



June 29, 2018

Mr. Justin McSmith
RWQCB North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Subject: MCSD Comments on NPDES Renewal WDR Order No. R1-2018-0032

Dear Justin:

On behalf of the McKinleyville Community Services District (MCSD), Moonstone Associates, Inc. (Moonstone), is submitting the attached comments on the renewal of the National Pollutant Discharge Elimination System (NPDES) Permit for the MCSD Wastewater Management Facility, Order No. R1-2018-0032. These comments identify areas in the draft permit where further information is requested, and also address identified inconsistencies in the language included in the draft order, the monitoring and reporting program, and the fact sheet.

In addition to the attached comments on the draft order, there were also a few inconsistencies noted in the summary cover letter submitted with the draft order. Under the first bullet, the completion date for the upgrade of the MCSD facility should be referenced as July 1, 2018, instead of August 3, 2017. Under the fifth bullet, there is reference to a new requirement to monitor chlorine residual continuously before and after dechlorination at Monitoring Location INT-001, EFF-001 and EFF-003. Note, the draft order only requires continuous monitoring at location INT-001, and there is no monitoring location identified in the permit as EFF-003. Although the summary letter is not included as part of the draft order we wanted to make sure these additional inconsistencies in information were noted in the file. If you have any questions, or need any further clarification on the comments presented, please feel free to email me at lstromme@moonstoneassociates.com or call me at 707-845-1431.

Sincerely,

Moonstone Associates, Inc.

Lisa K. Stromme, PE, QSD, QISP
Senior Water Resources Engineer

Attachments:

1. MCSD Comments on NPDES Renewal Order No. R1-2018-0032

c. w/Attach: Greg Orsini, MCSD
James Henry, MCSD

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WDR Order R1-2018-0032

Page 1, Table 2

Comment 1. "Fischer Ranch" is spelled incorrectly, two places in Table 2.

Page 6, Section IV.A.1.a, Table 4

Comment 2. Need to confirm effluent limitations shown in Table 4.

Page 9, Section IV.D.1

Comment 3a. The language included in this section should be updated to reference chlorine residual monitoring at location EFF-001 instead of INT-001 and reference compliance with chlorine limitations (see Comment 3b). Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

"Total Residual Chlorine, Monitoring Location ~~INT-001~~ EFF-001. As measured at the end of the chlorine contact chamber at Monitoring Location ~~INT-001~~ EFF-001, the total residual chlorine concentration should be maintained at a level that ensures the discharge meets the total ~~coliform~~ chlorine effluent limitation at the end of the disinfection process for discharges to Discharge Point 001 ~~through 006~~."

Page 24, Section VII.N.1

Comment 3b. The language in this section is unclear and inconsistent with the required monitoring outlined in the Monitoring and Reporting Program (MRP) included as Attachment E. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

"Compliance with the chlorine residual effluent limitation shall be based on daily ~~coliform~~ chlorine monitoring at Monitoring Location EFF-001 to demonstrate that the discharge has been adequately dechlorinated."

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Attachment E - Monitoring and Reporting Program

Page E-3, Section I.E.

- Comment 4. There are two typos in the third sentence in this section. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

“For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 ~~or~~ for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive ~~ass~~ as defined at 40 C.F.R. 122.21(3) and 122.44(i)(1)(iv).”

Page E-4, Section II, Table E-1

- Comment 5. MCS D would like to request a reduction in the number of groundwater monitoring wells required to be monitored under the NPDES program. MCS D requests that groundwater monitoring only be required at monitoring well locations GW-002, GW-007, and GW-008, as these are the wells located near the Upper Fischer Ranch application area where recycled water is applied to land for land discharge as well as reuse.

Page E-4, Section II, Table E-1

- Comment 6. If MCS D is not able to reduce the number of wells required to be monitored, as requested under Comment 5, then MCS D would like to request that the monitoring wells be re-numbered in the new permit to align with the original numbering system used for the wells. Proposed revisions to the numbering system are as follows:

GW-015 should be GW-016

GW-016 should be GW-019

GW-014 should be GW-020

Page E-4, Section II, Table E-1

- Comment 7. Remove reference to “following dechlorination” from the monitoring location description for LND-001 and REC-001. Effluent is not dechlorinated when discharging to LND-001 and REC-001. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

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LND-001	Location for monitoring effluent from the chlorine contact chamber following dechlorination and prior to discharge to the Mad River percolation ponds.
REC-001	Location for monitoring effluent from the chlorine contact chamber following dechlorination and prior to water recycling.

Page E-5, Section II, Table E-1, Table Note 1

- Comment 8. Remove reference to “the sampling point following dechlorination” for LND-001 and REC-001 in table note 1. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

“Monitoring locations EFF-001, LND-001, and REC-001 are the same location, the sampling point ~~following dechlorination in the chlorine contact chamber~~. Different discharge point names and monitoring location names have been assigned due to differences in monitoring requirements at Discharge Points 001 (discharge to the Mad River following dechlorination), 002 (discharge to the percolation ponds) and 003 through 006 (discharge to the water recycling system).

Page E-5, Section II, Table E-1, Table Note 2

- Comment 9. Update reference to flow monitoring location for EFF-001 in table note 2. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

“Effluent flow shall be measured immediately prior to the chlorine contact basin ~~to the Mad River under the Hammond Trail railroad bridge~~.”

Page E-6, Section IV, Table E-3, Table Note 10

- Comment 10. Table note 10 indicates that CTR sampling at EFF-001 is only required to be completed once per permit term, no later than June 1, 2021, however the minimum sampling frequency specified in the table is annual sampling. Need clarification if annual CTR sampling is still required, or if the CTR sampling frequency can be reduced to once per permit term, consistent with the CTR sampling requirements at RSW-001.

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Page E-15, Section VI.A.1, Table E-4, Table Note 3

Comment 11. Revise percolation pond project completion date to 2020/2021.

Page E-16, Section VI.A.1, Table E-5

Comment 12. The monitoring frequency for total coliform bacteria at REC-001 has been set as a daily minimum sampling frequency. MCS D would like to request weekly sampling for coliform at REC-001 consistent with the coliform sampling requirements for EFF-001 and LND-001. Note there are no animals that produce milk for human consumption that are allowed to graze in the pasture areas where recycled water is applied for reuse.

Page E-18, Section VIII.C

Comment 13. As noted in Comment 5, MCS D would like to reduce the groundwater monitoring network to include wells GW-002, GW-007, and GW-008 only. These are the groundwater monitoring wells that are located in the Upper Fischer Ranch recycled water application area where effluent is applied for land discharge as well as reuse.

Attachment F – Fact Sheet

Page F-6, Section II.B.2

Comment 14. Revise the percolation pond project completion date to 2020/2021.

Page F-6, Section II.B.3

Comment 15. Need to update description of current recycled water system in this section to be consistent with the reuse area descriptions included in the Title 22 Report. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

“The Upper Fischer Ranch has ~~28~~ 36 acres available for irrigation: ~~19~~ 14 by flood irrigation and ~~9~~ 22 by spray irrigation. The Lower Fischer and West Pialorsi sites receive spray irrigation and are 45 and 35 acres; respectively.”

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Page F-7, Section II.E

Comment 16. Need to remove reference to treatment plant upgrades in the planned changes section, upgrades have been completed. Recommend updating section to include reference to the future expansion of the water recycling system on the East Pialorsi Ranch which will provide 53 acres for spray irrigation, and the transition of the percolation ponds to off channel salmonid habitat by 2020/2021.

Page F-17, Section IV.A.14

Comment 17. The word “receivibg” is spelled incorrectly.

Page F-18, Section IV.B.2

Comment 18. The permit language in this section indicates that the numeric effluent limitations for BOD₅ and TSS, including the percent removal requirements are “retained” from Order No. R1-2011-0054. However, the new draft permit contains more stringent numeric effluent limitations for BOD₅ and TSS, including more stringent percent removal requirements, than the previous order. Recommend this section be updated to include reference to new more stringent limitations for BOD₅ and TSS.

Page F-24, Section IV.C.3.a.v.(b)

Comment 19. The reasonable potential analysis for ammonia uses numeric effluent limitations for ammonia that are based on a paired receiving water pH of 8.6 and temperature of 10.7 °C at Monitoring Location RSW-001, the assumed presence of salmonids, and the assumed absence of mussels. MCSD would like to request further review of the receiving water data selected for use in establishing the ammonia criteria. Temperature and pH values recorded in the Mad River vary throughout the year, and the variability in data for each parameter should be taken into account when establishing effluent limitations that are based on these parameters.

Based on review of the pH data collected at R-001 from November 2011 through April 2018, the median pH value for R-001 is 7.7 and the 85th percentile pH value for R-001 is 8.3. The receiving water pH value used in the permit (8.6) appears to be a maximum observed value at R-001, equivalent to the 99th percentile pH value for the data set.

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MCSD would like to request that the ammonia effluent limitations be established based on the median or 85th percentile receiving water values, as these values are more representative of the baseline receiving water conditions under normal discharge conditions. Alternatively, a calculation-based limitation could be used in the permit, where the permittee is allowed to determine the ammonia toxicity limit for each discrete ammonia sampling event based on the receiving water pH and temperature at the time of sample collection. This would ensure that the ammonia effluent limitations being applied for the facility are directly related to actual receiving water conditions at the time of discharge.

Page F-24, Section IV.C.3.a.v.(b)

Comment 20. There is a typo in the MDEL value set for ammonia (0:1.6 mg/L) in the second to last sentence in this section.

Page F-26, Section IV.C.3.c

Comment 21. This section is missing reference to ammonia and dichlorobromomethane in the first sentence, also need to remove reference to reasonable potential for discharges of bis (2-ethylhexyl) phthalate per rationale presented in Comment 22 below.

Page F-27, Section IV.C.3.c

Comment 22. The rationale provided regarding the RPA results for bis (2-ethylhexyl) phthalate is unclear. The permit specifies that for pollutants with effluent limitations set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. For bis (2-ethylhexyl) phthalate, it appears all results collected in the past four years have been identified as having concentrations less than or equal to the minimum level set forth in the SIP for bis (2-ethylhexyl) phthalate (5 ug/L), indicating that compliance with the effluent limitations for this constituent has been met. The only exception to this is when the minimum reporting level has been elevated for bis (2-ethylhexyl) phthalate due to sample matrix interference. Need further clarification on how to address the reasonable potential for this parameter based on "J-flagged" data values that are less than or equal to the minimum level.

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Page F-29, Section IV.C.4

Comment 23. This section has inconsistent references to the CV value used for ammonia. Under Step 2 the text states “When the data set contains less than 10 sample results (as for the facility), or when 80 percent or more of the data set is reported as non-detect (ND), the CV is set equal to 0.6.” Under Step 3, the CV value used for ammonia is set equal to 0.25. The first reference to CV equal to 0.6 should be removed.

Page F-29, Section IV.C.4

Comment 24a. This section references the use of Table 2 in the SIP to establish the MDEL and AMEL multipliers based on the identified CV value for each constituent. For ammonia (CV=0.25), the permit establishes an AMEL multiplier of 1.08, using the 95th percentile occurrence probability, based on a sample set with n=30. Under Step 5 in Section 1.4 of the SIP (pg. 10), the SIP notes that “The AMEL and MDEL multipliers shall be calculated as described below, or shall be found in Table 2 using the previously calculated CV and the monthly sampling frequency (n) of the pollutant in the effluent.” The monthly sampling frequency set forth for ammonia in the permit is a monthly frequency. Per the SIP, if the sampling frequency is four times a month or less, n shall be set equal to 4. Request revision of the AMEL multiplier to 1.22, based on the 95th percentile occurrence probability for CV = 0.25, with a sample set n=4.

Page F-30, Section IV.C.4, Table F-6

Comment 24b. Need to update values shown in Table F-6 to be consistent with changes to the AMEL multiplier and resulting AMEL for ammonia as noted in Comment 24a above. The AMEL multiplier referenced should be 1.22 and the resulting AMEL would be equal to 1.11. Also, the LTA value shown in Table F-6 (0.90) is inconsistent with the lowest LTA value shown in Table F-5 (0.91). Need to update LTA value shown as well.

Page F-30, Section IV. Table F-8

Comment 25. The maximum daily effluent limitation for ammonia in the table (1.7) is inconsistent with the value referenced in Table F-6 and in the text on page F-24.

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Page F-36, Section IV.D.1

Comment 26. The second to last paragraph in this section states "...this Order does not retain effluent limitations for nitrate". This statement conflicts with the statement on page F-23 that provides a rationale for including effluent limitations for nitrate. MCSD requests clarification on whether nitrate limitations are required under the new permit terms.

Page F-38, Section IV.F.3.a

Comment 27. In reference to discharge specifications for BOD₅, the permit language in this section references the previous "equivalent-to-secondary treatment" regulations that no longer apply for the facility. MCSD recommends this section be updated to remove reference to the old permit language.

Page F-38, Section IV.F.3.b

Comment 28. In reference to discharge specifications for TSS, the permit language in this section references the previous "95th percentile TSS effluent concentration value" that no longer applies for the facility. MCSD recommends this section be updated to remove reference to the old permit language.

Page F-39, Section IV.F.3.d

Comment 29. This section states "...this Order does not retain the discharge specification for nitrate from Order No. 2011-0008-DWQ". This statement conflicts with the statement on page F-23 that provides a rationale for including effluent limitations for nitrate in the new permit. MCSD requests clarification on whether nitrate limitations are required under the new permit terms.

Page F-40, Section IV.G.3.b

Comment 30. In reference to discharge specifications for BOD₅, the permit language in this section references the previous "equivalent-to-secondary treatment" regulations that no longer apply for the facility. MCSD recommends this section be updated to remove reference to the old permit language.

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Page F-41, Section IV.G.3.c

Comment 31. In reference to discharge specifications for TSS, the permit language in this section references the previous “95th percentile TSS effluent concentration value” that no longer applies for the facility. MCS D recommends this section be updated to remove reference to the old permit language.

Page F-41, Section IV.G.3.e

Comment 32. Update text to reference 240 MPN/100 mL as the daily maximum limit for coliform.

Page F-47, Section VII.B.1

Comment 33. Update text to remove reference to “following dechlorination” for discharges to the percolation ponds and the water recycling system. Recommended changes to the language are as follows (strikeout indicates deletion, underline indicates added text):

“Order No. R1-2011-0008-DWQ established effluent monitoring requirements at Monitoring Location M-001, located in the chlorine contact chamber ~~following dechlorination~~, for discharges to the Mad River, following dechlorination (Discharge Point 001), the percolation ponds (Discharge Point 002) and the water recycling system (Discharge Points 003 through 006).”

Page F-48, Section VII.B.2.b

Comment 34. The rationale included in this section regarding the change from daily grab sampling to continuous chlorine monitoring at INT-001 is unclear. Section IV.D.1. in the draft order indicates that total residual chlorine is monitored at the INT-001 location to ensure the discharge meets the total coliform effluent limitation at the end of the disinfection process. In this section of the fact sheet, the rationale for continuous chlorine residual monitoring is linked to the potential for formation of chlorine disinfection by-products. Request revision of this section to reference continuous chlorine monitoring requirements at monitoring location EFF-001, as noted in Comments 3a and 3b above.

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Page F-49, Section VII.B.2.f

Comment 35. This section is missing reference to dichlorobromomethane in the last sentence. Also need to remove reference to bis (2-ethylhexyl) phthalate in the last sentence based on rationale presented in Comment 22 above.