

City of Eureka, Elk River Wastewater Treatment Plant					
Renewal of NPDES Permit - Observations and Comments					
April 4, 2016					
Item	Criteria	Current Limit or Value	Proposed Limit or Value	Observation	Comment
1	Peak dry weather treatment capacity	8.6 mgd	8.6 mgd	This limit is based on the original service area flow predictions and was used to set mass load limits but is not based on actual treatment capacity. Based on past performance, the WWTP should continue to meet the existing dry weather mass load limits in the future but there is potential to exceed the 8.6 mgd hydraulic limit during periods of unusually wet weather during the months defined as the dry weather period. To reduce the likelihood of exceeding future hydraulic limits during dry weather, request that dry weather limit correspond to the actual firm secondary treatment capacity.	The City of Eureka (City) requests that 12.0 mgd be listed as peak dry weather treatment capacity in lieu of 8.6 mgd. The current limit of 8.6 mgd has been carried over from the original Elk River Wastewater Treatment Plant (WWTP) National Pollutant Discharge Elimination System (NPDES) permit; it reflects the original projected peak dry weather flow for the service area. However, there are no actual hydraulic or treatment limitations at the WWTP associated with this flowrate. The WWTP currently has a firm secondary treatment capacity of 12.0 mgd.
2	Peak wet weather hydraulic capacity	32 mgd	removed	Flows in excess of 12 mgd will result in permit violation per Section III "Discharge Limitations" of the Waste Discharge Requirements (WDR). The permit should retain the ability to route peak flows through plant without causing hydraulic capacity violations. Proposed alternate mass load limits when flows exceeding 8.6 mgd are based on flowrate of 12 mgd (same as existing permit).	The City requests that the permit retain the peak hydraulic wet weather capacity of 32.0 mgd. The City understands that diversion of primary effluent around the secondary treatment process will eventually be phased out under the State Implementation Policy (SIP). The City plans to achieve full secondary treatment through process modifications for all flows reaching the WWTP and further will reduce the incoming flows through some combination of inflow and infiltration (I/I) reduction within the service area. In the interim, the City requests that the established hydraulic capacity of the WWTP be retained and continued diversion of primary effluent exceeding trickling filter capacity be allowed to continue.
3	All hydraulic limits	average day basis	average day basis	There is currently no distinction in the permit as to whether flow limitations are based on an average day or a peak instantaneous basis. This distinction is potentially important given the periodic nature of limiting discharge to the outgoing tides.	The City requests that plant flow limitations be influent based rather than effluent based and that the permit language is clear that hydraulic limits are based on the flow volume averaged over a 24-hour period.
4	Discharge of treated wastewater to seasonal and tidal marshes (See Section III Discharge Prohibitions)	prohibited	prohibited	An actively managed seasonal and tidal marsh system has potential to enhance beneficial uses of Humboldt Bay.	Item H, listed under Section III. Discharge Prohibitions, states that "The discharge of waste from the Facility to the Elk River and its tributaries, and to seasonal tidal marshes adjacent to the Facility is prohibited". Until such time that the City has considered all alternatives for compliance, the City requests that the language be modified to "The discharge of waste from the Facility to the Elk River and its tributaries, and to seasonal tidal marshes adjacent to the Facility is prohibited unless the discharge is done in such a manner as to enhance the beneficial uses associated with the seasonal and tidal marshes, including discharge of effluent, polished through the seasonal marshes, to Humboldt Bay".
5	Table 4 - Effluent Limits Total Residual Chlorine	0.248 mg/L (max daily)	0.012 mg/L (max daily) 0.0061 mg/L (avg. monthly)	Max day residual chlorine limit reduced by a factor of 20. New monthly average limit is essentially zero residual chlorine. Proposed limits may be difficult to meet. Consider peracetic acid (PAA) for disinfection.	As part of its efforts to plan for and conform to revised permits requirements, the City plans to consider alternative disinfection strategies that may eliminate its use of chlorine as a disinfectant. Within the CDO, the City requests reasonable time in which to study alternative disinfection methods and during which to budget for and implement any required monitoring changes. Prior to completing such studies, the City requests a minimum measurement sensitivity of 0.05 mg/L.
6	Table 4 - Effluent Limits Ammonia Nitrogen	74.4 mg/L maximum daily, increased mass load limits when flows exceed 8.6 mgd	4.1 mg/L average monthly, 10 mg/L maximum daily	Proposed average monthly effluent ammonia limits are close to actual plant performance on occasion. Past toxicity testing indicate that ammonia is not toxic for concentrations exceeding 20 mg/L (20 mg/L was test limit).	The City requests that effluent ammonia limits be tied to a dilution allowance (See Item 10).
7	Table 4 - Effluent Limits Copper	312 ug/L, maximum daily	4.8 ug/L, maximum daily	Proposed maximum daily copper limits are 65 times more restrictive than existing limits.	The City requests that effluent copper limits be tied to a dilution allowance (See Item 10). Further, the City submits for review the attached Water Effects Ratio (WER) Study, which it requests be taken into consideration while evaluating the copper effluent limit.
8	Table 4 - Effluent Limits Cyanide	124 ug/L	1.0 ug/L	Proposed maximum daily cyanide limits are 124 times more restrictive than existing limits.	The City requests that effluent cyanide limits be tied to the dilution allowance (See Item 10). The City also requests consideration for alternative testing for cyanide to distinguish between free cyanide and strongly and weakly complexed cyanide by methods comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999. The City also requests that cyanide monitoring frequency be changed from monthly to quarterly. During the last permit cycle, only one sample returned positive (out of more than 70). The City acknowledges its obligation to perform accelerated sampling if future results return positive, pursuant to Table E-4, note 6.

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9	Table 4 - Effluent Limits pH	6 to 9	6 to 8.5	Proposed WDR set upper pH limit at pH = 8.5. Fact Sheet states pH limits will be 6 to 9 which is consistent with current permit.	The City requests that the proposed pH limits be clarified.
10	Mixing Zone/Dilution Credit	Allowed 30/1 dilution credit	No dilution credit	The SIP requires that allowances for mixing zones and dilution credits be determined on a case by case basis and for specific pollutants. The City requests dilution credits and a mixing zone both in the CDO and new permit. The City continues in its efforts to identify the sources for copper and cyanide and reduce the concentrations for those constituents as its Best Management Practices, to complement work that optimizes removal at the WWTP.	As part of the Cease and Desist Order (CDO) and the new permit, the City requests that the Board consider granting a mixing zone and dilution credit for the following parameters: ammonia, copper, and cyanide. Further, the City requests that the aerial extent of the mixing zone be the distance required to achieve initial dilution at slack water. To validate the existing dilution allowance, the City proposes to update the dilution study done in 2008 using site specific information obtained as part of the 2012 Ebb Tide Discharge Study to validate 30/1 as the worst case condition. The City currently has the mixing zone study underway and intends to submit it for review prior to the Regional Water Board hearing where adoption of this permit will be considered.
11	Receiving Water Monitoring	Monthly	Monthly	The WDR and MRP require receiving water monitoring on a monthly basis.	The City requests that it be allowed to monitor using equipment currently in place at the Chevron dock, accessed from the CeNCOOS website (http://www.cencoos.org/data/shore/humboldt). Further, the City requests the following: - Remove hardness, TDS, and electrical conductivity from required monitoring parameters - Hardness in Humboldt Bay is generally above 6000 mg/L - TDS and electrical conductivity should be replaced by salinity, as it will give the same type of information - Receiving waters are saline and not fit for a municipal drinking water source
12	Receiving Water Monitoring			The WDR acknowledges that receiving water conditions not in conformance with the limitation are not necessarily a violation of the order.	The City requests that the Regional Water Board take into consideration that many other factors (including other permitted discharges) contribute to water quality in Humboldt Bay. Hence, it should not be the City's burden to show that water conditions in violation of the order are NOT due to its discharge. Accordingly, the City requests that the sentence "The Regional Water Board may require an investigation to determine cause and culpability prior to asserting that a violation has occurred," be replaced with "The Regional Board shall perform an investigation to determine cause and culpability prior to asserting that a violation has occurred."
13	Septage Handling Requirements			The WDR and MRP are not specific as to the definition of "septage."	The City requests that "septage" be defined as excrement and other waste material contained in or removed from septic tanks, portable toilets, or other similar sources.
14	Financial Implications			Requirements in the WDR and CDO could result in significant improvements at the Elk River Wastewater Treatment Plant	The City requests that with this renewal and with review of subsequent studies, the Regional Water Board take into account the City's ability to finance any potential improvements. The City is currently preparing to undertake a water and wastewater rate study; the City's median household income (MHI) of \$25,849 (according to the 2010 census) will need to be considered when setting rates.