



## **Natural Resources, Agriculture & Environment Interim Committee DEQ Planning Issues May 2016**

The planning challenges facing the Utah Department of Environmental Quality all stem from a combination of factors: 1) significant population growth putting more pressure on air, land, and water; 2) significant new federal regulations imposing additional requirements on states; and 3) limited resources available to meet the new demands.

### Significant Federal Air Actions Affecting Utah Anticipated in the Next Year:

- Oil and Gas (Methane) Rules - New Source Performance Standards OOOO-A
- Uinta Basin Indian Country Federal Implementation Plan (FIP) for Minor Sources
- Near Road NOx, PM, CO, and air monitoring requirements
- Regional Haze Rule for the 2018-2028 planning period
- Exclusion of Natural and Exceptional Events Rule
- 2015 Ozone NAAQS, Designation, Implementation and Infrastructure SIP Rulemaking
- EPA approval/disapproval for Utah's first planning period Regional Haze Plan
- 2010 1 hour SO<sub>2</sub> implementation and data requirements rule
- 2008 Ozone Standard Transport Infrastructure SIP final action
- PM<sub>2.5</sub> Serious Area Reclassification (2006 standard)
- PM<sub>2.5</sub> Implementation Rule for the 2006 and 2012 standards
- 2015 Ozone Standard Photochemical Assessment Monitoring Stations (PAMS)
- Potential Clean Power Plan Supreme Court Stay removal and requirement changes under 111(d)
- Mercury and Air Toxics Standard for Utilities (MATS) reinstatement following remand from Supreme Court

Recent and Proposed Federal Drinking Water Regulations: Revised Total Coliform Rule; Groundwater Rule; Stage 2 Disinfection Byproducts Rule; Long Term 2 Enhanced Surface Water Treatment Rule; and enhanced EPA scrutiny of Lead/Copper Rule.

### National Ambient Air Quality Standards

Ozone: EPA established a new 8-hour ozone standard of 70 ppb in 2015. Current air monitoring indicates that the Wasatch Front between Spanish Fork and Brigham City, portions of Tooele County, and portions of Uintah and Duchesne Counties exceed the revised standard. The Governor must recommend area designations by October 1, 2016, and EPA will make final non-attainment designations in 2017. The State must develop a State Implementation Plan (SIP) for areas designated as "Moderate" or higher by 2020. The SIP process is rigorous and will strain DAQ resources. As background levels of ozone approach the new standard, identifying strategies to meet the standard is increasingly challenging.

PM2.5: Although no Utah counties violated the attainment standard for PM2.5 in 2015, the Logan, Salt Lake, and Provo-Orem non-attainment areas all exceeded the standard in January-February 2016, requiring those areas to be reclassified as “Serious” non-attainment areas by operation of law. We expect EPA to require reclassification this summer. DAQ will have 18 months to develop a new SIP.

### Water Quality Issues

#### 1) Ammonia

In 2013, EPA established a stricter water quality standard for ammonia and Utah likely will have to incorporate it into our rules in 2020. The new standard will present significant challenges for several wastewater treatment plants that will be unable to meet the new standard without significant upgrades. DWQ is the only state agency in the nation seeking to avoid the requirement by demonstrating that the mussels and non-pulmonate snails, upon which the standard is based, are not present in our state. Such a demonstration will be difficult.

#### 2) Nutrients

Background: There are increasing levels of nitrogen and phosphorus (“nutrients”) in Utah’s waters from sources such as storm water runoff, wastewater treatment plants, and agricultural production. Combined with decreasing stream flows and increasing temperatures, excessive nutrients contribute to impairments of Utah’s waters, decreasing oxygen levels in Utah’s fisheries and increasing the number of harmful algal blooms which threaten public health and recreational activities. Under current policies, conditions at one-third of Utah lakes and nearly half of Utah rivers will degrade over the next 20 years. EPA does not develop standards to address nutrient pollution, as they are site-dependent, leaving states to develop strategies that fit their own circumstances. Many states have already developed numeric nutrient standards.

#### Utah’s Nutrient Control Strategy:

- Completed an October 2010 study to determine the cost of reducing excessive nutrients at publicly owned wastewater treatment plants. The average monthly cost increase to remove additional phosphorus is \$1.19/home
- Since September 2011, ongoing work with a stakeholder workgroup to develop Utah’s nutrient control strategy
- Completed an April 2013 study that identified the economic impacts of controlling nutrients
- Adopted a December 2014 rule establishing a technology-based phosphorus effluent limit (TBPEL) of 1 mg/l for all mechanical discharging wastewater treatment plants. The rule allows for variances. This rule will reduce the phosphorus being discharged to Utah’s waters from treatment plants by two-thirds and buy valuable time while site-specific nutrient control strategies are developed and put in place over the next two decades. The deadline to meet this limit is January 1, 2020 or no later than January 1, 2025 if an extension request is granted

- Currently developing phosphorus and nitrogen standards for Utah's high mountain waters which serve as a major source of Utah's drinking water (anticipated completion in Spring 2017)

#### Challenges:

- Many wastewater treatment plants in Utah are already able to achieve a 1 mg/l phosphorus limit with minimal expense. However, many 1950-1970s-era treatment plants that have not been upgraded in many years may require larger capital outlays to upgrade their facilities to remove phosphorus.
- The TBPEL is a performance-based limit not based on measured impacts. It is intended to provide a modest and adaptive bridge until a science-based phosphorus standard can be developed. New standards raise controversy and some would like to wait until the degradation of our waters is clearly manifest before implementing steps to remove nutrients.

#### **Drinking Water Data Supporting Capacity Requirements and Planning**

Background: Two recommendations from the December 2014 Legislative Audit of the Division of Drinking Water remain unresolved. They involve gathering "actual" water use data to appropriately revise the indoor and outdoor water-use capacity requirements. An updated, accurate and reliable source-capacity requirement would help identify future infrastructure needs for each water system and provide more accurate projections of current and future water demand in support of state water planning.

#### Challenges:

1. The Legislature directed the Division to revise its standards based on actual use data. Data for peak-day use in different parts of the state and distinguishing between indoor and outdoor use is not broadly available. The Division of Water Resources has data reflecting the total flow each month, but that is not sufficient to answer the audit's questions.
2. The revised standard must ensure that water systems have sufficient water. To set the right standard, the Division must measure the "peak" day demands. Water outages typically start at the highest elevation within the distribution system and then progress down to the lowest elevation of the distribution system. During this process, contaminants could be syphoned into the water system. Further, water for fire protection and household uses would be compromised.
3. The Division developed a plan to gather the data and evaluate it, consistent with the Legislative Auditor's recommendations. The estimated cost was \$13.3 million. The Legislature authorized the use of \$1.0 million in federally funded construction funds and \$500,000 in state construction funds. The Division of Drinking Water is developing new plans to most effectively use the authorized funds.