



DATE: September 9, 2024

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Patrick Pulis – Environmental Services Supervisor, Public Works & Utilities (PW&U)
Chelsea Thompson – Deputy Director of Environmental Services, PW&U
Gina Benedetti-Petnic, PE – Interim Director, PW&U

SUBJECT: Introduction (First Reading) of an Ordinance of the City Council of the City of Petaluma to Amend Section 15.48.040 of the Petaluma Municipal Code Entitled “Specific Limitations on Wastewater Strength”

RECOMMENDATION

It is recommended that the City Council introduce an Ordinance of the City of Petaluma to amend Section 15.48.040 of the Petaluma Municipal Code entitled “Specific limitations on wastewater strength.”

BACKGROUND

The City of Petaluma (City) operates a pretreatment program that sets local limits on certain pollutants, as outlined in the Sewer Use and Source Control Regulations found in Chapter 15.48 of the Petaluma Municipal Code (PMC). These regulations prevent harmful substances from being discharged into the City’s Ellis Creek Water Recycling Facility (ECWRF), which could result in violations or interference with facility operations. Current local limits apply to all industrial discharges and can be found in PMC Chapter 15.48.040. These local limits help protect the facility and ensure it operates smoothly.

Every five years, the City reviews its limits on specific pollutants to ensure they continue to protect ECWRF, comply with the National Pollutant Discharge Elimination System (NPDES) permit, and enable the City to meet additional regulatory and operational requirements. In 2022, the City consulted with Woodard & Curran to assess these local limits. The assessment considered regulatory and operational criteria specific to ECWRF, and the following pollutants were evaluated:

- Toxic Pollutants: Arsenic, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, Selenium, Silver, Zinc.
- Conventional Pollutants: Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Kjeldahl Nitrogen (TKN).

The evaluation identified the maximum levels of these pollutants that ECWRF can handle while still meeting operational and regulatory requirements, including NPDES permit effluent requirements and water quality objectives for the safe discharge of treated wastewater to the Petaluma River.

The 2022 local limits re-evaluation study found no change to the City's local limits for pollutants is needed; however, it identified that the current language in PMC Section 15.48.040 for copper and nickel limits, as based on domestic wastewater concentrations for those constituents, is not technically aligned with the EPA's Local Limits Guidance.

Current local limits for copper (0.061 mg/L) and nickel (0.021 mg/L) are uniform limits based on levels measured in residential household wastewater. Due to the low values, these limits can be hard to implement with industrial sewer users. PMC Section 15.48.040 currently gives the City the ability to issue wastewater discharge permits with mass-based limits as well as uniform limits. The strength and volume of wastewater determine mass-based limits, which may be issued to industrial sewer users who do not discharge large volumes of wastewater to help with compliance.

Woodard & Curran's study proposed new, technically based local limits for copper and nickel that are uniform concentration-based limits. These proposed limits are less restrictive and based on the operational and treatment capacity of ECWRF.

A change in local limits is a substantial modification of the City's pretreatment program and requires approval by the Regional Water Quality Control Board (RWQCB). On April 14, 2024, the City received written approval from the RWQCB to update its local limits for copper and nickel.

Additionally, the 2017 local limits re-evaluation report recommended the City remove the individual concentration limit listed for Phenol in PMC Section 15.48.040 (A) for the following reasons:

- Total Toxic Organics (TTO) are a group of several individual toxic organic compounds, of which Phenol is one. This change is a consolidation that will eliminate redundancy in the PMC.
- Removal of the Phenol limit is more conservative than the removal of the TTO limit; thus, it is not a substantial modification, and no approval from RWQCB is needed.
- Neither Phenol nor TTO are considered pollutants of concern based on the local limits' evaluation of 2017 and 2022.
- No history of issues with Phenol at ECWRF.

DISCUSSION

The proposed amendments to PMC Section 15.48.040 (A) will:

- Revise the local limits for copper and nickel to reflect the treatment capacity of ECWRF instead of being based on concentrations of residential household wastewater.
- Remove the concentration limit for Phenol, eliminating redundancy in the municipal code.

The proposed amendment to PMC Section 15.48.040 (D) will:

- Add definition of TTO.

The proposed amendment to PMC Section 15.48.040 (E) will:

- Allow the City to impose equivalent mass-based discharge limits in place of, or in addition to, concentration-based discharge limits in cases where the imposition of mass-based discharge limitations is deemed appropriate by the City.

The proposed amendment to PMC Section 15.48.040 (F) will:

- Correct a municipal code reference and clarify the intent of this section.

Proposed Amendment

The proposed amendments to PMC Section 15.48.040 are shown below, with ***bold italics*** representing additions and ~~strikethrough~~ text representing deletions from the current ordinance.

Chapter 15.48
Sewer Use and Source Control Regulations

15.48.040 Specific limitations on wastewater strength.

These limits shall be deemed pretreatment standards for the purpose of Section 307(d) of the Act.

A. No person shall discharge wastewater containing in excess of:

Discharge Limitations

POLLUTANT	DAILY COMPOSITE SAMPLE
	(values in mg/L)
Arsenic	0.20
Barium	7.00

Beryllium	0.03
Cadmium	0.01
Chromium-(Total)	0.42
<i>Copper</i>	<i>0.34</i>
Cyanide	0.26
Lead	0.12
Mercury	0.001
<i>Nickel</i>	<i>0.21</i>
Selenium	0.10
Silver	0.10
Zinc	1.00
Phenol	1.00

- B. Any discharge which contains greater than two thousand ***(2,000)*** mg/L of suspended solids or one thousand five hundred ***(1,500)*** mg/L BOD, except discharges containing greater amounts of suspended solids and/or BOD that are subject to a discharge permit that permits such greater amounts of suspended solids and/or BOD.
- C. Any water or waste which contains more than one hundred ***(100)*** mg/L, by weight, of oil or grease of petroleum origin or fat, oil or grease of animal or vegetable origin, or which contains grease or oil or other substances that will solidify or become viscous at temperatures between thirty-two to one hundred forty degrees Fahrenheit (zero to sixty degrees centigrade).
- D. Any waste containing total toxic organics (TTO), ~~as defined in this part,~~ greater than one ***(1.0)*** mg/L. ***TTO is defined as the sum of the individual constituent concentrations from EPA Methods 624 and 625.***
- ~~E. Any wastewater containing copper or nickel at levels above the domestic concentrations as determined by the city authority, unless issued a wastewater discharge permit containing mass-based limit for copper and/or nickel.~~

E. The City authority may impose equivalent mass-based discharge limitations in place of, or in addition to, concentration-based discharge limitations in cases where the imposition of mass-based discharge limitations are deemed appropriate by the City authority.

F. The discharge of Aany wastewater containing items listed in Section 15.48.030(A) through (DQ) or any other regulated compound found in excess of concentrations found in normal typical domestic sewage. If unless an abnormal sewage surcharge is levied as defined in Section 15.44.020(A)(1) and (2) the City authority may impose an alternate discharge limitation for the compound for which an average sewage surcharge has been levied. At no time shall a twenty-four hour composite sample of a user's discharge contain these constituents in excess of permitted limits.

PUBLIC OUTREACH

This item was noticed in compliance with the Brown Act. This is the first reading of the Ordinance at a public meeting allowing for public input. The Ordinance will be brought back to the City Council in October for consideration of adoption.

COUNCIL GOAL ALIGNMENT

The City Council has identified “An environmental legacy we can be proud of” as one of its key goals. This item meets this goal by implementing relevant local limits for pollutants of concern that ensure ECWRF continues to protect the environment. The City Council has identified “An economy that prospers” as another one of its key goals. This item meets this goal by setting limits that reflect ECWRF's capacity, allowing for responsible economic growth and making compliance easier for industrial users. Lastly, “A safe community that thrives” is another key goal. This item meets the goal of ensuring the sewer system and ECWRF operate safely and foster a thriving community.

CLIMATE ACTION/SUSTAINABILITY EFFORTS

The re-evaluation of local limits of pollutants of concern occurs every five years to ensure that the established limits will continue to support ECWRF in meeting permit limitations and water quality objectives for safe discharge to the Petaluma River. Impacts of climate change and sustainability efforts may impact the wastewater treatment process, including local limits and pollutants of concern. In the recent 2022 re-evaluation of local limits, several factors were considered, including the impact of drought conditions and water conservation on influent flows. The proposed amendments to PMC Section 15.48.040 will assist with the implementation of the recent 2022 re-evaluation of local limits.

ENVIRONMENTAL REVIEW

The proposed ordinance amendments are exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Sections 15307 (Actions by regulatory agencies for protection of natural resources) and 15308 (Actions by regulatory agencies for protection of the

environment) because this action will ensure that we do not exceed effluent limitations contained in the National Pollutant Discharge Elimination System permit for the Ellis Creek facility and its collection system, as well as enable the City to meet additional regulatory and operational requirements. The implementation of local limits helps avoid hazardous conditions in the sewer collection system and helps ECWRF meet regulatory standards for recycled water, biosolids, and treated wastewater that is discharged to the Petaluma River.

FINANCIAL IMPACTS

This action would have no direct financial impact. However, fewer enforcement fines may be issued for non-compliance with copper and nickel limits defined in PMC Section 15.48.040, which may have indirect financial impacts.

ALTERNATIVES

No alternatives are proposed. Not adopting the Ordinance to amend PMC Section 15.48.040, entitled “Specific limitations on wastewater strength,” would result in the local limits for copper and nickel remaining as limits based on residential household wastewater limits that are more conservative than technically based limits that consider the ECWRF treatment capability and be technically misaligned with the EPA’s Local Limits Guidance.

ATTACHMENTS

1. Ordinance