

# Stop nutrient pollution before it's worse

Clean waterways are a core feature of Jackson Hole — as intrinsic to our community character as the Tetons themselves. And yet our streams, creeks and groundwater are in peril.

Friends of Fish Creek was formed four years ago to deal with the nutrient pollution problems on the West Bank. We realized, however, that the problems we faced on the West Bank are also found throughout Teton County, so we changed our focus to encompass nutrient pollution in the entire county. We also have teamed up with other conservation organizations to form the Jackson Hole Clean Water Coalition.

Water pollution has no place in Jackson Hole. And yet it has become an ugly part of our reality, threatening our drinking water, causing excess algae growth that harms both our aquatic insect life and trout-spawning habitat.

Under certain conditions harmful algal blooms can occur that produce toxins and other irritants that pose a risk to humans, pets, wildlife, livestock and aquatic life. With some localized exceptions we are not at crisis levels yet, but we must address this problem before we get anywhere near a crisis.

Nutrient pollution is a complex problem encompassing all sources that contribute to excess levels of nitrogen and phosphorous in waterways, ranging from the fertilizer used on residential lawns to residential septic systems, the livestock grazing on ranches, golf courses and stormwater runoff. So, yes, the problem is sizable. The good news: The solutions are simple, technically speaking.

**Minor changes to residential lawn-care practices:** Turns out one of the largest sources of nutrient pollution is also one of the easiest to solve. Switch to slow-release lawn fertilizer, used at a rate that provides no more than 2 pounds of nitrogen per 1,000 square feet of lawn per season, top dress with compost soil mixes, water less, mow at 3 inches or higher and let buffers grow along water bodies. Consider converting some or all of your lawn area into natural vegetation that does not need watering or fertilization. Several area HOAs have already adopted our guidelines, and others are in the planning stages for adoption. For details go to our website.

**Consider livestock.** We are working on distilling the large body of research on best practices to reduce the nutrient footprint of cattle and horse ranches in sensitive watersheds. For now we are focused on working closely with all West Bank livestock operations.

**Work with golf courses.** Modern advances in design, construction and maintenance reduces potential nutrient pollution from golf courses. Water quality data collected from West Bank courses has not shown an impact on water quality. We will continue to monitor and work closely with both courses to insure these positive results continue.

**Stop injecting treated effluent into the groundwa-**

**ter.** The two injection sewer treatment plants on the West Bank do a stellar job of converting raw sewage into Class 1 groundwater standard effluent that is then injected into the groundwater. However, it still contains nitrogen and possibly other compounds. Both plants have agreed to consider alternatives if we can find funding. We are working on this.

**Hook up septic systems to a sewer line.** A well-designed, well-constructed and properly maintained septic system can remove most of the harmful compounds that enter the system. And yet even the best systems do not remove much nitrogen; they are just not designed to do that, which means most of the nitrogen leaves the system through the leach field pipes. The typical buffers for nitrogen leaching — 20 to 30 feet of quality soils beneath leach fields, consistently warm temperatures that promote microbial activity, low-density development, resilient watersheds — are not available to us in much of Teton County. Coarse sand, gravel and river rock below just a few inches of soil make

up most of the valley floor. When paired with our high water table, most of this water soluble nitrogen flows right into our groundwater. Our sensitive watershed cannot withstand such contamination, particularly as our community grows.

Once again, though, there is hope: The solution to our septic problem is simple, if ambitious. We need to hook up a majority of valley floor septic systems to a municipal sewer system — a major effort requiring community-wide cooperation and support. Extending the sewer lines alone will be a very expensive undertaking, with more funds likely needed to expand and upgrade the town of Jackson sewer plan.

How do we propose paying for this? Through multiple sources, including state and federal grants, specific purpose excise tax funds and, most importantly, some form of low-interest, long-term debt, paid back over many years. All residents and businesses in Teton County must help foot the bill because the return on investment will be significant for everyone. We believe that the annual cost to each taxpayer will be relatively low considering the substantial community benefit.

Over 50 years ago Lake Tahoe faced similar problems from septic systems. The community banded together, raised the funds and solved the problem.

We hope that Jackson Hole will rise to the challenge and protect our water quality by taking these technically simple yet important actions now. The consequences of inaction or delays will be devastating.

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*John Culbertson is the president of Friends of Fish Creek, which is one of the partners in the Jackson Hole Clean Water Coalition. Send any comments or questions to [info@FishCreekFriends.org](mailto:info@FishCreekFriends.org). Guest shots are solely the opinion of their authors.*

## GUEST SHOT

*John Culbertson*