



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Jennifer Robinson, Permit Writer

FROM: Chris Bittner, Standards Coordinator

DATE: October 24, 2014

SUBJECT: Antidegradation Review for the Central Davis Sewer District
UPDES Permit **UT0020974** Renewal

Summary: Based on the information provided in the UPDES Permit Renewal Package Application Documentation Package (March 7, 2014) submitted by Central Davis Sewer District, the uses designated in R317-2-12 and existing uses of the receiving waters (Transitional Waters → Farmington Bay, Great Salt Lake) will be protected and water quality-based effluent limits are not required (UAC R317-8-4.2(4)a.2.).

Receiving Waters and Designated Uses (UAC R317-2-13.11):

Transitional Waters, Great Salt Lake

Class 5E protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain

Farmington Bay, Great Salt Lake

Class 5D protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain

Level I Antidegradation Review

At the request of the Division of Water Quality (DWQ), Central Davis Sewer District (CDS) compiled and analyzed the available data for the effluent. The purpose of this request was twofold: 1) to document that the effluent will not violate water quality standards, and 2) to determine if water quality-based effluents are required for the permit. Water quality-based effluents are required when the effluent has “reasonable potential” to cause or contribute to a violation of a water quality standard.

The Level I antidegradation review requirements are that existing uses will be protected (UAC R317-2-3.1). For the affected receiving waters, existing uses are the same as the designated uses. The receiving waters for this effluent do not have numeric water quality criteria for the protection of aquatic life and therefore, the relevant portions of R317-8-4.2(4)(a)6. that apply are:

R317-8-4.2(4)(a)6. Where the State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard the Director will establish effluent limits using one or more of the following options:

a. Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the Director determines will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or rule interpreting its narrative water quality criteria supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook (October 1983), risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents.

b. Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 307(a) of the CWA, supplemented where necessary by other relevant information.

The screening approach that was implemented at the recommendations of DWQ was to compare the pollutant concentrations in the effluent to freshwater numeric criteria. If the effluent pollutant concentrations meet freshwater numeric criteria, the conclusion is that the aquatic life uses of the receiving waters will not be impaired and water quality-based effluents are not required.

As documented in the report, the representative pollutant concentrations in the effluent meet acute and chronic freshwater numeric criteria. Based on these comparisons, the uses are being protected and based on the currently available information, no pollutant exhibits reasonable potential.

Over four months in 2008, CDS D measured mercury concentrations in the influent, in- process, and effluent. Influent concentrations generally exceeded 100 ng/l and effluent concentrations were all less than 10 ng/l (freshwater screening value = 12 ng/l). The long term representativeness of these measured concentrations should be evaluated under the pretreatment program. Additional characterizations of mercury in the effluent using analytical methods sufficiently sensitive to measure 12 ng/l are unnecessary as long as the current data can be concluded to be representative.

The monitoring requirements from the previous permit are recommended to be retained to support future renewals and no changes are recommended.

Level II Antidegradation Review

In accordance with UAC R317-2-3.5.b.1.(b), a Level II antidegradation review is not required because there is no change to effluent concentrations or loading compared to the previous permit.

WET Testing

CDSD currently conducts acute WET monitoring consistent with Utah's 1991 WET Implementation Guidance. If WET monitoring is required for this permit, chronic WET monitoring is recommended because the dilution in the Class 5E Transitional Waters is less than 20:1.

