

WWTP IMPROVEMENTS - ELIMINATE BYPASS

Project Manager: Kelly Allen

PROJECT DESCRIPTION

Eliminating bypassing at the WWTP will require chemically Enhanced Primary Treatment (CEPT), which could include rehabilitation of the existing CEPT system or installation of a new system. Increase biological treatment capacity of the Trickling Filters (TF), which includes additional pumping capacity to increase biological treatment from 12 MGD to 23-24 MGD. Increase biological treatment of the Secondary Clarifiers (SC), which includes increasing the Return Secondary Solids (RSS) pumping capacity and therefore the SC biological treatment capacity from 12 MGD to 23-24 MGD. Provide storage of peak wet weather flows via a primary effluent equalization basin, which includes storage for approximately 8 MGD of primary effluent peak wet weather flows by repurposing a Facultative Sludge Lagoon (FSL).

PROJECT LOCATION

Elk River Wastewater Treatment plant.



JUSTIFICATION

The City of Eureka's Elk River Wastewater Treatment Plant (WWTP) discharges to Humboldt Bay. Discharges are regulated by the North Coast Regional Water Quality Control Board (RWQCB) through application of National Pollutant Discharge Elimination System (NPDES) permit. In 2016, the RWQCB issued Cease and Desist Order No. R1-2016-0012 (CDO) and the WWTP began operating under a new NPDES permit, Order No. R1-2016-0001, which specifically disallowed the historical practice termed 'blending'. Blending is the bypassing of primary-treated wet weather flows in excess of 12 million gallons per day (MGD) around the biological treatment system and directly to disinfection.

STUDIES AND REPORTS

Wet Weather Improvement Plan

Elk River Wastewater Treatment Plant Improvements Technical memorandum

COMMENTS

None

PRIOR APPROPRIATIONS

Preliminary Design, \$300,000 January 3rd 2023

FISCAL IMPACT

Total project cost - \$XXX (2022 dollars) plus X% for inflation annually.

Expenditure Category	(Thousands of Dollars)					Five Year
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
	23/24	24/25	25/26	26/27	27/28	
Right-of-way						\$0
Design/Evaluation						\$0
Professional Services						\$0
Construction						\$0
EXPENDITURE TOTALS	\$0	\$0	\$0	\$0	\$0	\$0
Wastewater Fund						\$0
HCS D						\$0
FUNDING TOTALS	\$0	\$0	\$0	\$0	\$0	\$0