

Great Salt Lake Dischargers

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Introduction

There are a number of entities that discharge treated water either directly or indirectly to the Great Salt Lake. Specifically there are ten municipal wastewater facilities that discharge to the lake or through a nearby water channel and one additional municipal facility in the design phase. In addition there are three major industrial dischargers who discharge directly to the lake and one more in the planning phase. Finally, there are several domestic lagoon systems which may discharge into the lake, again either directly or indirectly.

Dischargers Interest and Activities Relating to the GSL

Wastewater discharge permit limitations are based on either water quality or technology driven standards. All discharges must meet a technology based treatment standard called secondary treatment. In addition, specific permits may have a discharge limitation based on the assimilative capacity of the receiving water. This assimilative capacity is usually determined based on the numeric criteria established for the receiving water in the State Administrative Code, R317-2, and the current background concentrations of the pollutant being evaluated. For dischargers, basically, the lake is a place to put water. Water placed in the lake must not harm the intended use of the lake. It is feasible for wastewater to be treated to a point where all the pollutants have been removed. However, the cost for such treatment could be a significant burden to the public through higher sewer bills and it could cause industries to go out of business. The Clean Water Act passed in 1972 by the federal government and all subsequent amendments, revisions and State additions have always tried to balance the cost of treatment with the environmental needs of the receiving water. In short we want to discharge water which meets all the ecosystems needs at a reasonable cost to the discharger.

Required Permits and Approvals for Dischargers

The federal Clean Water Act, the subsequent Code of Federal Regulations Title 40, The State of Utah Code Title 19-5, and subsequent Utah Administrative Code R317 place specific requirements on all dischargers. The State of Utah is delegated the regulatory program for permit administration from the U.S. Government Environmental Protection Agency. As such, any party wishing to discharge waters to the Great Salt Lake must first obtain a discharge permit from the Utah Division of Water Quality/Water Quality Board. Permit requests are evaluated against current water quality standards and discharge requirements are determined. However, as a hyper-saline water body, most of the federal default water quality standards are not applicable. These federal default values are based on fresh water or sea water ecosystems and protect the normal

organisms found in these waters. The hyper-saline conditions of the GSL are significantly different and standards protective of the organisms present in the Great Salt Lake are not yet established. As such, protection of the lake is based on narrative standards which provide no specific numeric discharge limitations. The State has begun the process of establishing numeric water quality standards with the first standard for selenium currently being public noticed. The cost for establishment of this one standard was about \$2.6 million. Establishing a full suite of protective numeric standards will be very expensive.

Pressures on the Lake Affecting Dischargers

There is expressed concern that the lack of numeric standards on GSL discharges are causing harm to the ecosystem. Concerns over toxicity to the bird population and the possibility of one more selenium discharger, drove the development of the proposed selenium standard. The presence of cyanobacteria and possible cyanotoxins, concerns over the rapid growth of invasive species in the wetlands, and extremely high concentrations of chlorophyll A in Farmington Bay are now driving the need to evaluate excessive nutrients in the Great Salt Lake. The costs to the public for nutrient reduction at all municipal wastewater treatment facilities that reach the GSL (Salt Lake, Weber, Davis and Box Elder Counties) could be in the billions of dollars, depending on the end point required. Mercury in high concentrations in ducks is alarming and is now also under examination. As the State moves forward with the establishment of numeric criteria, dischargers worry that all standards will not have the rigorous science that has been completed for selenium. If the rush to be protective drives extremely low numeric criteria, the dischargers will be the primary target for pollutant reduction. Generally, all dischargers want to be protective of the ecosystem, just not overly protective to a level where we can't comply without industry going out of business or charges to citizens going through the roof. In the end, we all want to be able to continue to flush our toilets.

GSL Management Improvements

Most dischargers are satisfied with the Division of Water Quality as the primary regulatory agency managing their permits. The Division does a good job given the resources it has available. The establishment of Great Salt Lake numeric criteria for all the normally occurring pollutants appears to be beyond the resources the Division is currently allocated. As such, many dischargers favor the establishment of a commission for the lake which could assist in the development of greater research funding for standards development. Partnerships such as the those developed in other parts of the country could serve as a model for such a commission. Because the Great Salt Lake is of hemispheric importance as a flyway for migrating birds, it is critical that funding protecting this lake come from all sectors of government and the community.