An Overview of State CWA 303(d) Program Vision Prioritization Frameworks

2025

Introduction

In December 2013, after years of collaborative development, the U.S. Environmental Protection Agency (EPA) announced a new framework for implementing the Clean Water Act (CWA) Section 303(d) program. The document – *A Long-Term Vision for Assessment, Restoration and Protection under the Clean Water Act Section 303(d) Program* (the 2013 Vision) – identified six program goals, the first of which was for states to "review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports." These "Vision priorities" were intended to focus the location and timing of TMDL, advance restoration plan (ARP), and protection plan development to best suit the state's water quality goals, to lead to more efficient and effective program management, and to result in faster progress toward water quality improvement and protection. In 2016, the Environmental Law Institute (ELI) produced An Overview of State CWA 303(d) Program Vision Prioritization Frameworks, which summarized the types of state Vision priorities and the prioritization process for the purpose of aiding communication and coordination across states and with the EPA.

As the 2013 Vision neared the end of its ten-year duration, the EPA, again through a collaborative process, developed the 2022-2032 Vision, largely following the structure and content of the first iteration but adapting based on the experience of the prior ten years. The 2022-2032 Vision again centered around systematic prioritization of waters and watersheds and reporting on progress toward the development of plans for those priority waters. This paper is an update to the 2016 overview document, reflecting the details of the new state prioritization frameworks, with the same objectives as the original overview.

Methodology and Scope

This paper replicates the methodology used for the 2016 overview document. It includes all 2022-2032 Vision prioritization frameworks available in August of 2025, representing a total of 34 states. While this paper references specific priorities for purposes of illustration, it focuses primarily on the types of Vision priorities identified by states and their process for prioritizing. ELI reviewed each state framework document through the lens of the following broad questions:

- What did the state prioritize?
- What were the main reasons for choosing these priorities?
- What process did the state use to select its priority waters?
- What (if any) public participation process was involved in selecting or reviewing the priorities/prioritized waters?
- What (if any) other Clean Water Act programs were involved in selecting or reviewing the prioritization framework or prioritized waters?
- What types of plans does the state intend to pursue to address these priorities/prioritized waters?

ELI used the answers to these questions to develop an aggregate snapshot of Vision prioritization across the country, including the categorization of what states prioritized and how and why they did it, as of mid-2025.

This overview is based on *ELI staff's interpretations of the framework documents reviewed*. It is not intended to be a comprehensive or definitive representation of state priorities and prioritization processes. The framework documents vary significantly in their form as well as the breadth and depth of information provided. ELI is solely responsible for the accuracy of the content.

Vision Prioritization Framework Content

The varying forms of prioritization frameworks reflect the fact that not all frameworks contain the same types of information. Some frameworks simply document their Vision priorities and briefly explain why they were chosen. The vast majority of state CWA 303(d) programs use the framework to describe a system for prioritizing waters, one that potentially could be used again for future prioritizing. Many of these frameworks also include some explanation of why the system was chosen. In addition, some states include in their prioritization frameworks a list or map of some or all of their respective Vision priority waters,[1] while some others simply note that the list will be published separately, often with reference to the specific location, such as the state's Integrated Report.[2]

The Prioritization Process

In the instances that a framework describes a system for prioritizing waters, that system includes one or more of: (1) defining a "candidate pool" of waters from which Vision priorities are selected; (2) selecting the Vision priority waters; and (3) ordering the list of Vision priority waters.

1. Identifying Candidates for Prioritization

In most of the framework documents reviewed, the state CWA 303(d) program chose to start the prioritization process by defining a pool of candidate waters, rather than considering all waters or all impaired waters as potential priorities.[3] State CWA 303(d) programs often defined the candidate pool based on an overall focus or program goal, usually in one of the following categories: specific watersheds; priority pollutants; priority uses; or pollutant-use combinations. Several states defined their candidate pool using more than one of these categories, which will hereafter be referred to as a "hybrid" approach.

Watershed-Based Approach. Two state CWA 303(d) programs initiated their prioritization process by identifying watersheds from which Vision priority waters would be selected.[4] Mississippi's priority waters are based on landscape information that is used to calculate metrics on the watershed scale and rank watersheds by resource value and potential stressors. Montana ranks its watersheds using a variety of factors, including new individual permits, potential implementation, program coordination, resource

[1] Alaska, Colorado, Illinois, Indiana, Kansas, Maryland, Massachusetts, Mississippi, New Jersey, New Mexico, North Dakota, Utah, Vermont, Virginia, Wisconsin, and Wyoming.
[2] Connecticut, Florida, Georgia, Hawaii, Iowa, Kentucky, Louisiana, Maine, Minnesota, Missouri, and Pennsylvania.
[3] Of the 34 state prioritization frameworks reviewed, 22 began the prioritization process by defining a candidate pool. Twelve frameworks (those of California, Iowa, Louisiana, Maine, Maryland, Minnesota, Missouri, New Jersey, New Mexico, Ohio, Utah, and Wyoming) prioritize directly from the full list of CWA 303(d) / Integrated Report impairments. Florida prioritizes waters from its full Verified List, a subset of the CWA 303(d) list.
[4] Mississippi and Montana. Note: If a state indicated it would initially focus on a specific geographic area but ultimately rotate through all waters statewide during the Vision period, that was not considered a geography-based prioritization approach for this analysis.

value, magnitude of potential impact to use, impairment characteristics, and court determinations, and then all waterbody TMDL development priorities correspond to the priority of the watershed.

Pollutant-Based Approach: Among the 34 frameworks reviewed, 8 of them focus solely on impairments caused by one or more pollutants.[5] Nutrients, bacteria, and sediment are the most commonly emphasized pollutants, often due to their contribution to a large proportion of listings or their threat to public and ecosystem health. Hawaii prioritized nutrients; Kansas prioritized total phosphorus; and Arkansas prioritized turbidity. Wisconsin centered its priorities on total phosphorus and total suspended solids. Vermont's priority, at least in the short-term, is chloride. Alabama prioritized the most common pollutants on its CWA 303(d) list: pathogens and nutrients in the near-term and adding siltation and total dissolved solids as well as a statewide mercury TMDL later. Massachusetts also prioritized nutrients and pathogens and primarily due to the frequency with which they appeared in the state's 2018/2020 impaired waters list. Beyond Colorado's TMDLs that already are in progress, the state adopted a strategy that prioritizes pollutants based on their alignment with existing Clean Water Program and department priorities, the potential to build the division's ability to address emerging challenges, and opportunities for partnerships in restoring water quality, resulting in a focus on nutrients, sediment, selenium, uranium, and *E. coli*.

Use-Based Approach: Two state CWA 303(d) programs directed their Vision prioritization efforts on waters with specific designated use impairments.[6] Illinois ranked as the highest priority for TMDL development impairments for public and food processing water supply, followed by primary contact as the medium priority. Rhode Island prioritized designated uses protecting public health and healthy aquatic habitats, specifically the protection and restoration of drinking water supplies, shellfish growing area waters, public recreation, and high-quality aquatic habitats. This approach resulted in a focus on lake nutrient impairments and shellfishing pre-closures, and possibly salt pond eutrophication, tribal water quality, and metals in rivers.

Pollutant-Use Approach: Among the 34 state CWA 303(d) prioritization frameworks reviewed, Pennsylvania and North Dakota were the only states that explicitly based their Vision prioritization on specific combinations of pollutants and designated uses. Pennsylvania's approach focused on recreational use impairments caused by pathogens and aquatic life use impairments caused by siltation, while suggesting that aquatic life use impairments caused by nutrients and specific metals also could be prioritized as impairments are refined and methodologies are developed. North Dakota also focused on recreational use impairments, but ones caused by nutrients, particularly in lakes and reservoirs.

Hybrid Approach: Seven states used a hybrid approach, drawing on multiple strategies to create a comprehensive pool of candidate waters.[7] Connecticut built on and refined its focus topics from the first Vision, selecting for this ten-year period aquatic life use, stormwater and non-point sources, bacteria affecting recreational use and shellfishing activities, and nutrients in lakes and embayments, among others. Kentucky prioritized impairments caused by nutrients as well as waters not supporting Primary or Secondary Contact Recreation designated uses due to bacteria. Texas' framework carries through the focus on contact recreation impairments due to bacteria from the first Vision but added to the priorities impairments caused by dissolved oxygen, pH, and excessive algal growth. In Indiana, priority watersheds are selected from a pool of options that "have poor biological communities but show ability for improvement by means of a 'good' habitat score (QHEI)," have a "reasonable expectation that a group to

[5] Alabama, Arkansas, Colorado, Hawaii, Kansas, Massachusetts, Vermont, and Wisconsin.
[6] Illinois and Rhode Island.
[7] Alaska, Connecticut, Georgia, Indiana, Kentucky, Texas, and Virginia.

lead planning efforts exists in the watershed," and do not have a completed TMDL or watershed planning project. Georgia focused on human and ecological health, specifically nutrients (including total phosphorus, total nitrogen, and Chlorophyll *a*); bacteria (including *E. coli* and enterococci); and ammonia toxicity from the effluent of publicly owned treatment works. Virginia included in its candidate pool impairments caused by three specific pollutants (harmful algal blooms, temperature, and mercury) as well as impairments of aquatic life and fish consumption designated uses, impairments in watersheds draining national forests, and dissolved oxygen and pH conditions in swamp waters.

Additional Priorities: Several state CWA 303(d) programs note in their frameworks that, while their Vision priority lists are primarily drawn from candidate pool evaluations, they may include a small set of additional impairments based on emerging needs or strategic considerations. Three states mention that TMDLs already in progress or previously initiated will continue to be completed and thus are treated as priorities even if not selected through the current Vision framework.[8] Some frameworks, like those of Mississippi, North Dakota, Virginia, and Wisconsin, expressly retain flexibility to adjust priorities as needed to adapt to changing circumstances such as emerging contaminants and shifting resources, stakeholder needs, and state and national directives.

2. Selecting the Vision Priority Waters

Whether or not a state CWA 303(d) program started this process by defining a candidate pool, it eventually undertook the task of selecting specific waters or watersheds to be Vision priorities. While the details vary significantly, most of the prioritization processes used by state CWA 303(d) programs can be distilled into two general categories: (1) standardized processes with established criteria or consistently weighted indicators; and (2) the best professional judgment of program staff. The prioritization framework of Indiana and Iowa reference only the use of a standardized process. The prioritization frameworks of seven states reference the use of professional judgment but not a standardized process.[9] The vast majority of prioritization frameworks reference or imply some combination of a standardized process and professional judgment.[10]

Standardized Approaches: Several state CWA 303(d) programs used structured, standardized methods, such as ranking systems or tools, to identify and prioritize waters for the Vision framework. For example, Hawaii identified high priority waters using the EPA's Recovery Potential Screen Tool (now the Restoration and Protection Screening Tool). In Illinois, public and food processing water supply received the highest priority and primary contact the medium priority, but then all other HUC10 watersheds were ranked highest to lowest by the number of impairments within the watershed. Indiana prioritized waters in its candidate pool by selecting those that are sources of drinking water; are upstream of publicly accessible lakes used for recreation; and have endangered, threatened, or rare species in them, in addition to the TMDL being based on goals specific to Indiana. Iowa's framework details a point-based system to prioritize TMDL development, scoring waters by, among other factors, social impact, complexity and cost, partner priorities, and the severity and pervasiveness of impairments that would be covered by the TMDL. Florida implemented numerical screening criteria that differ depending on the type of parameter for which a water is impaired.

[8] Colorado, Indiana, and Wisconsin.

[9] Alabama, Alaska, Arkansas, California, Georgia, New Jersey, and Ohio.

[10] Colorado, Connecticut, Florida, Hawaii, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New Mexico, North Dakota, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Virginia, Wisconsin, and Wyoming.

Considerations in Professional Judgment: In many state frameworks, professional judgment plays a central role in prioritization decisions, whether used alone or to complement a more standardized approach. The frameworks highlight a wide array of approaches and factors that state CWA 303(d) program staff weigh when prioritizing waters. For example, in Alaska, the state's Clean Water Actions program, consisting of the Departments of Environmental Conservation, Fish and Game, and Natural Resources, reviews the list of high priority watersheds and narrows it down to a few on which to focus. Alabama's framework takes into consideration, among other factors, the availability of data and resources and the presence of interested stakeholders. California's framework encourages the State Waterboard and Regional Waterboards to consider many factors in prioritizing waters, some of which include the significance of the waterbody, the severity of impairment, use of the water by California Native American Tribes, a project's readiness and potential for success, resource availability, public interest and commitment, and the importance of the implementation to other Regional Water Board programs. Georgia's framework also lists numerous considerations, including some of the above as well as the model complexity and data requirements needed to develop the TMDL, interstate issues and protecting downstream water quality, and the identified sources of impairment. Colorado's framework incorporates logistical considerations such as opportunities to partner on data collection or restoration.

3. Ordering the Vision Priority Waters

After selecting Vision priority waters or watersheds, several state CWA 303(d) programs took the additional step of organizing them into a timeline for implementation. Among the states reviewed, Colorado, Indiana, Kansas, North Dakota, and Wyoming included some form of scheduling in their framework documents. In some cases, frameworks specified that factors such as data availability, staff capacity, EPA coordination, whether any necessary modeling is already in progress, or implementation feasibility would determine the order in which projects are carried out. This phased or adaptive approach allows state programs to align their Vision implementation with resource constraints, partner readiness, and other evolving logistical considerations.

The Roles of Others in the Process

Most state CWA 303(d) programs engaged other entities while selecting or vetting Vision priorities. The prioritization framework documents commonly reference many of these interactions, although likely not all of them, and reflect notable variation across states as to who was engaged in the process, at what stage, and how.

1. Other Clean Water Act Programs

A majority of state CWA 303(d) programs engaged with one or more other CWA programs in prioritizing waters or watersheds or in determining the schedule of work. The framework documents of 22 states reference the influence of the CWA 402 (NPDES) permitting program or location and number of discharge permits on the prioritization process.[11] Sixteen frameworks note that permitted sources are among the factors considered in the selection or ordering of priority waters or watersheds, some states prioritizing areas with permitted sources to leverage efforts to improve water quality and other states de-prioritizing those areas to avoid duplicative efforts.[12] Connecticut and Kentucky's frameworks indicate that the

[11] Alabama, Alaska, Colorado, Connecticut, Georgia, Hawaii, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Montana, New Jersey, New Mexico, North Dakota, Ohio, Utah, Wisconsin, and Wyoming.

[12] Alabama, Alaska, Colorado, Georgia, Hawaii, Kansas, Maryland, Massachusetts, Mississippi, Missouri, Montana, New Jersey, New Mexico, Ohio, Utah, and Wisconsin.

permitting program provided input during the selection of priority waters. Twenty-three states' frameworks reference the influence of the nonpoint source program, in many cases indicating that the CWA 303(d) program purposefully aligns Vision priorities with the priorities, plans, or ongoing projects of the nonpoint source program.[13] Three frameworks note that the implementation assistance that the nonpoint source program could provide is a factor when developing the list of Vision priority waters.[14]

Fifteen frameworks indicate that the state monitoring program is involved, or that its activities are considered, in the development of the state's Vision priorities.[15] Most of these frameworks note that monitoring plans and schedules inform the Vision priorities, so that prioritized waters are targeted for implementation where sufficient data exists or is anticipated to become available. For example, many frameworks align the Vision priorities with the state's rotating basin schedules.

2. The Public

Most of the CWA 303(d) Vision framework documents reflect an effort to engage the public at various phases of the prioritization process, beyond the standard Integrated Report cycle. Frameworks from twelve states indicate that the public played a role in the development of the prioritization framework.[16] Thirteen states report that the public had or will have the opportunity to help develop or review and comment on the draft list of Vision priority waters before finalization.[17] In eight states, public involvement occurred or will occur at both stages.[18]

States employed or will employ a range of methods to facilitate this participation. For instance, North Dakota and Utah used public surveys to inform decision-making, while Colorado, Connecticut, Georgia, and Montana offer stakeholders and the public the opportunity to provide input on specific waters or watersheds for prioritization. Some states hosted workshops, webinars, or stakeholder roundtables to gather input; some states incorporated feedback through public comment periods or direct outreach.[19] Several other state frameworks note intentional alignment with the priorities of watershed groups and other stakeholders to ensure consistency with local perspectives.[20] Overall, these diverse approaches reflect a broader commitment to transparent, inclusive decision-making in the development of Vision priorities under the Clean Water Act Section 303(d) program.

Protection as a Priority

One of the five goals of the 2022-2032 Vision emphasizes protecting healthy waters. A majority of state framework documents reference protection, though the nature and extent of this emphasis varies. Many

[13] Alabama, Alaska, Colorado, Connecticut, Hawaii, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Montana, New Jersey, New Mexico, North Dakota, Ohio, Utah, Texas, Virginia, Wisconsin, and Wyoming.
[14] Massachusetts, Missouri, and Virginia.
[15] Alabama, Alaska, Connecticut, Georgia, Indiana, Kentucky, Louisiana, Maine, Maryland, Minnesota, New Jersey, New Mexico, Ohio, Texas, and Wisconsin.
[16] Colorado, Connecticut, Illinois, Iowa, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Montana, North Dakota, and Wisconsin.
[17] California, Colorado, Connecticut, Florida, Georgia, Illinois, Iowa, Louisiana, Massachusetts, Montana, New Mexico, Utah, and Wisconsin.
[18] Colorado, Connecticut, Illinois, Iowa, Louisiana, Massachusetts, Montana, and Wisconsin.
[19] Colorado, Connecticut, Georgia, Illinois, Kentucky, and Massachusetts.
[20] Maryland, Minnesota, Utah, and Virginia.

states characterized protection as a future consideration or an area of growing interest, rather than a current programmatic focus. Twelve state frameworks identify a process or other means for prioritizing protection efforts alongside restoration.[21] Wisconsin went further by identifying specific protection priorities, and Wyoming selected the development of a protection plan for the Boysen Reservoir as a priority planning effort. Three state frameworks include protection factors, such as the presence of source water protection areas or habitat integrity, as considerations in the prioritization process even if no formal protection schedule was established.[22] A few frameworks provide more nuanced strategies for integrating protection. Minnesota emphasized protection by using its Watershed Restoration and Protection Strategies (WRAPS) structure to identify healthy waters for protection alongside impaired waters for restoration as well as to inform selection of management strategies, including development of "protection strategies" that establish water quality targets and goals for unimpaired waters. New Jersey's framework references implementing its existing watershed protection plans and that protection plans will be included in future TMDLs where applicable.

Implementation

Nearly all of the 34 state CWA 303(d) Vision prioritization frameworks reviewed reference the types of projects and plans the state intends to pursue to address its priorities. Many of them describe implementation in general terms, committing to develop TMDLs or other restoration plans as appropriate, while several provide more detailed strategies. Thirteen frameworks note plans to revisit and possibly revise existing TMDLs, often due to new data being available or changes in water quality standards.[23] Five states mentioned the use or development of statewide TMDLs to address widespread pollutants such as mercury or bacteria.[24] Many frameworks reference intentions to use or the possibility of using advance restoration plans (ARPs), usually where active community engagement, existing planning efforts, or specific restoration strategies already are underway.[25]

Conclusion

The state frameworks reviewed by ELI demonstrate significant progress toward meeting the Planning and Prioritization Goal of the 2022-2032 CWA 303(d) Vision while also advancing the goals related to restoration, protection, data and analysis, and partnerships. Though states took varied approaches to identifying their Vision priorities, resulting in quite a range of priorities, the variation reflects thoughtful adaptation to local conditions, agency capacity, and stakeholder needs. The diversity of frameworks showcases the flexibility, innovation, and coordination of meaningful water quality planning. Continued emphasis on adaptive, data-informed approaches will be critical to addressing complex and evolving water quality challenges. By learning from these frameworks and building on their strengths, future planning efforts can better support healthier waters for communities and ecosystems across the country.

[21] Alaska, California, Connecticut, Georgia, Kansas, Maine, Maryland, New Jersey, New Mexico, Utah, Wisconsin, and Wyoming.
[22] Alaska, Kentucky, and Montana.
[23] Alabama, Alaska, Arkansas, Colorado, Kansas, Louisiana, Montana, New Jersey, Texas, Utah, Virginia, Wisconsin, and Wyoming.
[24] Alabama, Kentucky, New Jersey, Rhode Island, and Vermont.
[25] Alabama, Alaska, Arkansas, California, Colorado, Florida, Illinois, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Missouri, Montana, New Jersey, New Mexico, North Dakota, Ohio, Pennsylvania, Texas, Virginia, Wisconsin, and Wyoming.