

Late Revisions - Item #9
City of Mt. Shasta, Wastewater Treatment Plant, Siskiyou County
Proposed NPDES Permit
21/22 June 2007, Central Valley Water Board Meeting

1. In the Fact Sheet, Section IV.D.4, p. F-37:

Add the following as introductory text to Section IV.D.4, Satisfaction of Antidegradation Policy.

This Order is consistent with the antidegradation provisions of 40 CFR 131.12, State Water Board Resolution 68-16, and State Water Board APU 90-004.

The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the Federal antidegradation policy (40 CFR 131.12) where the Federal policy applies under Federal law. Resolution 68-16 requires in part:

1) High quality waters be maintained until it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies; and

2) Any activity, which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The permitted surface and groundwater discharges will result in some minimal degradation of waters of the State and navigable waters of the United States, but in this case, such degradation is consistent with the maximum benefit to the people of the State. Limited degradation that does not cause exceedance of water quality objectives is warranted to allow for the economic benefit stemming from local growth. In this case, the City of Mt. Shasta is growing and continued treatment of wastewater is necessary to protect water quality and accommodate growth. The Regional Water Board defers to the local government agencies (City of Mt. Shasta and Siskiyou County) regarding land use and land development decisions, and their opinion that development is important and necessary. This Fact Sheet contains detailed information about each constituent of concern in the waste discharge and what changes in the discharge may occur for each constituent. The effluent concentrations for all constituents are based on water quality criteria and objectives and an increase in mass for some constituents, if any, will be insignificant. The accommodation of the development justifies lowering of receiving water quality. In this case, however, this Order authorizes, very minimal, if any lowering of receiving water quality given the increased level of treatment required by this Order. Consistent with the Federal and State antidegradation policies, this Order requires the Discharger to meet requirements that will result in best practicable treatment or control. This Order requires compliance with applicable Federal technology based standards and contains more stringent water quality

based effluent limitations, where required. This Order includes additional requirements for treatment and control that, in some cases, exceed Federal standards. This Order requires secondary and advanced secondary treatment, which is in excess of Federal technology based standards. It also requires the discharge to be disinfected to DHS recommendations for the protection of water contacts recreation beneficial uses. Discharge during the summer peak recreation period is prohibited. Due to upstream flow requirements, the discharge will always receive a dilution ratio of at least 20:1 (Sacramento River: effluent), but usually much greater (i.e., 100:1). In addition, this Order does not grant any credit for dilution until an adequate mixing zone and dilution study is provided.

These requirements to implement best practicable treatment or control will assure that pollution or nuisance will not occur and that the highest water quality consistent with maximum benefit to the people of the State will be maintained. Due to the high level of treatment requirements, the seasonal discharge prohibition, and the significant dilution available, this Order will result in maintenance of existing in-stream uses. In performing the "reasonable potential" analysis, the Regional Water Board considered the discharge effects on water quality on a pollutant-by-pollutant basis. This Order includes that analysis.

Discharge Prohibition III.C of this Order prohibits the wastewater treatment and discharge from causing a nuisance as defined by the California Water Code.

State Board APU 90-004 states that,

"A Regional Board may determine that it is not necessary to do a complete antidegradation analysis. The Regional Board may reach this determination if, using its best professional judgment and all available pertinent information, the Regional Board decides that the discharge will not be adverse to the intent and purpose of the State and Federal antidegradation policies.

Based on information available to the Regional Board and any other background material the Regional Board believes is necessary, a complete antidegradation analysis will not be required if:...

- 3. A Regional Board determines the proposed action will produce minor effects which will not result in a significant reduction of water quality; e.g., a POTW has a minor increase in the volume of discharge subject to secondary treatment; or..."*

Further discussion of antidegradation as it pertains to the surface and groundwater discharges is provided below.

2. In the Fact Sheet, Section IV.D.4.a, p. F-37:

Remove the second sentence in Section IV.D.4, Satisfaction of Antidegradation Policy, a. Surface Water and replace with the following:

“The increase in the permitted average dry weather flow rate from 0.70 mgd to 0.80 mgd is a “minor increase in the volume of discharge” and is subject to secondary and advanced secondary treatment. The increase will not result in a “significant reduction of water quality” (APU 90-004). In fact, Regional Board staff does not expect any measurable impact to receiving water quality from the increased discharge flow rate.”

3. In the Fact Sheet, Section IV.D.4.b, p. F-38

In Section 4, Satisfaction of Antidegradation Policy, b. Groundwater, on Page F-38 of the Fact Sheet, first paragraph, delete the remainder of the paragraph following the fourth sentence:

“The Sacramento River lies approximately 300 yards to the southwest and 400 vertical feet below the bottom of the oxidation ponds.”

and replace with the following:

“Groundwater monitoring at the wastewater treatment plant and the golf course is not necessary. Approximately 25 feet of soil (sand and clay) suitable for the treatment of percolating wastewater exists beneath these areas. Underlying groundwater is first encountered at approximately 250 feet bgs, and flows toward the Sacramento River, where any impacts are directly measured by the receiving water monitoring required in this Order. The potential for some groundwater degradation is always present when wastewater, even treated wastewater, is applied to land with underlying groundwater. However, in this case, the degradation is expected to be minor, and occur in an area where installation of a water supply well is neither practical nor desirable because of the required setback distances, and the steep terrain with poor access. It should also be noted that the Discharger’s land application of treated wastewater is at Regional Board staff’s request, as a means to eliminate the surface water discharge during the summer recreation period. Recently adopted permits for similar facilities do not require groundwater monitoring for the use of recycled water at golf courses. The City of Mt. Shasta is a small community with limited resources, so permit requirements must be carefully considered.”

4. In the Fact Sheet, Section IV.D.4.b, p. F-38.

Delete the first five sentences of the second paragraph, up to and including:

“No water quality degradation of groundwater has been observed over the 20 year period the groundwater monitoring period has been in effect.”

and replace with:

“The groundwater monitoring program established by this Order is capable of determining whether the leachfield discharge degrades groundwater. The monitoring is both adequate and appropriate, and protects beneficial uses. The three wells used for monitoring the leachfield were selected to monitor background, near-field downgradient, and far-field downgradient. All three wells are screened at 250 feet below ground surface, which is the depth of first encountered groundwater. No degradation in groundwater quality has been observed in over 20 years, with the exception of a minor increase in the concentration of nitrate at the edge of the leachfield. The highest nitrate concentration at this location is only one-tenth of the MCL, and is suspect because the EC concentration is stable--a contrary finding. It should also be noted that the effluent sent to the leachfield is not raw wastewater; it has been treated to secondary standards, and disinfected. The leachfield discharge only occurs during the summer, and then only what the golf course doesn't use.”

The paragraph continues from there.

6/19/2007, 6:05pm
BJS