Arkansas's 2022–2032 Vision for the Clean Water Act Section 303(d) Program

Background

In 2013, the United States Environmental Protection Agency (EPA) issued a memorandum in which they introduced a new framework for implementing the Clean Water Act Section 303(d) program. This framework, commonly referred to as "the Vision," was intended to aid 303(d) programs in developing tailored strategies for managing program responsibilities including total maximum daily load (TMDL) development. The Vision timeline spanned ten years: 2013–2022.

Continuing where the first Vision left off, EPA issued a new memorandum "2022–2032 Vision for the Clean Water Act Section 303(d) Program," in September 2022. The new framework is commonly called "Vision 2.0." Once again, EPA encouraged states to use the new framework to aid in prioritizing restoration priorities.

Purpose and Objectives

The purpose of this document is to describe Arkansas's Prioritization Framework under the new long-term Vision and identify waters prioritized for restoration.

Setting Arkansas's Priorities

The Division of Environmental Quality (DEQ) selected priorities for the new Vision 2.0 framework considering DEQ's ability to develop TMDLs in-house, waterbody type, and number of assessment unit (AU) listings by parameter.

Currently, DEQ develops TMDLs for certain pollutants using the load duration curve (LDC) method. This method is relatively easy to perform and works well for pollutants such as pathogens and total suspended solids (TSS). Developing TMDLs in-house affords DEQ greater control and ownership of the process and final TMDL product.

Using the 2018 303(d) list, DEQ prioritized listed stream AUs over lake AUs as stream listings were more numerous. Turbidity makes up 16% of all stream listings on the 2018 303(d) list of impaired waterbodies, the third highest pollutant. Additionally, TMDLs can be developed in-house using the LDC method for the above-referenced pollutants.

Goals

Planning and Prioritization Goal

The planning and prioritization goal for the DEQ is to first revise current TMDLs with outdated parameters or incorrect wasteload allocations. TMDLs using a specific parameter that is no longer included in the water quality standards creates confusion for permit writers and permittees as well. Likewise, wasteload allocations that cannot be implemented in permits create untenable situations for permittees, permit writers, and EPA, who reviews the permits. These revisions should provide clarity and consistency for implementing TMDLs in permits. This first goal will

also help a recently rebuilt program gain confidence in the TMDL process and allow the program to acquire some experience before developing new TMDLs.

The prioritization for future TMDLs will target one of the largest impairments in Arkansas, turbidity. Turbidity TMDLs can address point or non-point source pollution through mechanisms including, but not limited to, permitting, stream bank restoration projects, or non-paved roads projects. These projects would be performed on a watershed scale to capture loading from tributaries as well as the main waterbody. A future goal for the program is to also examine dissolved oxygen listings and determine if those are caused by pollutants or natural conditions.

Restoration Goal

DEQ intends to use all of the tools at its disposal to aid in the restoration of waterbodies and achieve attainment with the applicable water quality standards. While DEQ utilizes Category 5 for most listings, Categories 4b and 5-alt are also used. In these circumstances, there are existing plans in place through watershed groups or other state or federal agencies that are expected to result in attainment with the applicable water quality standards. DEQ will continue to develop and foster relationships with these groups and work cooperatively with these groups to accomplish common goals. These cooperative efforts may come in the form of funding, sampling, data analysis, or collaborative projects to attain water quality goals.

Protection Goal

Protection planning is a tool that DEQ may employ in the future as a proactive approach for the protection of waters, but due to the incipient nature of DEQ's TMDL program, the best and most efficient use of time and resources would be to focus on waterbodies that are currently impaired.

Data and Analysis Goal

DEQ requests and receives data from a wide variety of entities for use in the assessment and development of the 303(d) list. DEQ has a publically available listserv that it uses to solicit data every two years from state and federal agencies, watershed groups, and water utilities in order to gather as much data as possible. The agency has worked with stakeholders to ensure the data is in a usable format and that the data is of sufficient quality by working with outside entities on quality assurance documents and standard operating procedures. DEQ recently published a stream sampling procedures manual (a lake sampling manual is soon to come) that outside entities can use and reference when collecting data so they can be assured the data they collect meets DEQ's quality standards and is acceptable to DEQ. DEQ will continue to work with outside entities in an effort to gather as much high quality data as possible for waters throughout the state.

Partnership Goal

DEQ has strong relationships with many water quality agencies and non-governmental organizations throughout the state. These relationships range from partnerships for water chemistry sampling on lotic and lentic waterbodies to biological sampling on streams in the state. DEQ collaborates on compact commissions, state task forces, and multi-state groups to accomplish water quality goals. Many of these agencies or groups have thorough knowledge in areas or disciplines where DEQ can benefit. Likewise, DEQ shares expertise, knowledge, and

data with outside entities to further water quality goals. Through these collaborations, relationships are developed for future water quality partnerships, all with the common goal of maintaining or improving water quality throughout the state of Arkansas.

Focus Areas

DEQ is rebuilding a program that has been limited for several years. During this rebuilding process, a TMDL writer's guide is being created to not only have a guidance document for current employees but to have in place for future employees as well. DEQ plans to continue building this guidance as a living document until a robust, step-by-step document has been finalized. DEQ also looks forward to participating in EPA's TMDL training. This training will be a valuable resource for current and future DEQ employees and the DEQ TMDL program.

DEQ is collecting data in many parts of the state for future TMDL development. DEQ does not focus its efforts in any particular area of the state; rather, DEQ focuses on all impacted areas in Arkansas. DEQ evaluated the seventy-five counties in the State using the EJScreen: Environmental Justice Screening and Mapping Tool (https://www.epa.gov/ejscreen) with consideration of seven criteria for each county in Arkansas. The State of Arkansas is a rural state with each county scoring greater than the state or federal average for at least two criteria and with an average of four criteria at or above the state or federal level. Low income and less than a high school education are the two demographics in which most Arkansas counties exceed the state or federal average. The third most prevalent criteria present across the state is senior citizens over the age of sixty-four. Based on the evaluation of Arkansas's counties, each of Arkansas's seventy-five counties is considered an area of concern.

References

USEPA. 2013. Memorandum: A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. December 2013.

USEPA. 2022. Memorandum: 2022–2032 Vision for the Clean Water Act Section 303(d) Program. September 15, 2022.