



ARKANSAS



THE PROBLEM

Arkansas residents have the right to know whether the water flowing in their neighborhood streams is safe for fishing, swimming, and playing. Under the Clean Water Act, the state is tasked with monitoring all of its waterways, presenting that information to the public, and restoring polluted waters. Residents have much to be concerned about when it comes to water pollution. Pollutants found in Arkansas' waterways include salts, toxic metals, bacteria, and lead; nutrients that spur algae growth; and sediment that chokes fish and other aquatic life.

When the Izaak Walton League did our own investigation, we found that Arkansas' dirty water problems go even deeper.

Transparency	Site-Specific Information	Age of Data	Frequency of Sampling	Water Quality Standards	Volunteer Engagement*
B	F	C	B+	D+	F

*50% of final grade

How the Numbers Add Up

State reports: 11% of streams tested

IWLA fact check: 3% of streams tested

To adequately assess water quality, the state needs a significant increase in permanent monitoring stations, where data is collected each year at the same place.



Dirty Waters

Most common pollutants reported by the state include:

- Nutrients/sediment
- Salts
- Toxic metals
- Bacteria
- Lead



Scattershot Testing

Can you believe Arkansas has more than 120,000 miles of streams and rivers but only 150 permanent stations to monitor for water pollution? (U.S. EPA recommends a maximum of 25 miles per station!)

Number of permanent stations now: 150

Number of permanent stations needed: 4,892

Dubious Results?

State reports: 55% of streams clean

IWLA fact check: Fishy



Not only does the state need to monitor thousands more sites to adequately and accurately assess water quality, it has weak water quality standards and uses out-of-date information. So the state's claim that 55% of its streams and rivers are clean and healthy smells fishy.

With all this unreliable information, how can residents of Arkansas depend on the state's assessment of water quality?

THE DETAILS



Transparency: **B**

Although Arkansas monitors only a small fraction of its streams and rivers, it does a better job than many states of accurately portraying this problem to the public. The small difference between Arkansas' claim of assessing 11% of its streams and rivers and our calculation of 3% earns the state a B in this category, although both numbers leave **most of the state's streams untested and call into question whether these waters meet basic water quality standards.** Our calculation is based on U.S. Environmental Protection Agency (U.S. EPA) guidelines for stream monitoring (25 miles per station) and the total number of miles of rivers and streams in the state.



Site-Specific Information: **F**

Guidelines from U.S. EPA state that samples taken at a specific spot in a river (called a “monitoring station”) can be used to gauge water quality for no more than 25 miles upstream. On smaller streams, that data should represent no more than 5 to 10 miles upstream.

Even if we use the maximum of 25 miles per monitoring station, **the state should test close to 5,000 stream sites each year to accurately assess water quality. Instead, Arkansas has 150 permanent monitoring stations and places additional stations at random sites – and claims this represents water quality across the whole state, even though most streams aren't actually monitored.**



Age of Data: **C**

Arkansas relies on water quality data that is up to six years old – and presents the information in biennial reports to U.S. EPA as if it were current. Pollution spills can cause fish kills in just a few days – or a few hours – and rapid development brings new threats to water quality every year. Arkansas residents cannot trust the safety of their waterways to out-of-date information.



Frequency of Sampling: **B+**

Biological monitoring, which samples aquatic insects and crustaceans (called “macroinvertebrates”), is the most reliable method to determine stream health. Macroinvertebrates should be monitored four times each year. Chemical monitoring should be done even more frequently. If samples are taken less frequently, a polluted stream could be mistaken for a safe one – or vice versa. Arkansas does well with **frequent chemical and macroinvertebrate monitoring**, earning a B+ in this category.



Water Quality Standards: **D+**

When a state identifies “impaired” waters, it is comparing monitoring results with standards the state sets for how clean public waters need to be for uses such as fishing or swimming. If water quality standards are weak, it's easy to meet them.

Arkansas has strong standards for pH. However, the state's standards for nutrient pollution – the greatest threat to the health of America's waterways today – are weak. In fact, Arkansas only has narrative standards for total nitrogen and total phosphorus, not numeric standards. The state's standards for bacteria are weak compared with U.S. EPA's minimum guidelines for safe human contact, and its dissolved oxygen standards are weak as well.



Volunteer Engagement: F

The Izaak Walton League recognizes that water quality monitoring, while critical for public health, can be labor-intensive. Volunteer monitors can solve this problem – as long as states are willing to support volunteer groups and use volunteer-collected data. With rigorous monitoring procedures and training from the Izaak Walton League and other groups, volunteers can collect scientifically valid, accurate water quality data. Because it is so important that states work with volunteer monitors, this counts for 50 percent of a state’s final grade in this report.

To determine each state’s use of volunteer-collected data and support for volunteer groups, the League surveyed state water quality staff and representatives of the volunteer monitoring community. The survey included at least one volunteer monitoring program coordinator in each state as well as experts who support volunteer monitoring nationwide. The League sought supplemental information about volunteer engagement through research and a thorough examination of state water quality reports.

Arkansas supports groups that educate, train, and equip volunteers to monitor streams and rivers for chemicals, macroinvertebrates, and physical attributes. Although this is a positive step, the state’s grade is low for several reasons. Arkansas does not use volunteer-collected data in the state’s biennial reports on water quality to U.S. EPA (which are required under the Clean Water Act) and has little to no communication with volunteers about how their data is – or is not – being used. Arkansas also requires volunteers to submit chemical data to a lab for cost-prohibitive, unnecessary analysis, which can be a barrier to expanding volunteer monitoring.

SOLVING THE PROBLEM

Volunteers can help close the gaps in public knowledge about the health and safety of Arkansas’ rivers and streams and can move the state closer to actually monitoring all of its waterways. Studies prove that when properly trained and supported, volunteers can collect data as accurately as professionals working for state agencies. The utility and reliability of volunteer data is gaining greater recognition across the country. In fact, in October 2015, the White House launched a new citizen science initiative to encourage greater use of volunteer-collected data by federal and state agencies.

The Izaak Walton League urges Arkansas to expand engagement with volunteer stream monitors and more effectively use the data they collect to ensure the public has accurate, timely, and site-specific information about water quality in streams and rivers statewide.

Interested in being part of the solution? The Izaak Walton League has tools to get you started with water quality monitoring today. Visit www.iwla.org/sos for training videos, data forms, mobile apps, equipment lists, and a place to upload your data.

Curious how this measures up to other states? Read the Executive Summary and reports for all 50 states at www.iwla.org/righttoknow.