ALTERNATIVE RESTORATION PLANS

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National 303(d) Program Workshop

June 9, 2021

A Refresher on the 303(d) Program Vision

- Launched in 2013 – collaborative framework for implementing the 303(d) Program with the states, territories, and authorized tribes
- Encourages focus and attention on priority waters
- Promotes development of TMDLs designed to more readily support implementation activities
- Acknowledges flexibility in using available tools beyond TMDLs to attain water quality restoration and protection
- Emphasizes increased engagement with the public and integration with other programs and agencies

A Refresher on Alternative Restoration Plans (ARP or 5-alt)

- The 2013 303(d) Vision itself refers to “alternative approaches,” and many different terms may be used for alternative restoration approaches under the Vision: “5-alt,” “advanced implementation,” “watershed restoration plan,” etc.

- States and Regions should avoid terms like “TMDL alternative” or “alternative TMDL,” as these plans are not an alternative to a TMDL, but a restoration plan implemented in advance of a TMDL.

- During implementation, these waterbodies remain in category 5, so a TMDL or other regulatory action is still eventually required as long as the impairment remains.

A Refresher on Alternative Restoration Plans (ARP or 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:
  - *A Plan has been Completed*
  - *Restoration Activities are Taking Place*
  - *Waterbody may be Assigned a Lower Priority for TMDL Development*

Topics of this Presentation

- Elements of an ARP
- Overview of Accepted ARPs
- ARP Considerations and Best Practices
- Incorporating ARPs into Other Water Programs
- Q & A

Alternative Restoration Plan Elements for Consideration*

- ***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

Alternative Restoration Plan Elements for Consideration*, 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

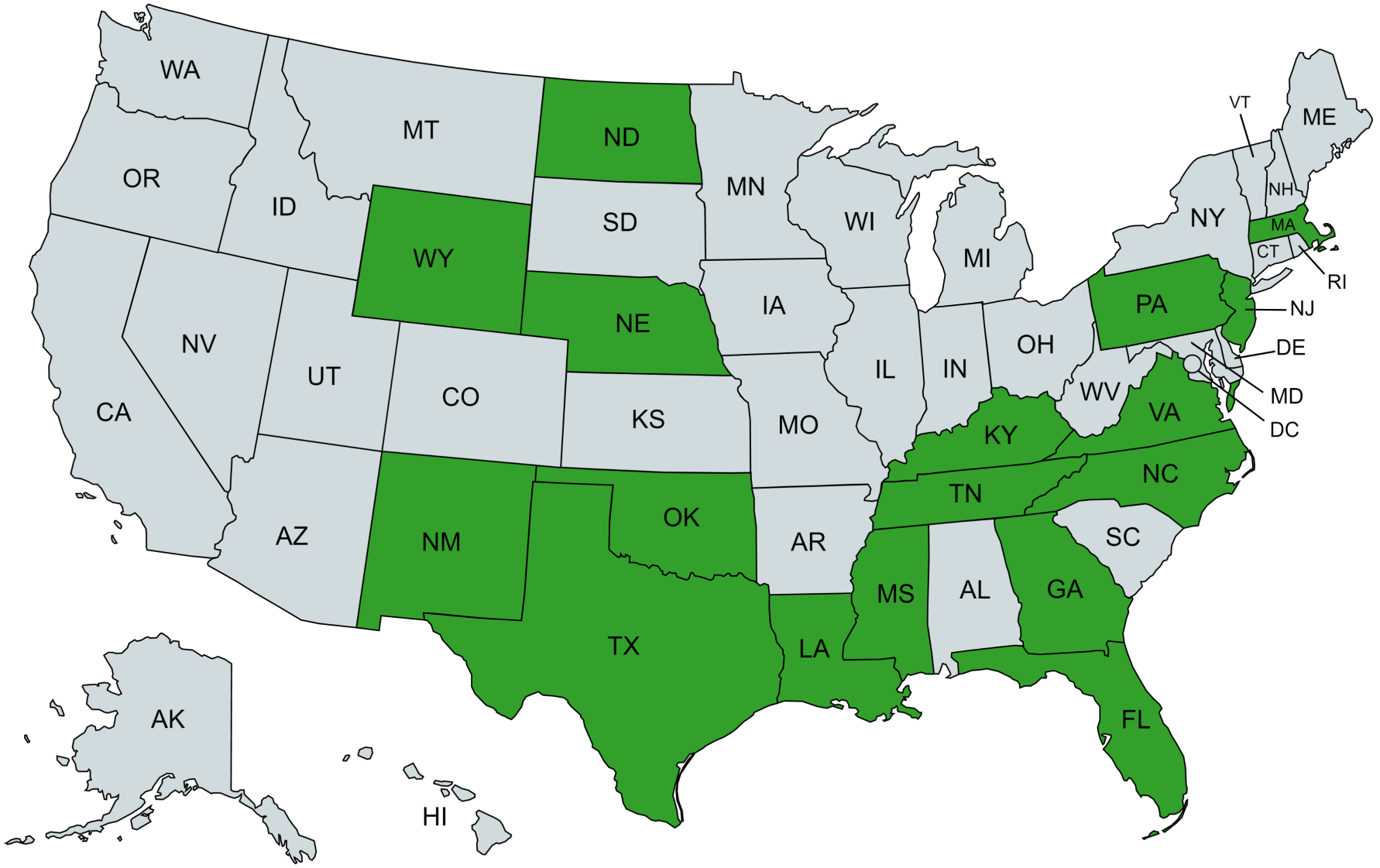
ARP Tracking and Summary

Over the past couple of years, EPA has been reviewing accepted ARPs to…

- Aggregate basic information on plans;
- Collect state and Regional SOPs on plan development and review;
- Review documents for commonalities and best practices; and
- Communicate success of ARP as a restoration tool.

ARPs Accepted as of May 2021

- 17 States with Plans (7 EPA Regions)
- 57 Plans
- 630+ Waterbody-Impairments
- Top Impairments Identified in Accepted Plans:
  - *Pathogens*
  - *Nutrients*
  - *Low Dissolved Oxygen*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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 prior to implementation being started 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.

Alternative Restoration Plans Can…

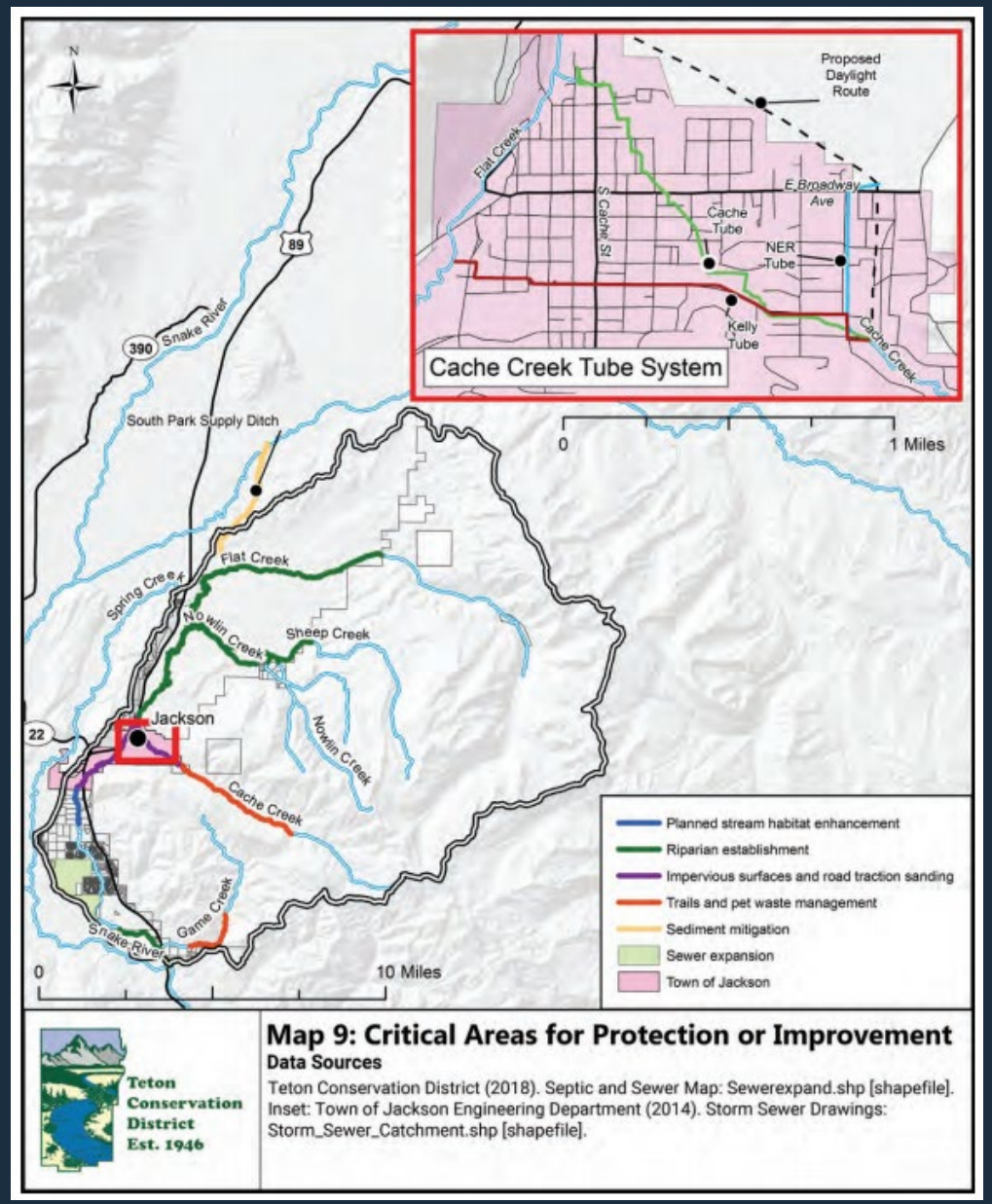
- ***Provide a greater range of tools*** for States to address impairments and ***recognize work*** that may already be ongoing;
- ***Encourage coordination*** and awareness of issues across programs and with the public;
- Allow State programs to ***focus TMDL resources*** elsewhere;
- ***Empower local 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; and
- ***Receive recognition*** under the current 303(d)/TMDL program measure, WQ-27.

Considerations for Identifying ARP 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***

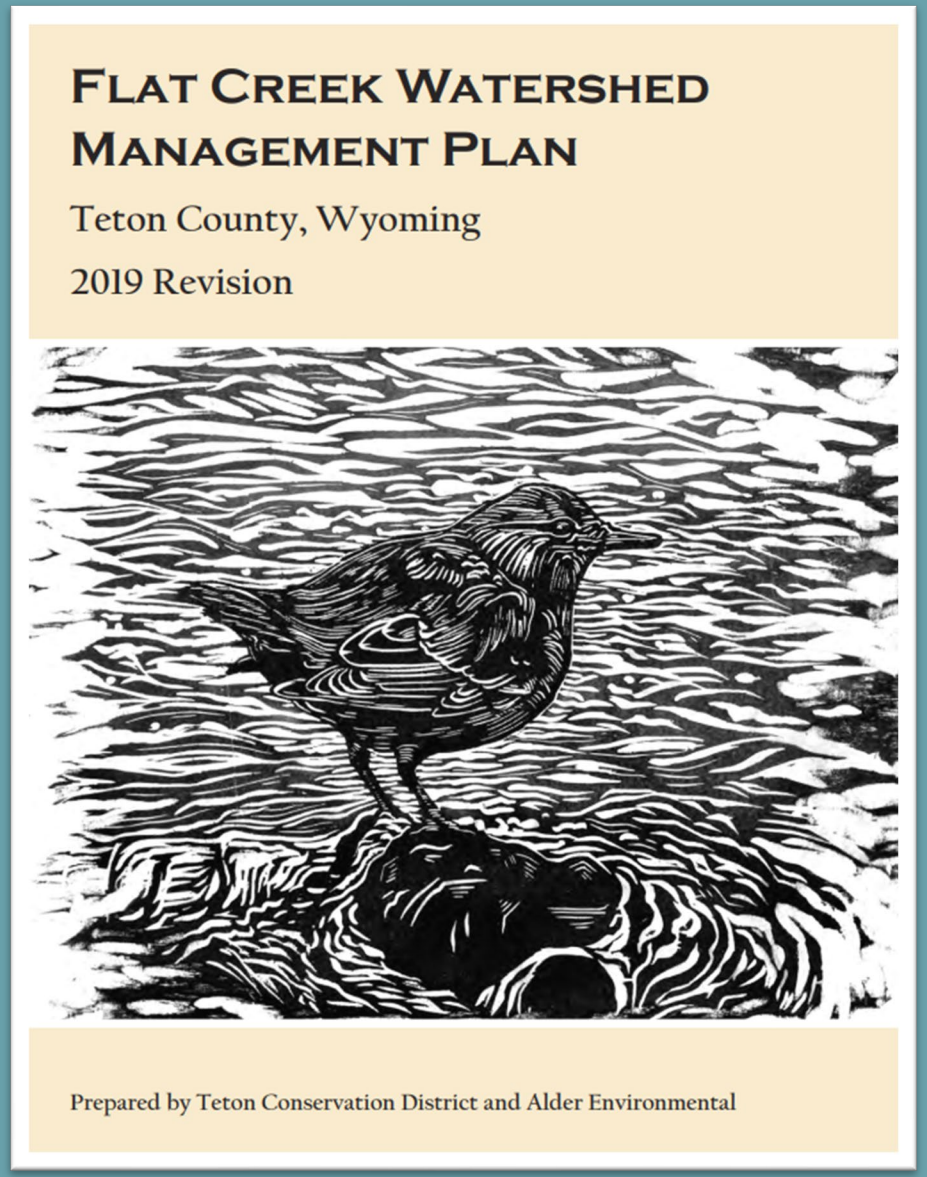
Considerations for Identifying ARP Candidates

- Expectations & Timing
  - *Some ARPs are projecting 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
  - *ARPs 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*



EXAMPLE: FLAT CREEK WATERSHED WYOMING

https://mywaterway.epa.gov/plan-summary/WYDEQ/R8-WY-2021-01



The overall purpose of the Flat Creek watershed planning process is to restore water and habitat quality in Flat Creek and its tributaries to meet the state's designated uses for the waterbody and to achieve the goals identified by the stakeholders in the watershed.

Attachment A - TMDL Alternative Rationale
Revised 2019 Flat Creek Watershed Management Plan

1. Introduction

This document provides the Wyoming Department of Environmental Quality's (WDEQ) rationale for pursuing a TMDL Alternative for Flat Creek (WYSR170401030205_01) and concludes that the *2019 Flat Creek Watershed Management Plan* (the Plan) meets the goals and objectives of the WDEQ Total Maximum Daily Load (TMDL) Program to improve water quality and seek to achieve water quality standards in Flat Creek.

The Flat Creek Watershed Management Plan is available at the following link:

https://www.tetonconservation.org/flat-creek-watershed-management-plan

Table 2. Summary review of the 2019 Flat Creek Watershed Management Plan.

Review Element	Summary	Crosswalk to the Plan
Impairment *What designated uses are impaired? What is the cause of the impairment?*	The Aquatic Life Other Than Fish use in an 11.1-mile segment of Flat Creek (WYSR170401030205_01), from the confluence with Cache Creek to the confluence with the Snake River, was listed as threatened due to physical substrate habitat alteration on Wyoming's 303(d) list in 2002.	The impaired reach is shown in Figure 8 and described in detail in Appendix A.

Available Funding

Funding Provided

- Teton Conservation District
- Town of Jackson
- Teton County, Wyoming
- Trout Unlimited
- Ducks Unlimited
- Snake River Fund
- Private Property Owners

Potential Sources of Funding

- Wyoming Wildlife Natural Resource Trust
- Natural Resource Conservation Service
- Wyoming Water Development Commission

Key Stakeholders

- Teton Conservation District
- Town of Jackson
- Teton County, Wyoming
- Flat Creek Water Improvement District
- Wyoming Game and Fish Department
- Wyoming Department of Transportation
- Wyoming Department of Environmental Quality

....and more!

Evaluation Criteria

Tracking progress toward achieving the watershed goals and completing the management practices in this plan will be the responsibility of the Watershed Committee. TCD will assist with the facilitation and administration duties required to evaluate progress. The following will be used by the watershed committee to evaluate progress:

- Compare completed management practice results with the milestones set in the Watershed Issues and Management Section and identify successful practices and/or why milestones are not being met
- Analyze water-quality monitoring data for the watershed and compare to sediment-loading estimates and baseline data
- Review and revise the management practices in the watershed management plan
- Review and check off items completed in the annual work plan
- Review feedback from landowners and stakeholders regarding the management practices being implemented

Watershed committee meetings will be scheduled as needed. At each meeting, the watershed committee will review the progress of management practice implementation and determine if revisions to individual management practices and the watershed management plan are needed. Reporting on progress will occur through the Wyoming Association of Conservation District's Watershed Progress Reporting, as well as through revision to this Watershed Management Plan.

Interim Targets

The 2019 Flat Creek Watershed Management Plan Revision includes the following set of water-quality goals, which were informed through consultation with WDEQ and will be referred to as interim targets. These interim targets use best-available data to set Flat Creek specific thresholds for TSS, turbidity and aquatic macroinvertebrates. It is acknowledged that these interim targets may shift and require adaptive management as better data becomes available.

Adaptive Management of Interim Targets

The adopted interim targets provide a starting point for measuring progress over time; however, it is acknowledged that there is currently insufficient data and information to confidently conclude that they will be met after addressing the anthropogenic influences in the watershed. The following three elements are proposed to determine if the targets need to be revised and/or if additional or different targets need to be included:

1. Continue implementing the 2015 Teton Conservation District Sampling and Analysis Plan with additional sampling parameters to more broadly assess the potential for stormwater contamination. Additional sampling parameters include metals and hydrocarbons, for base flow, storm event and spring runoff sample events.

2. Continue to support the ongoing USGS turbidity study. USGS is currently collecting continuous turbidity data from two sample stations in Flat Creek; one upstream of town and one downstream of town at High School Road. These data will greatly improve our understanding of turbidity conditions across all flow regimes.

3. WDEQ plans to formally reassess Flat Creek within the next five years. It is envisioned that this will be a comprehensive water-quality assessment considering all credible data collected by TCD, USGS, and others as well as data collected by WDEQ. To the extent possible, the goal will be to complete use support determinations for all of the applicable uses (to the extent data are available). If non-supported uses are found, the objective will be to determine the causes and sources of the impairments.

What about the 2016 IRG 5-Alt Considerations?

- ☒ Identify impaired Waterbodies to be Addressed and Sources
- ☐ Analysis showing 5-Alt will Achieve WQS
- ☒ Action Plan that Addresses Sources with Schedule and Milestones
- ☒ Funding Opportunities
- ☒ Commitment of Partners
- ☒ Effectiveness Monitoring
- ☐ Date When WQS are expected to be achieved
- ☒ Commitment to Periodically Evaluate the Approach

Incorporating ARPs into Other Water Programs

- 319 Plans and ARPs
  - *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 ARPs

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

ARP Coordination Best Practices

- Internal Agency Coordination – since there is often a lot of overlap between ARPs and 319 watershed plans, coordination between the 303(d) program (both listing and TMDL) and the Nonpoint Source Program is important for reducing confusion about submittal to and review by EPA.
  - *Discussions with both programs should highlight the differences between these two programs' roles and the difference between 319 approvals and ARP acceptance.*
  - *Internal Agency agreement on a process (either formal or informal) for making the 319 program aware of new ARPs submitted for EPA acceptance, or vice versa, can reduce communication gaps.*

Incorporating ARPs into Other Water Programs

- NPDES permitting in ARPs
  - *With planning and cooperation, point sources can be integrated into ARPs. 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 an intermediary step toward eliminating the need for a TMDL if WQS are attained.*

2016 IRG on Alternative Restoration Approaches:

*"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)."*

Incorporating ARPs into Other Water Programs

- Water Quality Monitoring
  - *The involvement of other engaged state or public stakeholders in an ARP 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

ARP Considerations

- Remember, the goal is to use the right tool for the case at hand.
- There may be some potential risks to choosing to develop an ARP in advance of a TMDL, but those risks should be low as long as the goal is "implementing activities that restore water quality".
- Realistically, there are waters that are not likely to have TMDLs developed in the short term, so an ARP provides on-the-ground improvements to water quality. *This shouldn't be viewed as a tradeoff of TMDLs to ARPs.*
- However, ARPs are not a replacement for TMDLs and we don't want to create a situation where a state focuses entirely on ARPs and deemphasizes TMDL development.

For Discussion

- Is your state considering developing an ARP? Already in development?
- If so, what benefits do you see?
- Any concerns regarding the use of ARPs?
- What would be helpful for ARP development?

- Questions?

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

- 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

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