

Purpose and Methodology

This document is intended to share among state and territorial CWA 303(d) listing and TMDL programs and tribal water quality programs some of the effective ways that they have explained complex water quality terms to less-technical audiences. In collaboration with a planning group composed of state, tribal, U.S. Environmental Protection Agency (EPA), Association of Clean Water Administrators (ACWA), and NEIWPCC staff, the Environmental Law Institute (ELI) developed and disseminated a questionnaire on communication to all 50 states, the District of Columbia, 5 territories, and over a dozen tribes. Among other questions, survey respondents were asked to list alternate words and phrases that they have used for the terms below, and for ways that they have explained those concepts. The planning group selected, and occasionally built upon, the examples in those answers to develop this document.

Several categories of options are provided for the water quality terms below; not all terms have an entry for each category. The “Simpler Term/Phrase” is likely most useful for short messages, such as Twitter posts. The “Brief Explanation” is particularly useful in presentations and conversations, and the “Explanation” is most applicable in factsheets or lengthier documents.¹ Importantly, these terms, phrases, and explanations may not be ideal for all less-technical audiences. For example, “illness-causing germs” might be best used when talking with children about pathogens, but “illness-causing bacteria” might be better for most adult audiences. Knowing what will resonate with your target audience is critical for effective communication.

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¹ The examples in this document are intended to simplify the communication of technical issues and items, but they may not be appropriate in all documents. For statutory and regulatory definitions, please consult the Clean Water Act and Code of Federal Regulations.

Algal Blooms

Simpler Term/Phrase: Unusually green water (or unusually green lakes)

Brief Explanation: Algae in amounts that can cause harm to animals or humans

Explanation: In certain conditions, algae can replicate quickly and overwhelm a waterbody. No one wants to jump in green water and be covered in algae, but the bigger issue is that the bloom can suck up all oxygen and suffocate fish. These blooms can also be toxic to animals and humans depending on the type of algae. The best way for us to make sure blooms don't happen is to take away the food source for the algae, which is why we're so concerned about the amount of nutrients that enters the water.

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“Alternative”

Simpler Terms/Phrases:

- Alternative restoration plan
- Straight-to-implementation plan

Brief Explanation:

- Cleaner water faster

Explanation: When the way to fix a water quality problem is clear, the state and partners might try this approach first. If the water is restored through this effort, a TMDL is not needed. If it isn't restored, a TMDL will be developed, but progress will have been made.

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Assessment

Simpler Terms/Phrases:

- Stream/lake checkup
- Water quality evaluation

Brief Explanations:

- How we evaluate the health of waters like rivers, streams, and lakes
- Measuring pollution

Explanation: The analysis of all of the water quality monitoring results against the levels that the waterbody should meet.

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Bacteria/Pathogens

Simpler Term/Phrase: Illness-causing germs

Brief Explanation: Germs that can make people and animals who come in contact with them sick

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Climate Change

1. What It Is

Simpler Terms/Phrases:

- Changing weather patterns
- Long-term trends

Brief Explanation: Changing expectations for the type, intensity, duration, and patterns of weather events

2. Its Effects

Simpler Terms/Phrases (examples of effects on water quality):

- Extreme precipitation events / dramatic rainfall patterns
 - More pollution is washed into waterbodies
 - Sewer systems and water treatment plants overflow more frequently
 - Fish habitat is washed away
- Extreme drought events
 - Reduced stream flow
 - Higher concentrations of pollution
 - Fish habitat is degraded or even disappears
 - Coastal waters become too salty
- Sea level rise
 - Saltwater moves into freshwater areas
 - Drinking water becomes too salty
 - Water infrastructure is at a higher risk from storm surges
- Rising water temperatures
 - Affect fish populations

Brief explanation: Overall change in atmospheric conditions that can affect everything from sea level to a marked increase in extreme weather events

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CWA 303(d) List

Simpler Terms/Phrases:

- Study list
- Unhealthy waters list

Brief Explanations:

- The list of waterbodies in our state that aren't meeting expectations and require a plan of action
- The list of unhealthy waters that need a cleanup plan

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Designated Uses

Simpler Terms/Phrases:

- The ways we use water
- The uses of water that we protect

Brief Explanation: What we want to use the water for, as written in the state's law

Explanations:

- By state law, what water is used for, such as recreation, agriculture, drinking water, industrial and municipal uses, and aquatic life. If more than one use is assigned to a waterbody, the most protective value of a parameter among all the uses is assigned as the water quality standard.
- [When presenting the concept to an audience:] Please name ways that you have used water [and then reveal the designated use chart for comparison]

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Discharger

Simpler Terms/Phrases:

- Entity emitting pollutants into a waterbody
- An industrial or municipal water user

Brief Explanation: Anyone that is required to get a permit to release or channel water back to the environment

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Impairment

Simpler Terms/Phrases:

- Unhealthy water
- Water quality problem
- Polluted water

Brief Explanations:

- Water that needs to be restored to health
- When a waterbody isn't meeting the water quality levels that are set for it

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Integrated Report / "IR"

Simpler Term/Phrase: Statewide water quality health report

Brief Explanations:

- The report containing the health evaluations of the state's waterbodies
- The statewide report of waterbody health analyses, comparing monitoring results against the standards for healthy water

Explanation: After all water quality monitoring data have been compared against the standards for healthy water in the various waterbodies of the state, the results are summarized in a report, called the 305(b) report, that explains the overall health of those waterbodies. The list of waters that are not considered healthy and require restoration plans is called the 303(d) list. The 305(b) report and 303(d) list are combined into an "Integrated Report" and submitted to EPA every two years.

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Macroinvertebrates

Simpler Terms/Phrases:

- Water bugs
- Spineless aquatic critters

Brief Explanation: Bugs that often are the base of a food chain in the aquatic ecosystem – they are helpful in determining the health of aquatic life in a waterbody

Explanation: Animals without spines that live on the bottom of a waterbody and are big enough to be seen. They are important indicators of pollution since they live in the same spot long enough to tell us about the long-term water quality.

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MS4

Simpler Term/Phrase: Urban runoff requiring a permit

Brief Explanation: A community stormwater system that requires a permit

Explanation: Bigger cities, often their suburbs, and even some universities are required to have a permit to manage their stormwater, which can move chemicals from our cars and salt from our roads into nearby creeks and rivers.

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Nonpoint Source Pollution

Simpler Terms/Phrases:

- Polluted runoff
- Runoff pollution

Brief Explanations:

- Water pollution for which a federal permit is not required
- Runoff pollution not covered under a permit
- Pollution from dispersed sources on the landscape that makes its way to a waterbody

Explanation: As water flows across a landscape, it picks up pollution from streets, yards, and fields and carries it into a waterbody.

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Nonpoint Source / CWA 319 Program

Simpler Term/Phrase: Polluted runoff program

Brief Explanations:

- A program that funds projects to reduce runoff pollution
- A program that provides grants and other resources to reduce water pollution from sources that are spread out and typically not required to make reductions

Explanation: It is a program that implements the section of the Clean Water Act that directs funds and technical assistance to the development of watershed plans and adoption of best management practices for reducing runoff pollution.

Nutrient Pollution

Simpler Term/Phrase: Excess plant food

Brief Explanation: Too much of a good thing can be bad – killing fish and closing beaches

Explanation: Nitrogen and phosphorus, you can think of them as fertilizer, help plants grow. Like in our own bodies, streams require nutrients to be healthy, but too many are harmful. They can contaminate drinking water and increase drinking and wastewater treatment costs. They also can cause too much plant growth, making the water unattractive and unpleasant for swimming and boating, and in some cases toxic. When that excessive plant growth dies and decomposes, it consumes oxygen in the water and can kill the nearby aquatic life.

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Point Source Pollution

Simpler Term/Phrase: Water pollution requiring a permit

Brief Explanation: Water pollution for which a permit is needed, usually from a single, traceable location

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TMDL

1. The Calculation

Simpler Terms/Phrases:

- Pollution diet
- Pollution budget

Brief Explanation: The maximum amount of a pollutant that a waterbody can receive while remaining healthy

2. The Report

Simpler Term/Phrase: Waterbody/watershed cleanup plan

Brief Explanation: The math and the path, crunching the numbers to suggest a way to clean up the waterbody

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Water Quality Criteria

Simpler Terms/Phrases:

- Safe levels of pollutants
- Water quality thresholds

Brief Explanations:

- The conditions a waterbody must meet to be deemed healthy
- What we compare our testing results to for a particular pollutant

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Water Quality Standards

Simpler Term/Phrase: Healthy water thresholds

Brief Explanation: The standards that we have for healthy waterbodies

Explanation: They are the set of policies and calculations that classify waterbodies based on how they are used and determine the water quality conditions needed to protect those uses.

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Watershed

Simpler Terms/Phrases:

- Drainage basin
- Water neighborhood
- Water address

Brief Explanation: All of the land area that drains to a specific waterbody

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