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# Climate Change Considerations When Prioritizing, Developing and Implementing Total Maximum Daily Loads: November 2024 U.S. Environmental Protection Agency Report

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The United States Environmental Protection Agency (“EPA”) issued a November 2024 report titled: *Climate Change Considerations When Prioritizing, Developing and Implementing Total Maximum Daily Loads (“Report”)*.

The Report was issued by EPA’s Office of Water.

The Report notes that EPA’s *FY 2022-2026 Strategic Plan* included a goal that focused exclusively on tackling what it describes as the climate crisis.

Additional climate-related plans are stated to have identified ways that climate change can impact water quality and be interrelated and spatially or temporally variable.

The Report notes a number of ways that climate change can adversely affect water quality, referencing:

- Increased runoff.
- Lower streamflows.
- Elevated temperatures.
- Reduced dissolved oxygen levels.
- More frequent wildfires.
- Rising sea levels.
- Rising concentrations of carbon dioxide.

A waterbody can only assimilate a finite amount of “load” of certain pollutants before it will fail the applicable water quality standard. This pollutant loading limit is referred to as the Total Maximum Daily Load (“TMDL”).

EPA defines a TMDL in part as:

...a written quantitative plan and an analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant.

Section 303 of the Clean Water Act requires each state to identify those jurisdictional waters within its boundaries for which the technology-based effluent limitations required by the statute and defined by EPA are not stringent enough to attain the water quality standards. Water so designated are known as “water quality limited segments” or “impaired waters”. Each state is required to periodically submit this list of waters to EPA.

The Report states that climate change impacts can directly and indirectly affect water quality pollutants and attainment of water quality standards. They are also stated to potentially add uncertainty to various elements of the TMDL planning, development, and implementation processes.

EPA describes a non-exhaustive selection of potential approaches for incorporating climate change considerations into TMDL prioritization, development, and implementation. It states that there is no intent to impose any new requirements nor constitute a prescriptive checklist for consideration of climate change.

Key chapters include:

- Prioritization.
- TMDL Development.
- Establishing the Total Allowable Load.
- Critical Conditions.
- Technical Approaches.
- Pollutant Source Loadings and Allocations.
- Margin of Safety.
- Strategies for Evaluating TMDL Effectiveness.
- Implementation.
- Public Engagement.
- Appendix A – Tool Descriptions.

A copy of the Report can be downloaded [here](#).