

State Prioritization Approaches

# Directory

How States, Tribes, and Territories Are  
Implementing their Programs Consistent  
with the Prioritization Goal of the  
CWA Section 303(d) Program Vision

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## INTRODUCTION

Released by U.S. EPA in December 2013, the *Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program*<sup>1</sup> is a collaborative framework for implementing the responsibilities under the CWA 303(d) Program. It is centered on six goals: Prioritization, Assessment, Protection, Alternatives, Engagement, and Integration.

This Directory focuses on the first of those goals, Prioritization. It identifies methods of prioritizing waters or watersheds, jurisdictions that are employing each method, and whom to contact about those efforts.

This Directory is a product of the *2014 National Training Workshop on CWA 303(d) Listing & TMDLs*, convened by ELI in collaboration with EPA. It is a compilation and summary of information provided by state, tribal, and territorial staff. ELI alone is responsible for errors or inaccuracies. The information provided here is not exhaustive, and is meant only to improve communication among state, tribal, and territorial staff as they work to achieve the Prioritization Goal of the new CWA 303(d) Program Vision.

## PRIORITIZATION GOAL of the CWA 303(d) PROGRAM VISION

*“For the 2016 integrated reporting cycle and beyond, states review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports to facilitate state strategic planning for achieving water quality goals”*

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<sup>1</sup> <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/programvision.cfm>

## I. How States, Tribes, and Territories Are Prioritizing

### Recovery Potential

A state, tribe, or territory could prioritize waters based upon their respective projected ability to meet water quality standards again. One method of comparing the relative restorability of many watersheds (e.g., across a state, river basin, or other geographic area) is EPA's Recovery Potential Screening (RPS) tool. This tool measures several ecological, stressor, and social indicators associated with the likelihood of successful restoration efforts. The precise indicators are selected by the user based on their relevance to a common problem (e.g., pathogen impairments) or on priority interest of the state (e.g., urban waters, heavily agricultural watersheds). Combined, these three indices form the Recovery Potential Integrated (RPI) score. The tool was piloted in several states and is now being used more widely. EPA has created state-specific RPS tools and watershed datasets for each of the lower 48 states. For more information, please contact Doug Norton (202-566-1221, [norton.douglas@epa.gov](mailto:norton.douglas@epa.gov)).

**Alabama:** The Alabama Department of Environmental Management has developed and employs its own recovery potential tool for prioritizing waters.

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**Florida:** The Florida Department of Environmental Protection has based its new prioritization process for TMDL and restoration plan development on the RPS tool, along with a public participation component.

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**Kentucky:** The Kentucky Division of Water uses the RPS tool to help refine which waters to focus on (biggest "bang" for money invested).

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**Louisiana:** The Louisiana Department of Environmental Quality uses the RPS tool as part of its collaborative prioritization process focused on nonpoint sources of pollution.

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**Maryland:** The Maryland Department of the Environment's restoration strategy is two-pronged: (1) target resources to waters that have a reasonable potential to achieve water quality standards, which tend to be waters that are not too severely impaired or are special situations with high recovery potential, and (2) target resources to waters that are severely impaired and for which restoration action is most likely to show measurable incremental improvement. These also tend to be places that are high loading sources to the Chesapeake Bay. The Department is working with EPA on assembling data for further assessment using the EPA Recovery Potential Screening Method system.

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**Massachusetts:** The Massachusetts Department of Environmental Protection (Mass DEP) partnered with EPA in Fiscal Year 2011-2012 to develop a recovery potential screening tool to help identify priority projects with high restoration potential. Mass DEP also worked with inter- and intra-agency partners to develop and implement synergistic strategies. The tool was used to identify HUC-12 sub-watersheds that are most highly recoverable. From that list, the watersheds showing high and medium-high recovery potential are selected and mapped. Mass DEP then evaluates Water Quality Assessment Report maps to identify sub-watersheds in need of both protection and restoration measures and identifies approaches to maintaining healthy watersheds and restoring impaired waters. For example, watershed based plans

will be considered for development in non-MS4 regulated areas, which would make them eligible for 319 grant funds for implementation of nonpoint source best management practices. The screening tool includes a broad selection of indicators to ensure that it is useful to many agencies and interests. For example, land trusts can use the tool to identify lower quality sub-watersheds within larger healthy watersheds that, if protected, would enhance the overall health of the larger watershed. Similarly, habitat managers can use the tool to make management decisions based on watersheds that provide critical connections. The development of TMDLs or alternative plans would be considered in sub-watersheds where water quality issues are most likely associated with point sources.

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**New Hampshire:** The New Hampshire Department of Environmental Services is adapting the RPS tool for use as a prioritization tool for restoration, protection, and funding.

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**South Carolina:** The South Carolina Watersheds program is developing a prioritization tool similar to the RPS tool. Once the tool is complete and criteria are identified, it will be used as an aid to TMDL, watershed-based planning, and CWA 319 implementation activities.

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**Utah:** The Utah Division of Water Quality will use the RPS tool in collaboration with agency partners to help determine where TMDL development and implementation efforts will be the most consequential in improving environmental quality.

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### Multi-Agency Team

To determine which waters are to receive priority treatment, a state, tribal, or territorial program could collaborate with other CWA programs and other agencies. Each entity would contribute its priorities given its respective charge, from which the team would determine the collective priorities. This approach ideally improves integration at the start, coordinating what to work on and how, and therefore may facilitate implementation of priorities.

**Alaska:** In Alaska, a state multi-agency team prioritizes waters of concern. Water quality concerns are represented by the state Department of Environmental Conservation, while water quantity issues are represented by the Department of Natural Resources, and habitat issues are covered by the Department of Fish & Game. The group uses a standard review process to rank waters as high, medium, or lower. The prioritization process addresses protection as well as restoration issues.

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**Arizona:** The Impaired Waters Identification Rule (Arizona Administrative Code, Title 18, Chapter 11, Article 6, Section 606 (B, C, and D)) describes how to prioritize impaired waters for TMDL development. However, the focus has shifted from simply completing TMDLs to improving water quality in coordination with the CWA 319 Program. The agency also routinely engages land management agencies (e.g., USFS and BLM) and NRCS to discuss their nonpoint sources activities and to determine where cooperation is mutually beneficial.

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**District of Columbia:** The Water Quality Division, Stormwater Management Division, and Watershed Protection Division of the District Department of the Environment collectively identify waters and

watersheds of concern, which then become priorities for the District for purposes of the CWA 303(d) program.

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**Kentucky:** The TMDL Section works with the CWA 319 Program to prioritize watersheds in areas that have stakeholder groups and watershed-based plans.

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**Louisiana:** The Louisiana Department of Environmental Quality has created an interagency team with the Coastal Protection and Restoration Authority of Louisiana, the Louisiana Department of Agriculture and Forestry, and the Louisiana Department of Natural Resources, to develop and implement the state's nutrient management strategy, which includes prioritizing waters of concern for protection and restoration efforts.

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**Oregon:** Regional Basin Coordinators and headquarters staff in the TMDL, Nonpoint Source, and Drinking Water Programs identify priorities based on the following: the Integrated Report, Watershed Approach Basin Reports, past TMDLs, TMDL implementation plan annual reports and five year reviews, Nonpoint Source Program needs, Watershed Council priorities, settlement agreements commitments, and permit needs. From this effort, they develop a two-year work plan for all involved.

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**Texas:** In Texas, the Watershed Action Planning Process brings together the Texas Commission on Environmental Quality, the Texas State Soil and Water Conservation Board, and the River Authorities to discuss, plan, and prioritize water bodies on the CWA 303(d) list. Discussions during meetings include evaluating potential strategies, identifying lead entities, and prioritizing water bodies.

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**Utah:** The Utah Division of Water Quality convenes every quarter a Water Quality Task Force made up of key federal, state, and local agencies and organizations to coordinate watershed planning, monitoring, outreach efforts, and implementation priorities.

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### Public Input

A state, tribe, or territory may rely on direct communication with the public to help determine which waters to prioritize. Public input can serve as a rough indicator of social impact, economic value, political relevance, and, ideally, potential support for implementation.

**Alabama:** In Alabama, multiple factors, including stakeholder priorities, play a role in the prioritization process.

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**Alaska:** The Alaska Department of Conservation's prioritization scheme begins with public input. Through an online system and over the phone, the public nominates water bodies to be prioritized. Any water body, impaired or healthy, may be nominated, which connects the prioritization of protection and restoration activities. A drawback of this method is that there may be no data available for a nominated water body – meaning it will have to remain in a lower category in the short term.

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**Colorado:** In Colorado, prioritization presently is outlined in the regulation that contains the CWA 303(d) list, which ranks each listing as high, medium, or low based on support of designated uses. The details of prioritization are in the associated listing methodology for the listing year. Secondary factors may either elevate a water body into a higher priority group (e.g., endangered or declining native species, public interest, and administrative needs) or reduce the priority ranking (e.g., pace of stakeholder group development or a CERCLA cleanup action in progress).

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**Connecticut:** In Connecticut, the Department of Energy and Environmental Protection holds a public review process for the CWA 303(d) list. Public comments are particularly relevant to the process of establishing priorities for the development of TMDLs and other management plans for impaired waters included in Categories 4 and 5.

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**Florida:** Prior to determining its approach to prioritization, the Florida Department of Environmental Protection gathered public input (primarily through a series of six stakeholder meetings held across the state) on the proposed approach (using the RPS tool in a phased manner); the specific stressor, social, and economic indicators selected; and the resulting prioritized list of water bodies.

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**Iowa:** If there is public interest in cleaning up a particular water body, the Iowa Department of Natural Resources will prioritize a TMDL there if basic conditions are met, such as an impairment for which the Department believes it can write a quality TMDL.

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**New York:** In New York, the interest of the public will be an important consideration in the priority setting scheme currently being developed.

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**North Dakota:** Through its basin framework, the North Dakota Department of Health intends to fully engage stakeholders (public and private) in the prioritization process. As currently envisioned, within each of the five major basin management units, a stakeholder-based basin management team will be formed. It is likely that these management teams will be made up of local, state, and federal officials and leaders living in the basin. In addition, each basin management area will have a basin technical team made up of local, state, and federal resource professionals who will provide information and advice to the basin management teams. As these basin management teams evolve, it is anticipated that each team will seek broader stakeholder input and feedback on issues and priorities.

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**Rhode Island:** In Rhode Island, scheduling is not necessarily representative of the severity of water quality impacts, but rather reflective of the priority given for TMDL development with consideration to shellfishing waters, drinking water supplies, and other priority areas identified by partner agencies and organizations, or the public.

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**South Carolina:** In South Carolina, local interest is a component of the current priority-setting scheme.

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**Washington:** The Washington Department of Ecology considers public interest in cleaning up or protecting the water body when prioritizing TMDL development. If the public already is interested and supportive, implementing a TMDL will be easier and more likely to be successful. If there is a lot of opposition to producing a TMDL, the Department has an opportunity to decide whether an alternative approach would be more successful or if education efforts regarding what a TMDL can and cannot accomplish are necessary.

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**Wisconsin:** In Wisconsin, the public is engaged in the prioritization process during the public notice and comment period for the impaired waters list. The priority rankings are provided, and comments received may result in changes to the priority status.

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### Availability of Implementation Support

A state, tribe, or territory may prioritize waters based upon the potential support it may receive to implement a TMDL or alternative approach. This support might come from other CWA programs, other state or federal agencies, watershed groups, or elsewhere, and it could take the form of funding, time, influence, or legal authority that assists the state, tribe, or territory in meeting water quality standards. This approach may include direct involvement of those other entities in the prioritization process.

**Arizona:** Since nonpoint source pollution is the biggest water quality issue in Arizona, the Department of Environmental Quality gives highest priority to those watersheds where there is local interest in improving water quality. The Department actively engages stakeholders to determine their interest in participating in water quality improvement projects and focuses resources in those watersheds with interest.

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**District of Columbia:** When prioritizing waters and watersheds, the Water Quality Division of the District Department of the Environment considers the potential influence of the CWA 319 Program, stormwater, and federal programs that affect water quality on addressing the impairment. Federal programs, including those resulting from executive orders, are particularly relevant because the federal footprint in DC is so large, approximately thirty percent of the District.

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**Idaho:** While the Settlement Agreement determines the state's TMDL priorities for waters listed at the time of the agreement, the Department of Environmental Quality concurrently prioritizes waters listed since that time on a rotating basis (4<sup>th</sup> order HUC) based in part upon the presence of ready, willing, and able partners to assemble a watershed advisory group as well as the availability of staff and resources for the specific pollutant.

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**Illinois:** In addition to the number of impaired water bodies in a given watershed, the Illinois Environmental Protection Agency prioritizes watersheds based on the interest level of watershed groups and stakeholder involvement in TMDL development.

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**Kansas:** In Kansas, the CWA 303(d) Program spends a portion of its time seeing that developed nutrient TMDLs are being incorporated within CWA Section 319 watershed plans and used in establishing NPDES permit conditions and limits. Effective CWA 319 watershed groups influence prioritization.

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**Kentucky:** In Kentucky, major factors in prioritization are stakeholder/watershed group presence, SRF funding, and CWA 319 projects. This helps ensure that implementation dollars are spent on the ground.

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**Montana:** Beginning in 2015, the Montana Department of Environmental Quality will prioritize water bodies for TMDL development through a statutorily defined list of considerations. High among these considerations are factors linked to potential implementation, including the degree of public interest and support and the availability of technology and resources to correct the problems. Thus, the presence of engaged stakeholders and established, functional watershed groups will significantly influence prioritization.

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**Nevada:** As part of the Integrated Report, the Nevada Division of Environmental Protection has prioritized CWA 303(d) listed waters for TMDL development based upon multiple factors, including stakeholder interest in undertaking needed restoration activities.

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**New Hampshire:** The New Hampshire Department of Environmental Services places a high priority on TMDL project development where there are invested stakeholder groups. While the Department does not actively engage stakeholders during the prioritization process at this time, it does engage them when projects are chosen.

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**Utah:** Prioritization for TMDL development in Utah includes the level of partner agency and stakeholder involvement, in addition to the severity of impact to human and ecological health and potential for restoration.

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**Virginia:** The Virginia Department of Environmental Quality's prioritization framework to achieve water quality goals is a two-tiered collaborative process, beginning with central office staff analysis and followed by prioritization of waters by the regional offices. At both stages, stakeholder interest and engagement in addressing the impairment is a key consideration, leading to pragmatic TMDLs, implementation plans, and alternative approaches and providing reasonable assurance of water quality use attainment and maintenance.

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**Washington:** The Department of Ecology considers several factors when prioritizing waters, especially the availability of staff to perform technical work on the water body and to work with landowners to implement the BMPs necessary to achieve compliance with water quality standards. The Department has found that once it begins implementation in a watershed, it is important to maintain a presence there until all implementation has been completed, otherwise it sends a confusing message about the necessity to complete and maintain the BMPs.

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## Economics

Related to the availability of implementation support is prioritization based on economics, although this approach considers the projected cost of restoration in addition to the availability of funds to accomplish it. At its simplest, this is “bang for the buck,” prioritizing waters offering the greatest results (in terms of restoration, improvement, social or ecological benefit, etc.) for the least cost. But it also can include consideration of how much financial support may be available and the likelihood of procuring it, from sources such as CWA 319 funds.

**Iowa:** Iowa’s TMDL Program prioritizes lake impairments because there is economic research to support the value of lakes to citizens, and lake watersheds are normally at a scale for which the CWA Section 319 Program can effect positive change in a reasonable time frame. Iowa recently began prioritizing river basins as well, to take advantage of the water quality monitoring efficiencies and save money.

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**Minnesota:** In Minnesota, Watershed Restoration and Protection Strategies (WRAPS) help guide the water plans of local governments. WRAPS include targeting data, along with information from stressor identification, modeling, and TMDL reports, to help local governments select and install BMPs in areas where they will yield the biggest bang for the buck.

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**Utah:** In Utah, implementation efforts on TMDL waters are focused partly on contiguous stream reaches within smaller 12-digit watersheds to achieve measurable results with the limited funds available.

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## Nutrient Framework Memo

When a state, tribe, or territory is prioritizing waters not meeting nitrogen or phosphorus criteria, it might use the prioritization framework identified in the EPA memo *Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions*. That framework suggests identifying HUC-8 watersheds that individually or collectively account for most of the nutrient load in the state and then prioritize HUC-12 watersheds therein for implementing targeted load reduction activities.

**Kansas:** Since 2012, the Kansas Department of Health and Environment (KDHE) has determined its 16 highest priority HUC-8s, pursuant to the EPA memo *Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions*. This led KDHE to look at the stream total phosphorus and lake eutrophication impairments in those HUC-8s and make them the basis for scheduling TMDL development over the next eight to ten years. KDHE likely will complete nutrient-related impairment TMDLs in six of Kansas’ twelve major river basins between 2013 and 2022. KDHE also will spend a portion of its time ensuring that developed nutrient TMDLs are being incorporated within CWA 319 watershed plans and used in establishing NPDES permit conditions and limits.

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### Age of Listing

A state, tribal, or territorial program can continue to prioritize waters based upon how long they have been on the CWA 303(d) list. Like the process under the metric of pace, the highest priority waters may be those that have been on the list the longest, addressing water quality impairments in the order in which they were identified.

**West Virginia:** The West Virginia Department of Environmental Protection will continue to prioritize waters for TMDL development based upon the age of the CWA 303(d) listing. Using the state's rotating basin approach, it intends to develop TMDLs within the eight-to-ten year time frame of the pace guidance. The Department predicts exceeding this time frame in limited, explainable scenarios but also anticipates limited capacity for out-of-sequence TMDL development.

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## II. What States, Tribes, and Territories Are Prioritizing

### Pollutants

The most significant issue facing a state, tribe, or territory may be a specific pollutant or set of pollutants. The pollutant may be of particular importance to the public, be significantly affecting uses throughout the state, or be of notable concern to public health, and thus deemed to be worthy of concentrated effort by the state, tribe, or territory.

**Colorado:** The Colorado Department of Public Health and Environment prioritizes selenium and other pollutants from mining, as well as *E. coli*.

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**District of Columbia:** Bacteria and toxics are priority pollutants for the District Department of the Environment.

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**Florida:** The Florida Department of Environmental Protection's prioritization of nutrients was the result of excluding other pollutants (e.g., fecal coliform and mercury) due to state-wide plans and the number of impairments in the state. The state includes in "nutrients" dissolved oxygen, total phosphorus, and total nitrogen.

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**Fond du Lac Band of Lake Superior Chippewa:** The top priority is mercury contamination, in fish and the water column. The Minnesota mercury TMDL does not sufficient to attain the tribe's mercury fish consumption-based water quality standard.

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**Idaho:** The Department of Environmental Quality prioritizes waters listed since the Settlement Agreement on a rotating basis (4<sup>th</sup> order HUC) based in part upon the type of pollutant, in particular nutrients and temperature.

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**Kansas:** As indicated by its use of the Nutrient Framework Memo for prioritizing waters, the Kansas Department of Health and Environment prioritizes lake eutrophication and total phosphorus in streams.

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**Louisiana:** The Louisiana Department of Environmental Quality is prioritizing nutrients, coinciding with the state's nutrient management strategy, one of the largest coordination efforts across programs and entities in the state. Relatedly, the Department also prioritizes waters impaired for dissolved oxygen, as well as fecal coliform and minerals.

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**Massachusetts:** Since approximately 60% of the impaired waters in Massachusetts are impaired for either bacteria or nutrients, this prioritization based on pollutant has been the primary focus for TMDL plan development. In light of the Northeast Regional Mercury TMDL, the Massachusetts Department of Environmental Protection also is prioritizing mercury.

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**South Carolina:** Bacteria and nutrients currently are priority pollutants for the TMDL and CWA 319 Programs. Bacteria are the largest cause of water quality impairment in South Carolina (via the number of monitoring sites and stream miles), and nutrients and nutrient-related parameters (e.g., phosphorus, nitrogen, chlorophyll-a, pH, and dissolved oxygen) are major causes of water quality impairment in the state's lakes.

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**Virginia:** The Virginia Department of Environmental Quality has a two-tiered collaborative prioritization framework. The central office initially prioritizes waters by, among other factors, statewide pollutant distribution. The Regional offices then finalize priorities by, among other factors, the type of pollutant and complexity of the impairment.

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### Impacts/Uses

A state, tribe, or territory could prioritize waters based upon the effects of water quality impairments. These effects could be general, such as environmental harm, or pertain to specific designated uses, such as drinking water or recreational contact.

**Arkansas:** In Arkansas, primary prioritization factors include drinking water sources, extraordinary resource waters, and ecologically sensitive waters.

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**Houlton Band of Maliseet Indians:** The tribe prioritizes the return of Atlantic salmon to the river and to have eagles nesting on its land.

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**Illinois:** In Illinois, a high priority is given to waters where public water supply use is impaired by atrazine, simazine, or nitrate. For those waters, TMDLs will be developed based on the entire watershed, whether smaller or larger than a ten-digit HUC.

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**Iowa:** Associated with the prioritization of lake impairments, the Iowa Department of Natural Resources is focusing on recreational use of lakes, including human health on beaches (bacteria) and eutrophication.

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**Maryland:** The Maryland Department of the Environment gives top priority to CWA 303(d) listings that have a direct connection to public health, such as fish tissue-, beach-, and shellfish-related listings.

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**Massachusetts:** The Massachusetts Department of Environmental Protection prioritizes bacteria-impaired waters for TMDL development based on human health considerations, such as proximity to shellfish areas and public swimming areas.

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**New York:** The New York State Department of Environmental Conservation has placed high priority on drinking water, with secondary focus on sensitive trout streams.

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**North Carolina:** The North Carolina Division of Water Resources (DWR) has developed a framework for prioritizing restoration activities, including TMDL and alternative development. The framework is an index that includes designated uses, severity of impairment, and watershed size. Nutrient Criteria Development Plan commitments also are considered.

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**Ohio:** The Ohio Environmental Protection Agency uses a rotating basin approach and integrates monitoring, permits, and grants programs into TMDLs to adaptively manage Ohio's watersheds. In approximately 2000, the agency began prioritizing aquatic life use impairments in streams because that was where the state's major monitoring investment and expertise was. This priority led to the development of nutrient, sediment, habitat, dissolved oxygen, and related TMDLs. A couple of years later, the agency added a focus on recreation use impairments, which yielded bacteria TMDLs. The agency now is also prioritizing public drinking water use impairments, which is leading to nitrate and pesticides TMDLs.

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**Oklahoma:** The Oklahoma Department of Environmental Quality has developed a four-level watershed priority ranking for future TMDL development that takes a number of factors into account, including risks to public health and threat to aquatic life and other wildlife, in addition to degradation vulnerability.

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**Utah:** The Utah Division of Water Quality prioritizes impacts to human and ecological health. These priorities translate into the protection and restoration of waters designated for culinary, recreational, and aquatic wildlife uses.

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**Washington:** The Department of Ecology considers the presence of threatened or endangered species when prioritizing waters, especially for the development of temperature and toxics TMDLs.

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### Pollution Sources

A state, tribe, or territory may find the most effective means of improving water quality and ultimately meeting water quality standards to be prioritizing categories of water pollution sources. This approach likely would be useful when certain types of sources are significant contributors to major water quality problems in the state or improvements to certain sources are deemed highly cost-effective.

**Colorado:** The Colorado Department of Public Health and Environment prioritizes water quality impairments caused by abandoned/legacy mines.

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**Connecticut:** The Connecticut Department of Energy and Environmental Protection is prioritizing stormwater sources, at least in the short term.

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**Houlton Band of Maliseet Indians:** Pollution from agricultural practices is their primary focus, followed by concerns about wastewater dischargers.

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**Montana:** High among the statutorily defined list of considerations that the Montana Department of Environmental Quality will use when prioritizing water bodies for TMDL development are factors linked to program coordination, in particular new sources such as large mines or oil and gas.

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