# Utah Department of Environmental Quality
## Division of Water Quality

# Fact Sheet

June 2014

## Phosphorus Rule

### Technology-Based Limits for Controlling Phosphorus Pollution

The proposed rule institutes a technology-based effluent limit of 1.0 mg/L of total phosphorus from all wastewater discharges into surface waters by January 1, 2020. This rule would reduce phosphorus discharges from treatment plants by 66 percent and reduce phosphorus concentrations in receiving streams by 50 percent on average. This limit is nationally recognized as achievable using current technologies.

### Phosphorus Rule Highlights

Under the proposed rule, all wastewater treatment plants will play a role in reducing phosphorus discharges into state waters.

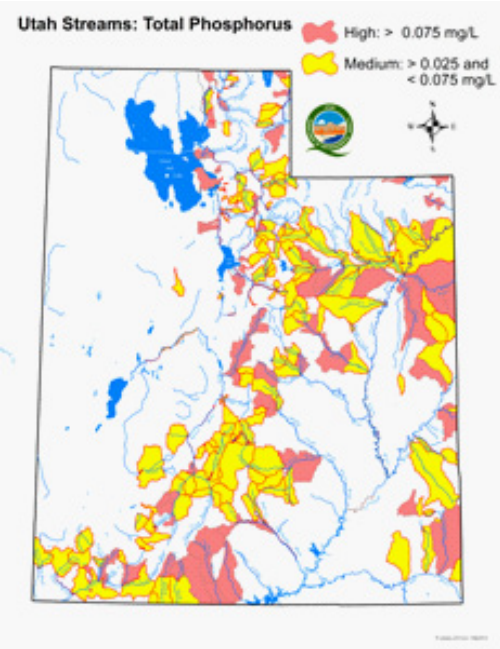
- Mechanical plants will be required to produce treated wastewater that contains 1.0 mg/L or less before that water can be discharged.
- Lagoon and pond-based plants will have total phosphorus caps of 125 percent times the current phosphorus discharges.
- The proposed rule contains four exceptions for discharging facilities with special circumstances.
- All discharging treatment plants will be required to monitor influent and effluent wastewater for phosphorus and nitrogen concentrations.

### Nutrient Pollution in Utah

Nitrogen and phosphorus are nutrients that are natural and essential for healthy streams and lakes. Nitrogen and phosphorus support the growth of algae and plants that provide food and habitat for fish and smaller aquatic organisms. Excess nitrogen and phosphorus, or nutrient pollution, cause algae to grow faster than ecosystems can handle—a process called eutrophication. Significant increases in algae hurt water quality, food resources and habitat, and decrease the oxygen that fish and other aquatic life need to survive. Large growths of algae, called algal blooms, can lead to illnesses and the death of large numbers of fish. Some algal blooms are harmful, producing toxins that can make people and animals sick. Algae can also taint drinking water sources, resulting in higher treatment costs. Finally, nutrient pollution can make recreational activities, such as swimming, unsafe or undesirable.

### A Statewide Problem

Excess nutrients in Utah waters originate from a number of urban and rural sources. Wastewater treatment plants, stormwater runoff, septic system leachfields, and agricultural production all contribute nutrients to state waterways. Nutrient loading into Utah's waterways grows as the state's population and economy grows.
No portion of the state is immune from nutrient pollution. Excess nutrients from fertilizer on urban lawns, soil erosion, fertilizer on cropland, and wastewater treatment plant discharges all contribute to excess nitrogen and phosphorus in Utah waters.




The Division of Water Quality is currently soliciting public comments on the proposed phosphorus rule. The 60-day public comment period runs from:

June 1, 2014 to August 1, 2014

Comments can be e-mailed to:

uwqcomment@utah.gov

or mailed to:

Utah Division of Water Quality
Attn: Technology-based Phosphorus Limits
P.O. Box 144870
Salt Lake City, Utah. 84114-4870

### Quality of Life and Quality Water

Safe drinking water, clear lakes and vibrant streams are critical to Utah's quality of life. When the Utah Foundation surveyed residents for its Quality of Life Index (2011), it found that Utah residents ranked air and water quality as the third most important factor for a good quality of life—exceeding jobs, transportation, and healthcare. An economic benefits study conducted by the Division of Water Quality (2013) showed that 97 percent of the Utah households surveyed believed it was important to maintain water quality for future generations.

Water quality is also important to Utah's economy. National business rankings consistently give Utah high marks for its quality of life, particularly its recreational opportunities. The Governor's Office of Economic Development and the state Office of Outdoor Recreation promote outdoor recreation as important for Utah's economy, both as a direct source of revenue and a quality-of-life amenity for business. Annual expenditures for recreation trips to hunt, fish, and boat on Utah waters by state residents total between $1.4 billion and $2.4 billion. This boost to the state economy is even greater when expenditures by out-of-state visitors are included. All these activities depend directly on good water quality.

### Water Quality Is Worth It to Utahns

Willingness-to-pay is the maximum amount a person is willing to pay to receive a benefit or avoid something undesirable. Approximately three-quarters of Utah households surveyed expressed a willingness to pay an additional $2 to $5 a month for nutrient reduction to maintain and improve Utah waters. This means that over a 20-year timeframe, residents are willing to pay about a $500 million to maintain water quality and about $1 billion to improve water quality.

### Consequences of the Status Quo

If the state continues to control for nutrients under its current water quality policies, conditions at 46 lakes and 73 rivers, most of which are used for water-based recreation, will degrade over the next 20 years. Population and economic growth will increase nutrient loading to the state's wastewater treatment plants, urban stormwater systems, and waterways. Costs for treatment of wastewater and drinking water will increase as water quality degrades. Nutrient pollution is usually much more costly to fix than to prevent.

Since the Clean Water passed in 1972, Utah's population has grown 260 percent, resulting in a commensurate increase in wastewater and nutrient loading to Utah's waters. Without a nutrient strategy to control these pollutants, the problem will continue to grow.

### Utah Nutrient Strategy

The Utah Nutrient Strategy uses an adaptive management approach to achieve near-term reductions in nutrient loading and provide long-term strategies to protect state waters. Tools include stronger permits for point source discharges, an agricultural land stewardship program for nonpoint pollution, and best management practices for urban storm water sources. Near-term reductions in nutrient loadings will help the state "hold the line" on further deterioration in water quality while DWQ scientists gather the necessary data to develop site-specific numeric nutrient criteria for nitrogen and phosphorus.