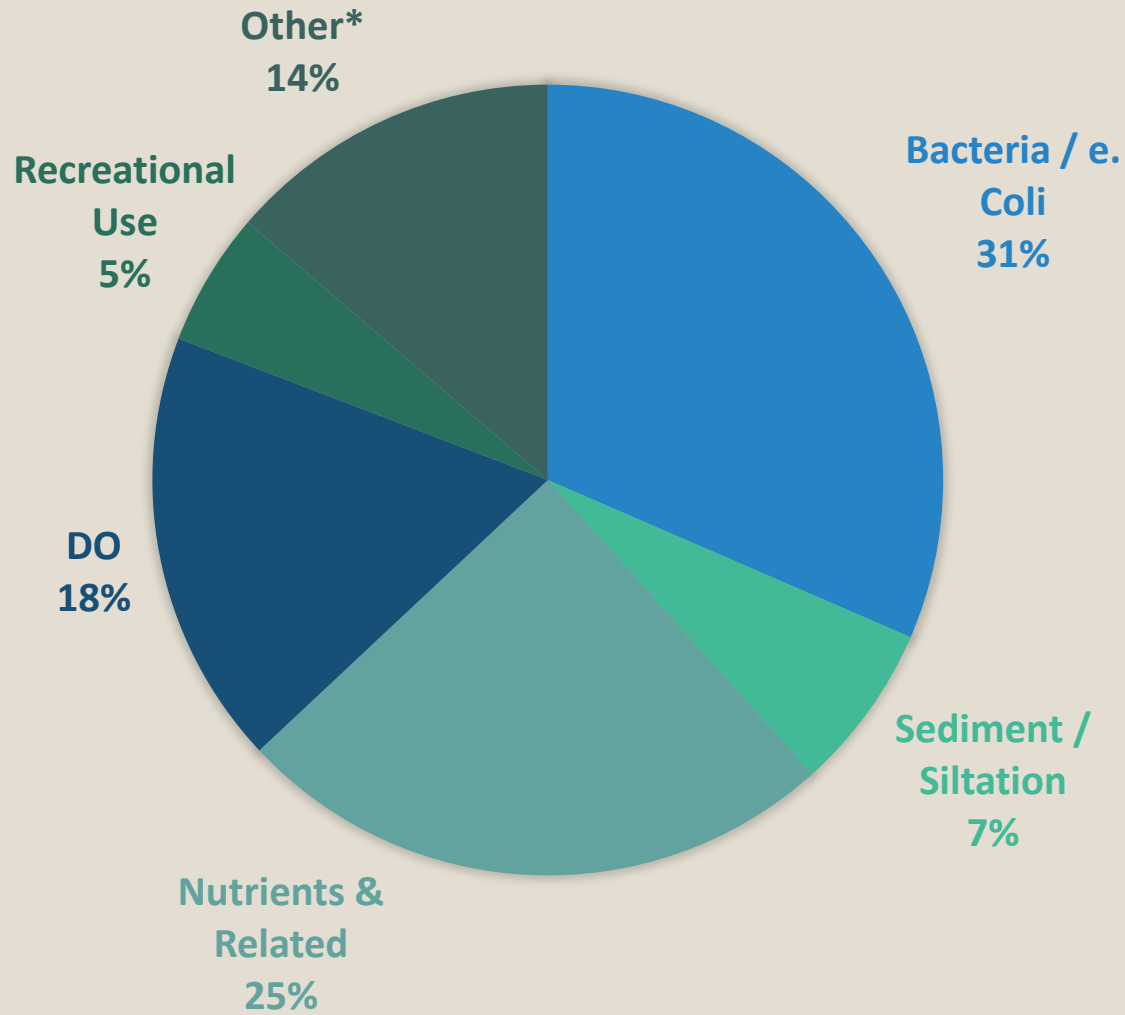
# Review of Accepted Plans – Key Points

- Most plans contained explicit goals to *improve* water quality, quantified the improvements needed, and contained actions to monitor water quality and/or implementation activities.
- Plans were evenly split between those that were accepted pre-implementation and plans with activities already in progress.

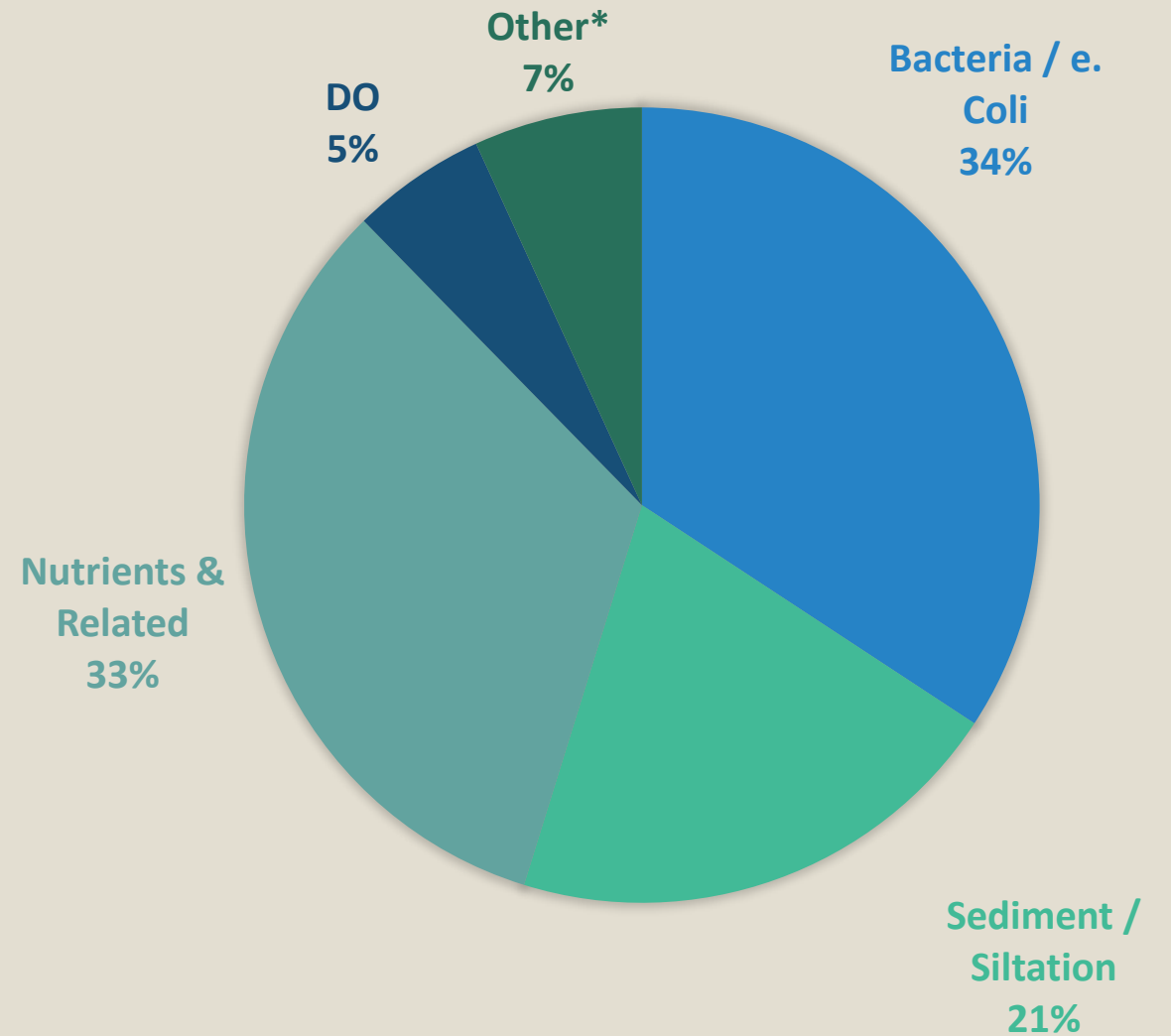
# Review of Accepted Plans – Key Points

- However, plans were less consistent in identifying a specific date or timeframe when WQS were expected to be achieved, or when the 5-alt category would be reassessed.
- Nearly 25% of the plans did not explicitly say that implementation was expected to lead to restoration of WQS, or stated that the results of implementation were uncertain.

## IMPAIRMENT IDENTIFIED

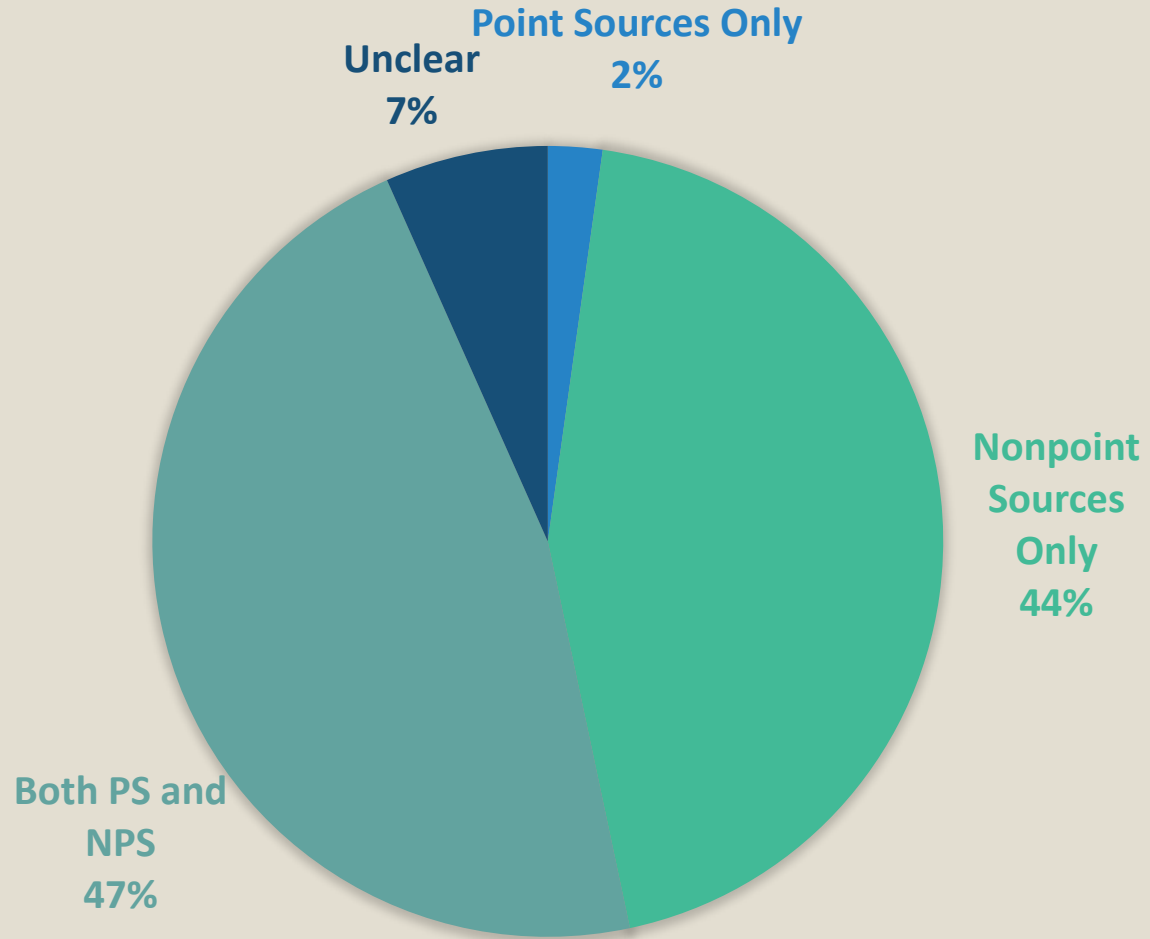


## POLLUTANT IDENTIFIED

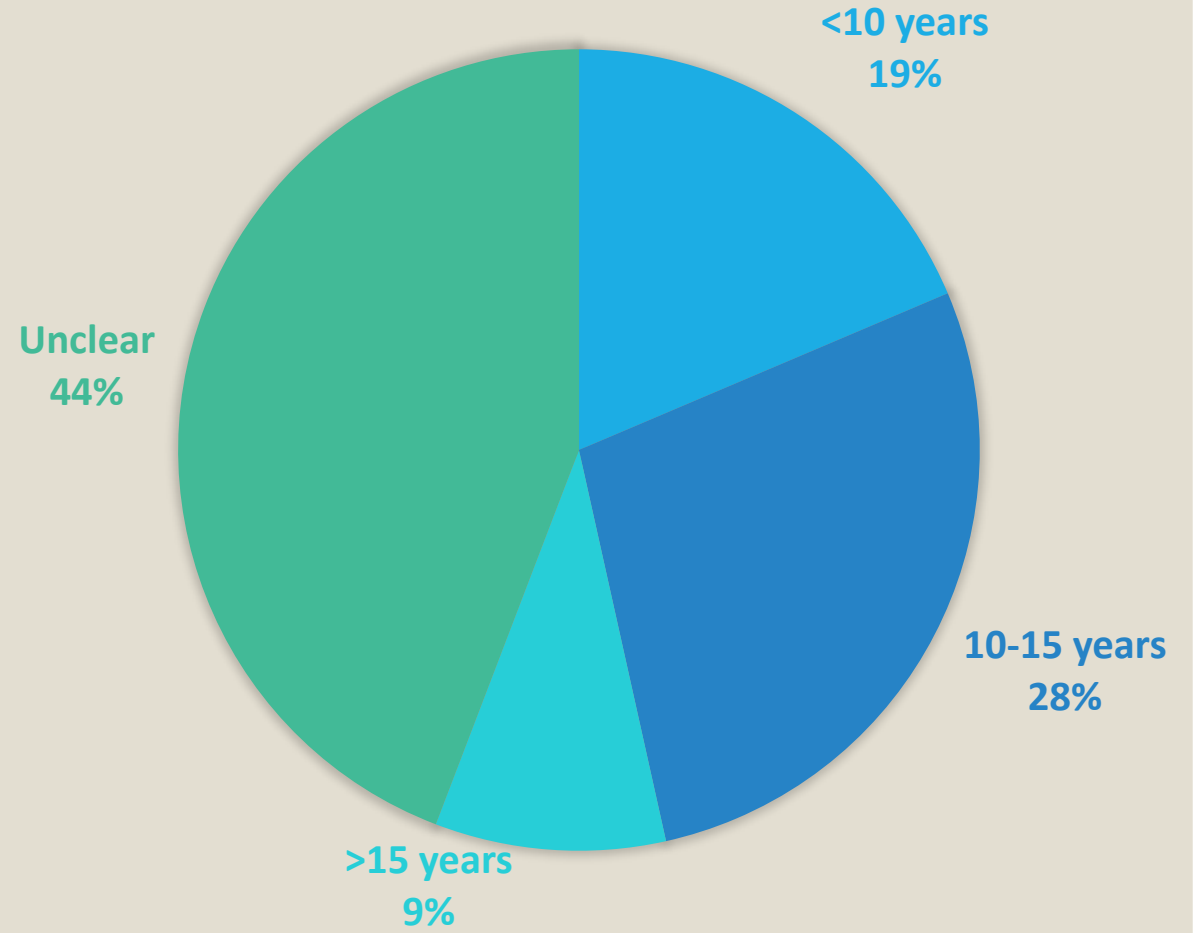


\*Other impairments/pollutants identified were: biological impairment, dioxin, PCB, temperature, pH, and TDS

## SOURCES PRESENT/EVALUATED



## TIMEFRAME TO ATTAINMENT OR REASSESSMENT



# 5-Alt plans can...

- Allow State programs to **focus TMDL resources** elsewhere;
- **Empower local groups** to address water quality problems while fostering partnership and collaboration at the local, state, and federal levels;
- **Provide transparency** to the public regarding restoration activities;
- Encourage **greater coordination and awareness of issues** across programs and with the public; and
- **Receive recognition** under 303(d)/TMDL program measure, WQ-27.

# Considerations for Identifying 5-alt Candidates

- Partners
  - Existing and Interested Local Stakeholders
  - Diversity of Funding Sources and Contribution Types
- Pollutants
  - Well-understood Relationship between Actions Taken (BMPs, restoration activities, permit reductions) and Progress Toward WQS
- Projects & Progress
  - Reasonably Sized Activities and Timeframes for Results
  - Existing Data, Project Work, and Partner Engagement
  - ***Reasonable Confidence that WQS Will be Attained When Projects are Implemented***

# Considerations for Identifying 5-alt Candidates

- Expectations & Timing
  - Some 5-alt plans are expecting 15+ years for WQS restoration
  - Is this *“more immediately beneficial or practicable to achieving WQS”* as compared to a TMDL?
- Determining the Right Tool
  - Some waters may benefit from the greater regulatory certainty and clarity of a TMDL, while others may benefit from faster on-the-ground implementation
- Level of Effort
  - 5-alts may involve more public participation and investment up-front, with the goal of faster WQ improvements and a more self-sustaining partnership framework that will help carry work forward

# An Example:

## Considerations for When to Use Alternatives-- *Washington State Draft TMDL Alternatives Guidance*

- The watershed may be...
  - Primarily Rural
  - “Small”
  - Dominated by Nonpoint Sources
- The problem is simple and well understood and/or necessary control strategies are known.
- Opportunities for nonpoint source improvement and/or point source impact is minimal; WLAs contribute little to implementation.
- Local implementing resources are active or available.



# Practices for Writing an Alternative Plan

## *Washington State Draft TMDL Alternatives Guidance*

- “Take excerpts from existing plans...to expedite the planning process and ensure consistency with other restoration efforts”
- “Attempt to establish simple, meaningful, and useful baseline measurements and performance metrics”
- “Focus on direct actions that improve water quality in a streamlined and effective manner”
- “Implementation...is more likely to occur in watersheds that have been identified as priorities for both [the State] and local stakeholders”

# Incorporating 5-alt Plans into Other Water Programs

- 319 Plans and 5-alt
  - The NPS program is already doing a lot of the development work – with minimal additional documentation, watershed based plans can be used to justify use of Category 5-alt and the efforts can be recognized as taking place without having to wait until waters are delisted.
  - Documenting the nonpoint source commitment to reducing pollutants may make it easier to get buy-in from point sources to take on voluntary reductions to support restoration.
  - Early coordination may provide an opportunity for 303(d) and NPS programs to connect in a new and more meaningful way.

# Example – Combining 319 Plans and 5-alts

## South Loup River Watershed Plan (Nebraska)

### EPA'S "NINE-ELEMENTS"

This watershed plan is organized around and includes EPA's "Nine-Elements" for implementing an effective plan, as identified in Table 1. The Nine-Elements are listed below:



Throughout this plan items that directly address one of the 9-Elements are marked with a graphic, as displayed to the left. EPA requires that the watershed projects receiving Section 319 funds be supported by a watershed plan that addresses the 9-Elements or an equivalent plan. Table 1 also provides the reader a shortcut to the location of each element.

Table 1: Location of Nine Elements within the Plan

Element
Pollution/impairment source identification
Estimate of pollutant loading reduction needs
Nonpoint source management practices needed
Public information, education, and participation

As part of a 9-element WMP, the project sponsor is expected to reference existing EPA-approved TMDLs in addition to utilizing 5-alt data and providing 5-alt graphs and charts in an appendix. The data provided by NDEQ can be found in Appendix C. Throughout this plan, language that directly addresses a 5-alt item is marked with a graphic, as displayed to the right. Table 2 also provides the reader a shortcut to the location of each 5-alt component.



Table 2: Location of 5-alt Components within the Plan

Component	Chapter	Page Number
Management Measures	7.01	117
Management Measures	4.06	73
Causes/Sources	4.05	66

# Incorporating 5-alt Plans into Other Water Programs

- NPDES permitting in 5-alts
  - With planning and cooperation, point sources can be integrated into 5-alts. Existing nutrient reduction frameworks, trading programs, or other plans are likely the most direct way to document these actions.
  - Involving dischargers as partners in the plans means that states could also reduce effluent limits with permittee buy-in, as a intermediary step toward eliminating the need for a TMDL if WQS are attained.

## 2016 IRG on Alternatives:

*“Initial review of the pollutant or cause of impairment shows that particular point or non-point sources are responsible for the impairment with clear mechanisms to address all sources (both point and nonpoint), as appropriate (e.g., CWA 319 nine-element watershed-based plans or other restoration plans; source water protection plans; **setting new limits when permit is re-issued**, which alone or in combination with other actions, is expected to achieve WQS in the listed water).”*

# Point Sources Examples in 5-alt Plans

## Crooked Creek & Gap Creek (Tennessee)

- “Tennessee is using both a point source and nonpoint source approach for addressing nutrients in the subwatershed according to the process described in the *Tennessee Nutrient Reduction Framework*.”
- “The Plan includes an analysis sheet with a decision matrix to help permit writers establish nutrient limits based on: 1) enrichment factors and 2) percent contribution in the watershed using the process described in the Framework. The analysis sheet indicates the trading potential between point and nonpoint sources, which the State is in the early stages of exploring.”

**In this case, the 5-alt plan contains a mix of numeric pounds/year loads (with guidance for permit writers) and monitoring & reporting**

# Point Sources in 5-alt Plans - Example

## Arroyo Colorado (Texas)

- “Goals and milestones for the wastewater component of the original Watershed Protection Plan were contained within the Pollutant Reduction Plan for the Arroyo Colorado (PRP). The PRP is an agreement between local wastewater operators and the TCEQ to reduce the amount of pollutants from domestic and municipal wastewater entering the Arroyo Colorado to the maximum extent feasible.”
- “The management measures in the PRP included permit limits, extension of wastewater service, enhanced wastewater treatment, and wastewater reuse. The PRP identified load reduction measures for 17 municipal WWTFs.”

**This 5-alt plan references the continued plant optimization and upgrades, leading to point source nutrient targets established in PRP**

# Incorporating 5-alt Plans into Other Water Programs

- Water Quality Monitoring
  - The involvement of other engaged state or public stakeholders in a 5-alt plan can reduce state water program burdens by sharing the monitoring responsibilities.
  - This can allow the water program to reprioritize limited monitoring resources to other areas, while the plan is being implemented.
    - Areas targeted for TMDL development
    - Areas in need of long-term monitoring to show trends or restoration progress



# Summary

*“We should use the tool that we think will get us to achieving water quality standards the quickest.”*

- Engaged partners/stakeholders are a key ingredient for a successful 5-alt (but also for TMDLs, as well!)
- Don't miss the opportunity to leverage existing plans and work as source materials for 5-alt candidates.
- Clear documentation of expected timeframes for restoration or reassessment will make it easier to highlight 5-alt successes





# References and Contacts:

- Information Concerning 2016 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. Memorandum from Benita Best-Wong, August 13, 2015:

[https://www.epa.gov/sites/production/files/2015-10/documents/2016-ir-memo-and-cover-memo-8\\_13\\_2015.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/2016-ir-memo-and-cover-memo-8_13_2015.pdf)

- Washington State *Draft* TMDL Alternatives Guidance

- Joint Principles of NPS and 303(d) Program Coordination on Watershed based Plans as Alternatives under 303(d) Program, Jim Havard and Lynda Hall:

[https://www.eli.org/sites/default/files/docs/s72\\_hall\\_havard\\_joint\\_principles\\_of\\_nps\\_303d\\_coordination\\_wb\\_nscb\\_cc.pdf](https://www.eli.org/sites/default/files/docs/s72_hall_havard_joint_principles_of_nps_303d_coordination_wb_nscb_cc.pdf)

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