



City of Sparks, Truckee Meadows Water Reclamation Facility

Fine Bubble Diffuser Aeration System

Facility Description:

The City of Sparks Truckee Meadows Water Reclamation Facility (TMWRF) is located east of the Truckee Meadows, along the Truckee River in Sparks, Nevada. TMWRF is responsible for treating wastewater from the Reno/Sparks area to meet NDEP/EPA permit requirements and to enhance the public health and aesthetics of Sparks. Water reclamation is also important to downstream users and TMWRF continues to take steps to provide these communities with high-quality water.

Project Overview:

TMWRF recently converted its mechanical aeration system to a subsurface fine bubble disk diffuser system. Aeration introduces oxygen into the wastewater to support metabolizing microorganisms that breakdown the organic pollutants thereby reducing the environmental impact. Effective aeration is a critical and highly energy intensive part of the wastewater treatment process. In general, processes that mix the wastewater and expose the greatest surface area of bubbles to the water are the most efficient.



**Mechanical Aeration
(before conversion)**



**Fine Bubble Disk Diffusers
in Aeration Tank**



**Subsurface Aeration with
Fine Bubble Diffusers**

