



## CITY OF BANNING STAFF REPORT

**TO:** CITY COUNCIL

**FROM:** Douglas Schulze, City Manager

**PREPARED BY:** Art Vela, Public Works Director

**MEETING DATE:** February 11, 2025

**SUBJECT:** Discuss the New California State Water Resources Control Board Hexavalent Chromium Regulation, Impacts to the City of Banning and s Path to Compliance

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### **RECOMMENDATION:**

Discuss the new California State Water Resources Control Board Hexavalent Chromium Regulation, impacts to the City of Banning and a path to Compliance.

### **BACKGROUND:**

Chromium is a metal found in natural deposits of ores containing other elements, mostly as chrome iron ores. It is also widely present in soil and plants. Under most conditions, natural chromium in the environment occurs as Trivalent Chromium (Cr-3), but under oxidizing conditions chromium can exist as Hexavalent Chromium (Cr-6). Chromium also originates as a contaminant in the environment from the discharges of dye and paint pigments, wood preservatives, chrome-plating liquid wastes, and leaching from hazardous waste sites.

Since 1977 California has regulated Total Chromium (Cr-3 and Cr-6) at a Maximum Contaminant Level (MCL) of 50 parts per billion (ppb). The United States Environmental Protection Agency (EPA) had also adopted the 50 ppb standard, but in 1991 raised it to the current standard of 100 ppb. In 2001, the State established a Public Health Goal (PHG) of .02 ppb. In 2014, the California State Water Resources Control Board (SWRCB) established a Cr-6 MCL of 10 ppb. However, California was sued over this regulation in 2017 and the Superior Court of Sacramento County ruled that the state "did not adequately document why the MCL was economically feasible." Economic feasibility evaluates how costly Cr-6 treatment technologies are and whether the price tag is within a water utility's budget.

Since the Superior Court's invalidation of the Cr-6 MCL, the State has continued to work on establishing a new MCL for Cr-6. In 2020, SWRCB published a white paper "Discussion on Economic Feasibility Analysis in Consideration of a Hexavalent Chromium Maximum Level", which the City submitted a response to, see attached. In 2023, the SWRCB started the formal rulemaking process for establishing a new Cr-6 MCL and in 2024 adopted the new regulation setting the Cr-6 MCL at 10 ppb, which became effective on October 1, 2024.

Amongst other things, the adopted Cr-6 regulation requires that the City begin testing all of its wells by April 1, 2025, to develop a Cr-6 Compliance Plan, provide a public notice of Cr-6 exceedances and to be in compliance by October 1, 2026. Staff from the Division of Drinking Water has informed City staff that water produced in exceedance of the new Cr-6 MCL can be continued to be used so long as public notices are provided (see attached notices). This will be a policy decision that Council will have to consider when the time comes.

It should be noted that water samples are required to be obtained at a well head, before the produced water enters the City's distribution system. In most areas of the City, water is delivered to customers below 10 ppb. See point-in-time water sample results for concentrations in the distribution system.

Nine (9) of the City's twenty-one (21) wells with Cr-6 concentrations at or near the Cr-6 MCL (wells C2, C3, C4, C5, C6, C8, M3, M10, M11). The Cr-6 concentration in these wells range from 9.6 ppb to 17 ppb.

The Public Works Department has conducted several studies to evaluate different approaches for complying with the Cr-6 MCL.

- 2016 Cr-6 Compliance Study – initial evaluation of treatment options and costs.
- 2022 Cr-6 Compliance Study Update – update to the original compliance study, incorporating treatment technology advancements and refreshing cost information.
- 2024 Cr-6 Compliance Study Update – system-wide update to the 2022 Cr6 compliance study providing cost and non-cost analysis of options (this document).

The objective of the 2024 Cr-6 Compliance Study was to evaluate options for addressing Cr-6 and to develop cost estimates including capital and operation and maintenance all to support the development of a treatment strategy. The 2024 Cr-6 Compliance Study evaluated best available technologies including (BATs) including weak base anion exchange (WBA), strong base anion exchange (SBA) and reduction, coagulation and filtration/microfiltration (RCF/RCMF).

BATs were assessed based on lifecycle costs and operability considerations (chemical consumption, residuals waste generation, and staffing requirements). While the accuracy range of lifecycle costs overlap for each of the alternatives, it was found that the RCF with horizontal filter configuration located at clustered treatment facilities and individual sites was the lowest point estimate lifecycle cost compared with WBA and SBA.

Additionally, the 2024 Cr-6 Compliance Study also identified next steps such as:

- Further analysis of sewer disposal at C2, C4, C8, M3 to confirm available sewer capacity.
- Confirm if brine can be sent to the wastewater reclamation facility.
- Further assessment of site layouts for Wells C3 and C5, which may require the purchase of additional land.
- Consider pilot unit options to train operation staff in advance of design and/or startup.

Staff will begin tackling each one of these items very soon.

**JUSTIFICATION:**

The new Cr-6 MCL will create financial and operating challenges for the City of Banning.

**FISCAL IMPACT:**

The draft 2024 Cr6 Compliance Study Update has developed a high level range of costs consistent with Association for the Advancement of Cost Engineering (AACE) Class 4 costs with an accuracy range of -30% to +50%. \$23,200,000 to \$84,700,000.

The 2024 Cr6 Compliance Study Update also provides a Total Projected Annual Costs (Capital plus Operations/Maintenance) range of \$2,400,000 to \$7,100,000.

The Water Operations Fund (Fund 660) currently has a revenue budget from metered sales of \$13,000,000.

It is important to note that the City's current water rate structure does not support the required financial investment to comply with the new Cr-6 regulation. A new rate study will have to be completed to determine rate impacts. Staff will have to work on having more detailed cost estimates developed in order to include those costs in a rate study.

In October, 2024, staff prepared and submitted a grant application for the Foothill West Cr-6 Cluster Facility to the WaterSMART: Drought Response Program: Drought Resiliency Projects. The grant application has asked for \$10,000,000, which is the maximum amount available per grant application. The estimated total cost of the project is \$16,801,636. Notice of awards are anticipated to be released by the end of February, 2025.

**ALTERNATIVES:**

N/A

**BUDGETED?:**

No

**CONTRACT/AGREEMENT:**

No

**ATTACHMENTS:**

1. [Cr-6 Regulation.pdf](#)
2. [Cr-6 FAQs.pdf](#)
3. [SWRCB Staff Report.pdf](#)
4. [Response Letter Regarding White Paper Econ Feasibility Analysis Hexavalent Chromium.pdf](#)
5. [Point in Time Cr-6 Concentrations in System.pdf](#)
6. [Public Notice Before Compliance Deadline.pdf](#)
7. [Public Notice After Compliance Deadline.pdf](#)