



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

April 7, 2017

Michael Drinkwater, P.E.
Treatment Plant Manager
Truckee Meadows Water Reclamation Facility
8500 Cleanwater Way
Reno, Nevada 89502

Re: Potential Impact of AB 193 on the Truckee Meadows Water Reclamation Facility Discharge - Permit NV0020150.

Dear Mr. Drinkwater:

The Nevada Division of Environmental Protection (NDEP) has reviewed the March 23, 2017 Truckee Meadows Water Reclamation Facility (TMWRF) letter of concern regarding the potential impact to TMWRF by the fluoridation requirement of AB 193. We appreciate the uncertainties expressed in the letter and concerns with any mandate that may result in elevating the effluent fluoride and total dissolved solids (TDS) concentrations of the TMWRF discharge to the Truckee River. While not stated in the letter, discussion at the March 20, 2017 meeting between City of Sparks and NDEP representatives, indicated a desire from Sparks for NDEP to evaluate whether or not additional wastewater treatment would be required of TMWRF for fluoride or TDS. While there is a degree of uncertainty based on limited review of readily available data, NDEP's review indicates that such wastewater treatment is unlikely to be necessary, as further outlined herein. However, it is important to understand that our analysis, based on available information, cannot guarantee additional treatment will not be needed.

Nevada Administrative Code (NAC) 445A.1236, "Standards for toxic materials applicable to designated waters", includes a total fluoride irrigation water quality standard of 1.0 milligrams per liter (mg/L) for all surface waters that do not have a site-specific standard for this parameter. The Pyramid Lake Paiute Tribe has adopted the same water quality standard for the Truckee River. Additionally, NAC 445A.1688, "Truckee Region: Truckee River at Lockwood Bridge", includes a TDS water quality standard for beneficial uses of 500 mg/L that has been incorporated into the TMWRF discharge permit, NV0020150. While it is uncertain if these values will be exceeded by a drinking water fluoridation requirement, it is agreed that any increase in the TMWRF effluent fluoride and TDS concentrations could increase the levels of these parameters in the Truckee River at the downgradient Lockwood Bridge sampling point.

As stated in your letter, there are natural base flow fluoride contributions into Steamboat Creek that impact the fluoride concentrations in the Truckee River independent of the fluoride addition that would be required by AB 193. Fluoride values ranging from 0.4 to 0.7 mg/L have been documented in Steamboat Creek at Cleanwater Way in 2014-2016. Based on a limited data set of five samples, TMWRF currently discharges an average fluoride concentration of 0.20 mg/L. If the Truckee Meadows Water Authority (TMWA) provides water with a fluoride concentration of less than 1.0 mg/L, a fluoride effluent discharge limitation for TMWRF would not be violated by the fluoridation requirement. While the current discharge effectively dilutes the natural concentration of fluoride in Steamboat Creek, TMWRF is not obligated to provide this beneficial effect.

The TMWRF correspondence focused on fluoridation via sodium fluoride that will increase the effluent TDS concentration by approximately 3 mg/L. In 2015-2016, TMWRF had two exceedances of the TDS 30-day average discharge standard of 500 mg/L; August and October 2015. The remaining months reported TDS discharge levels of 387 mg/L – 488 mg/L. The TMWRF letter also identifies one additional reporting period in the past nine years that would have been an exceedance with an additional 3 mg/L contribution of TDS. Based on this data, the increased risk of exceedance of the discharge standard due to fluoridation is low. Data trends from 2015-2016 for

TDS effluent concentrations appear seasonal and indicate increased usage of groundwater wells by TMWA during the summer months. If TMWA and TMWRF were able to cooperatively manage the water resources of the basin, and drinking water fluoridation, with an eye toward TDS effluent management, the risk of exceedance would remain low.

Another option to reduce risk of TDS effluent exceedance would be for the community to evaluate the use of other fluoridation processes such as hydrofluorosilicic acid (HFA). HFA does not introduce the same degree of additional TDS as sodium fluoride. NDEP has a Memorandum of Understanding with the Health Division's Oral Health Program that commits the NDEP to provide engineering design review and approval services for drinking water systems that propose to install fluoridation equipment. The NDEP is committed to working with TMWA and TMWRF on the planning and design of these systems if required by the passage of AB 193, including discussion on the form of fluoridation.

If environmental or operational circumstances change, or additional data reveals that either TDS or fluoride discharge concentrations have a reasonable potential to degrade waters of the State, NDEP will work with TMWRF on an acceptable plan to comply with Truckee River standards as we have done in the past. As always, NDEP is available to meet to discuss the items in this letter should additional clarification be required. I can be reached at (775) 687-9433.

Sincerely,



Bruce Holmgren, P.E., Chief
Bureau of Water Pollution Control

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