



Why are elevated levels of nitrate a concern?

Nitrogen is naturally present in the environment and low quantities of nitrate are necessary nutrients. However, high levels of nitrate found in agricultural runoff, nitrogen-based fertilizers, animal manure, and sewage pose a problem.

An excess of nitrate may cause algal blooms, which blocks sunlight and creates anoxic zones. This leads to environmental and economic consequences such as uninhabitable environments for marine life and losses in the tourism and commercial fishing sectors.

How can the source of nitrate be tracked?



[Photo Credit: Dr. Jennifer L. Graham, U.S. Geological Survey.]

The application of nutrient source analysis is often used by water managers to [track the source\(s\) of nitrate](#) after a contamination event.

Since these various nitrogen sources have known isotopic signatures, measuring $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ of dissolved nitrate in water samples can help identify the source. Knowledge of the source is crucial to address the primary causes of contamination and manage, track and mitigate further nitrate contamination of waterways.

Concerned with nitrate contamination? [Speak with our technical consultant](#)

Do you need sources of funding for nitrate source tracking?

The U.S. EPA and U.S. Department of Agriculture (USDA) recently hosted a webinar highlighting financial opportunities for nutrient reduction projects.

[View the webinar](#)

We are committed to protect your privacy

We have recently updated our Privacy Policy in support of the EU General Data Protection Regulation (GDPR), in effect from May 25. You are welcome to review the policy to learn more about how we process your data in order to provide you laboratory services and updates.

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