Central Valley Regional Water Quality Control Board
5/6 June 2014 Board Meeting

Response to Comments
for the
City of Williams
Wastewater Treatment Plant
Tentative Waste Discharge Requirements
and
Time Schedule Order

The following are Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit) and Time Schedule Order for the City of Williams Wastewater Treatment Plant (Facility), in Colusa County.

The tentative NPDES Permit and Time Schedule Order were issued for a 30-day public comment period on 28 March 2014 and comments were due 28 April 2014.

The Central Valley Water Board received timely comments regarding the tentative NPDES Permit by the due date from the following interested parties:

- City of Williams (City)

Changes, where necessary, were made to the tentative NPDES Permit based on public comments received. The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses.

CITY COMMENTS

Comment 1, Effluent Limitations and Discharge Specifications, IV.A.1.A:

The City noted a mathematical error in the effluent loading limitation calculations for BOD and TSS, and requested the corrected calculation shown below.

(10 mg/L)(0.5 million gallons per day (MGD))(8.34) = 42 pounds/day

Response: Central Valley Water Board staff agrees and changed the proposed NPDES Permit, Table 4. Effluent Limitations in the Limitations and Requirements section, as shown in part below in underline/strikethrough format, and throughout the proposed NPDES Permit as appropriate.

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20	--	--
	lbs/day[1]	~~40~~42	63	83	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day[1]	~~40~~42	63	83	--	--

[1] Based on an average dry weather flow of 0.5 MGD.

Comment 2, Effluent Limitations and Discharge Specifications, IV.A.1.D.

The City is concerned that there is ambiguity in the Monitoring Locations EFF-001 and UVS-001.

Response: Board staff met with City staff and consultants to discuss the appropriate filtration and ultraviolet disinfection systems' monitoring locations and applicable descriptions. As agreed during the meeting, Central Valley Water Board staff changed the Limitations and Requirements and the Monitoring and Reporting Program (Attachment E) sections in the proposed NPDES Permit as shown in part in underline/strikethrough format below, and throughout the proposed NPDES Permit as appropriate.

VI. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

…

d. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following, with compliance measured at Monitoring Location UVS-002:

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; and
iii. 240 MPN/100 mL, at any time.

ATTACHMENT E

Table E-1. Monitoring Station Locations (in part)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	UVS-002	A location, per UV channel, where a representative sample of wastewater can be collected immediately downstream of the UV disinfection system.

Table E-8. Filtration System and UV Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Flow	MGD	Meter	~~UVS~~FIL-001	Continuous[1]
Turbidity	NTU	Meter	FIL-001	Continuous[1,2]
Number of UV banks in operation	Number	Observation	N/A	Continuous[1]
UV Transmittance	Percent (%)	Meter	UVS-001	Continuous[1]
UV Dose[3]	mJ/cm^2	Calculated	UVS-~~001~~002	Continuous[1]
Total Coliform Organisms	MPN/100mL	Grab	UVS-002 [4]	3/Week

[1] For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation. If analyzer(s) fail to provide continuous monitoring for more than two hours and influent and/or effluent from the disinfection process is not diverted for retreatment, the Discharger shall obtain and report hourly manual and/or grab sample results. The Discharger shall not decrease power settings or reduce the number of UV lamp banks in operation while the continuous analyzers are out of service and water is being disinfected.

[2] Report daily average and maximum turbidity.

[3] Report daily minimum hourly UV dose and daily average UV dose. The minimum hourly average dose shall consist of lowest hourly average dose provided in any channel that had at least one bank of lamps operating during the hour interval. For channels that did not operate for the entire hour interval, the dose will be averaged based on the actual operation time.

[4] Collection of total coliform organism samples from the end of the lead UV channel as water cascades down into the collection trough is allowed. The Discharger shall identify the lead channel at the time of sample collection.

Fact Sheet

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

B. Effluent Monitoring

10. Order R5-2008-0185-01 required monitoring for turbidity continuously and total coliform organisms three times per week at Monitoring Location EFF-001. This Order retains the monitoring frequencies for turbidity and total coliform organisms, but moves the point of compliance from Monitoring Location EFF-001 to an internal compliance point following the filtration system and prior to the UV disinfection system for turbidity and following the UV disinfection system for total coliform organisms. Therefore, monitoring for turbidity is required at Monitoring Location FIL-001 and

monitoring for total coliform organisms is required at Monitoring Location UVS-002.

The UV disinfection system has two channels. Regrowth of total coliform bacteria may occur at various locations in each channel after disinfection has occurred. To minimize the potential for sampling the regrowth, collection of total coliform organism samples shall be from the lead channel as water cascades over the weir and down into the collection trough (UV Effluent Channel). The designation of lead channel (with Monitoring Location UVS-002) shall rotate on a regular basis; therefore, the Discharger shall identify the lead channel at the time of sample collection in the monitoring reports.

Comment 3, Receiving Water Limitations V.A.17.

The City contends the 1-month averaging period for determining compliance with the turbidity receiving water limitation is applicable when wastewater is compliant with the Filtration System Operating Specifications in section VI.C.4.a, rather than tied to a tertiary level of treatment.

Response: Central Valley Water Board staff agrees and the following changes were made to section V.A.17 of the Limitations and Requirements of the proposed NPDES Permit regarding, turbidity, and to section VII.H, Compliance Determination and throughout the proposed NPDES Permit as appropriate:

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

…

17. **Turbidity**

…

~~When wastewater is treated to a tertiary level (including coagulation) or equivalent, a 1-month averaging period may be used when determining compliance with this receiving water limitation.~~When treated wastewater is in compliance with the Filtration System Operating Specifications in section VI.C.4.a, a 1-month averaging period may be used when determining compliance with the turbidity receiving water limitation. If the treated wastewater is not in compliance with section VI.C.4.a, then an averaging period is not allowed.

VII. COMPLIANCE DETERMINATION

…

G. 1-Month Averaging Period for Receiving Water Limitations (Section V.A.). The parameter (temperature or turbidity) sample values shall be collected as specified in Attachment E, Monitoring and Reporting Program. The sample values collected for the calendar month at RSW-001 shall be added together and the total divided by the number of sample values. The sample values collected for the calendar month at RSW-002 shall be added together and the total divided by the number of sample values. The difference between the two averages may then be calculated and used to satisfy the 1-month averaging period allowance, if applicable under Receiving Water Limitations section V.A.

Comment 4, Groundwater Limitation B.1

The City contends that the groundwater narrative limitations are inconsistent and requests elimination of portions of the narrative limitation.

Response: Central Valley Water Board staff agrees and modified section V.B. Groundwater Limitations of the proposed NPDES Permit as shown below in underline/strikethrough format and throughout the proposed NPDES Permit as appropriate.

V. Receiving Water Limitations

B. Groundwater Limitations

1. The discharge shall not cause the groundwater to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

~~1~~2. ~~Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the Facility to contain waste constituents in concentrations in excess of natural background quality or that listed below, whichever is greater~~The discharge shall not cause the groundwater to exceed that listed below or background quality, whichever is greater:

a. Total coliform organisms median of 2.2 MPN/100 mL over any 7-day period.

Comment 5, Provisions VI.C.2.C (Survey and Evaluation of Influent Salinity Sources)

The City is concerned that Provision VI.C.2.c. Survey and Evaluation of Influent Salinity Sources in the tentative NDPES Permit violates the privacy of residential users and is unnecessarily expensive for the City and its users. The City requests elimination or major modification of the provision so that only industrial users are listed and to allow the City to refine the study objectives.

Response: Central Valley Water Board staff agrees and modified Provision VI.C.2.c. Survey and Evaluation of Influent Salinity Sources in the proposed NPDES Permit as shown in underline/strikethrough format below and throughout the proposed NPDES Permit as appropriate:

VI. Provisions

C. Special Provisions

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

…

c. Survey and Evaluation of Influent Salinity Sources. ~~The Discharger shall survey and evaluate the potential salinity contributions from local users of the facility collection and treatment systems. The Discharger shall submit a report that lists the local users, the salinity (as electrical conductivity) concentrations in the local user's wastewater, and the local user's percent contribution to the total electrical conductivity concentrations in the City's influent. The Discharger shall also summarize in the report the actions taken (or that will be taken) to reduce electrical conductivity concentration in the influent. This report shall be submitted no later than the following compliance date:~~ The Discharger shall determine the basis for the observed effluent salinity concentrations and report the findings. The basis shall be determined by reporting the salinity load originating from the municipal water supply and describing the additional loads associated with residential, commercial, and industrial uses. Monitoring may be required of specific discharger(s) or collection system branches to allow for the development of an accurate salinity model. The final report shall include the Discharger's proposal to reduce salinity concentrations within the effluent discharge, including projected timelines. The Discharger, in the final report, may also propose site-specific salinity objectives based upon the factual findings of this study. This report shall be submitted no later than the following compliance date:

Task	Compliance Date
i. Submit Final ~~r~~Report ~~on salinity source survey and evaluation~~	**1 August 2015~~7~~**
ii. Implement Source Reductions or Controls	**Within 6 months following approval by Executive Officer**

Comment 6, Attachment E – Receiving Water Monitoring Requirements VIII.A.1

The City states that the tentative NPDES Permit contains total coliform effluent limitations and compliance monitoring, and thus the additional receiving water monitoring in Table E-5 Receiving Water Monitoring Requirements is unnecessary and costly. Therefore, the City requests the receiving water monitoring for fecal coliform organisms in Salt Creek be removed or reduced from 1/week.

Response: Central Valley Water Board staff agrees and made the following modifications to Table E-5 Receiving Water Monitoring Requirements in the Monitoring and Reporting Program (Attachment E) and in Section VII.D.1.f in the Fact Sheet (Attachment F) of the proposed NPDES Permit as shown in part in underline/strikethrough format below:

MONITORING AND REPORTING PROGRAM (ATTACHMENT E)

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring Locations RSW-001 and RSW-002

1. The Discharger shall monitor Salt Creek at Monitoring Locations RSW-001 and RSW-002 as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Conventional Pollutants				
~~Fecal Coliform Organisms~~	~~MPN/100 mL~~	~~Grab~~	~~1/Week~~	~~1~~

FACT SHEET (ATTACHMENT F)

VII. Rationale for Monitoring and Reporting Requirements

D. Receiving Water Monitoring

1. Surface Water

f. Order R5-2008-0185-01 required receiving water monitoring at Monitoring Locations RSW-001 and RSW-002 for fecal coliform organisms. The Facility was upgraded to provide tertiary-level treatment and thus produces an effluent with total coliform at or

below 2.2 MPN per 100 mL as a 7-day median, no more than 23 MPN/100 mL more than once in a 30-day period, and never to exceed 240 MPN/100 ml. The Basin Plan contains receiving water objectives for fecal coliform, a subgroup of total coliform organisms, and with proper operation of the Facility, it is not possible for an effluent that is in compliance with the total coliform effluent limitation, to cause the receiving water to violate the fecal coliform objectives. Therefore, this Order does not contain monitoring requirements for fecal coliform organisms in the receiving water at monitoring locations RSW-001 and RSW-002. However, this Order retains effluent monitoring requirements for total coliform organism.

Comment 7, Attachment E – Reporting Requirements X.D.6 (SALINITY EVALUATION AND MINIMIZATION PLAN)

The City notes that reporting due dates in the Limitations and Requirements section and those in the Monitoring and Reporting Program of the tentative NPDES Permit are inconsistent, and thus the City request the due dates be modified to be consistent.

Response: Central Valley Water Board staff agrees and changed section X.D.5 and 6 Other Reports in the Monitoring and Reporting Program of the proposed NPDES Permit as shown in part in underline/strikethrough format below and throughout the proposed NPDES Permit as appropriate:

ATTACHMENT E

X. Reporting Requirements

D. Other Reports

5. **Survey and Evaluation of Influent Sources of Salinity.** ~~The Discharger shall survey and evaluate the local users of the WWTP collection system and submit a report containing the results of the survey and evaluation by **8 August 2015**.~~ The Discharger shall determine the basis for the observed effluent salinity concentrations in accordance with Provision VI.C.2.c in the Limitations and Discharge Requirement section of this Order. The Discharger shall report the findings by 1 August 2017. In addition the Discharger will Implement Source Reduction or Controls within 6 months after approval by the Executive Officer

6. **Salinity Evaluation and Minimization Plan.** The Discharger shall update and implement their 4 September 2009 Salinity Evaluation and Minimization Plan to identify and address sources of salinity from the Facility. The updated plan shall be submitted to the Central Valley Water Board by **~~8 May~~1 August 201~~5~~7**. **Annual reports** identifying the City's

progress/set-backs in reducing salinity concentrations in the effluent shall be submitted annually thereafter **(i.e. 1 August 2018, etc.)**.

CENTRAL VALLEY WATER BOARD STAFF (STAFF) CHANGES

Staff Change No. 1.

With City representative approval, requirements for submittal of a Groundwater Sampling and Analysis Plan (SAP) were added to Special Provision VI.C.2.b. Groundwater Monitoring and Evaluation, and compliance dates were modified as shown in underline/strikethrough format below and throughout the proposed NPDES Permit as appropriate:

VI. Provisions

C. Special Provisions

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

b. Groundwater Monitoring and Evaluation. Groundwater monitoring results have shown higher concentrations of EC, TDS, nitrate, and total coliform organisms in historically defined compliance wells than have been observed in the historically defined upgradient well. However, ~~The Discharger reports that a more thorough geo-forensic investigation (e.g., making use of expanded water chemistry and stable isotopes) is required to establish the cause of the elevated concentrations, as there are numerous sources that contribute to groundwater quality within the installed monitoring well network. The Discharger has not submitted studies that fully establish background groundwater quality or appropriately defined appropriate groundwater limitations that protect the beneficial uses. Because the costs to undertake these studies are significant, and~~ the upgrades to the treatment facility (e.g., conversion of ponds to activated sludge, the lining of several ponds, and the infrequent discharge to unlined ponds) likely eliminates any further impact to groundwater~~, groundwater limitations for EC, TDS, and nitrate have not been included in this Order. An effluent limitation for total coliform organisms as a median of 2.2 MPN/100 mL over any 7-day period, is retained in this Order from the previous NPDES Permit because the total coliform groundwater data showed no obvious trends~~. This Order requires the Discharger to submit a report documenting past efforts to remove wastes from the storage basins. This Order also requires the Discharger to continue groundwater monitoring in accordance with section VIII.B of the MRP (Attachment E), to prepare groundwater trend analyses, and to submit annual updates evaluating pollutant concentration trends. ~~The~~

~~Discharger shall continue to conduct groundwater monitoring in accordance with section VIII.B of the MRP (Attachment E). The intent of continued groundwater monitoring and trend analyses is to provide enough information at the end of this permit term for Central Valley Water Board to determine whether the effluent limitations for total coliform organisms may be removed from the next permit and whether continued groundwater monitoring is warranted.~~

The Discharger shall:

iii. Submit annual updates of the groundwater trend analysis for electrical conductivity, total dissolved solids, nitrate, and total coliform organisms including data from 1 January 2010 through December 2015, December 2016, December 2017, and December 2018.

iv. The Discharger shall submit these reports by the following dates:

Task		Compliance Date
~~i.~~	Submit report on removal of solid wastes from ponds.	**1 February 2015**
ii.	Submit groundwater trend report using data from 1 January 2010 through 31 December 2014	**1 ~~August~~February 2015**
iii.	Submit annual groundwater trend updates showing data from 1 January 2010 through December 2015, December 2016, December 2017, and December 2018.	**1 ~~March~~February 2016 and annually thereafter.**

Staff Change No. 2.

Language was added to footnotes 7 and 9 of Table E-3 of Attachment E, Section IV.A.1 to require the Discharger to report when aluminum or chlorine were not used as shown in underline format below.

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[7] Monitoring for aluminum is only required when aluminum-based coagulants are used in the treatment process. When aluminum-based coagulants are not used, the Discharger will so state in the monthly self-monitoring report.

[9] Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L. Total chlorine residual monitoring is only required when chlorine or chlorine-containing products are used in the treatment process. When chlorine or chlorine-containing products are not in use in the treatment process, the Discharger will so state in the monthly self-monitoring report.

Staff Change No. 3.

Table E-10. Monitoring Periods and Reporting Schedule of the Monitoring and Reporting Program in the proposed NPDES Permit was modified to properly specify the SMR Due Date for 1/Month Sampling Frequency as shown in part in underline/strikethrough format below:

Table E-10 Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Month	Permit effective date	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling ~~Submit with monthly SMR~~