Date of Hearing: August 3, 2022

ASSEMBLY COMMITTEE ON APPROPRIATIONS
Chris Holden, Chair
SB 1124 (Archuleta) – As Amended June 23, 2022

Policy Committee: Environmental Safety and Toxic Materials Vote: 6 - 2

Urgency: No State Mandated Local Program: No Reimbursable: No

SUMMARY:

This bill requires the establishment of drinking water standards for manganese.

Specifically, this bill:

1) Requires, on or before July 1, 2025, the Office of Environmental Health Hazard Assessment (OEHHA) to prepare and publish a public health goal (PHG) for manganese.

2) Requires the State Water Resources Control Board (State Water Board) to, 1) after OEHHA publishes a PHG for manganese, adopt a primary drinking water standard for manganese; and 2) for the period before the primary drinking water standard for manganese is adopted, establish appropriate monitoring requirements for manganese that include, but are not limited to, routine distribution system monitoring, distribution system monitoring after flushing activities, and monitoring when water is discolored or after a customer complains of discolored water.

3) Prohibits the monitoring requirements established under this bill from being construed to limit the State Water Board's authority to order distribution system monitoring for contaminants, other than manganese, that have secondary drinking water standards.

4) Requires, on or before January 31, 2024, the State Water Board to consider establishing a notification level and response level for manganese that would remain in place until the State Water Board adopts a primary drinking water standard for manganese.

5) Authorizes the State Water Board, before adopting a primary drinking water standard for manganese, to continue to (a) require a community water system to monitor manganese in its source water and within its distribution system; and (b) provide funding for treatment, source protection, and alternative water supplies, and to use exceedances of the secondary drinking water standard for manganese as a basis for prioritizing funding, to the extent authorized by the funding source.

FISCAL EFFECT:

1) The State Water Board estimates this bill will result in (a) ongoing costs of $1.1 million (Safe Drinking Water Account or different special fund) for regulatory development, development of monitoring orders and implementation guidance, ongoing compliance and enforcement activities, and data management; and (b) $200,000 in one-time contract costs (Environmental

Laboratory Improvement Fund or different special fund) for modification of the California Laboratory Intake Portal to account for manganese-specific distribution system data.

2) OEHHA estimates this bill will result in costs of $203,000 (General Fund or special fund) per year for three years for one new position to develop the manganese PHG by July 1, 2025. After the PHG is developed, OEHHA estimates $65,500 in annual, ongoing costs for staffing resources to review and update the PHG every five years, as required by existing law. Without additional staff, OEHHA notes the added workload of this bill cannot be absorbed within existing resources without displacing existing PHG and notification level development work.

3) Department of Justice (DOJ) notes the fiscal impact of this bill is unknown, but potentially significant enough to be non-absorbable (Legal Services Revolving Fund.) If this bill becomes law, DOJ anticipates client referrals from the State Water Board. The additional number of Deputy Attorneys General that may need to be hired, along with their Legal Complement, would depend on the number of client referrals to DOJ from the State Water Board. These referrals could result from legal challenges from applicants who were not awarded grant funds.

COMMENTS:

1) **Purpose.** According to the author:

> SB 1124 will address the problem of manganese in California's water systems. Manganese in water can cause aesthetic issues such as metallic-tasting water and black stains on tubs, showers, toilets, plumbing fixtures, and laundry. Studies have also suggested an association between exposure to manganese in drinking water and neurological issues in infants and children…It is thought that manganese has a disproportionate impact on children, the elderly, and people suffering from liver disease. The central basin region in my district has had chronic issues with our water and specifically manganese. Most median-income water systems with manganese voluntarily install treatment at the water source, whereas disadvantaged water systems cannot afford to do this. This bill will help to ensure that our poorest systems are able to address manganese in their water.

2) **Background.**

   a) **Regulating Water Quality.** In California, the state manages contaminants with negative health implications using a regulatory process that typically begins with the development of a PHG and ends with the establishment, implementation, and enforcement of a primary MCL. A PHG is the level of a chemical contaminant in drinking water that does not pose a significant risk to health. The final PHG values then serve as guideposts to the State Water Board in setting a primary MCL. A drinking water contaminant's MCL must be established at a level as close to its PHG as is technologically and economically feasible. While primary MCLs place emphasis on public health, they must also account for factors such as detectability, treatability, and cost of treatment. Once the State Water Board

establishes an MCL through the regulatory process, public water systems must meet it within the prescribed compliance period, though the State Water Board is not required to provide such a compliance period upon adoption of an MCL.

For some contaminants without primary MCLs, the State Water Board maintains health-based advisory levels called "notification levels," which are used to provide information to public water systems and others about certain chemicals in drinking water. Chemicals with notification levels may eventually be regulated by primary MCLs, although not all have proceeded to MCLs. If a chemical is present in drinking water that is provided to consumers at concentrations considerably greater than the notification level, the State Water Board recommends the drinking water system take the source out of service. The level prompting such a recommendation is known as the "response level."

b) **Health Effects of Manganese.** Manganese naturally occurs in soil and water and is also used in various industrial processes. Unlike many metals, in trace amounts manganese is an essential nutrient in the human diet. However, chronic exposure to manganese, especially through inhalation in occupational settings, can cause manganism, a disease characterized by higher levels of manganese in the brain, brain damage, and symptoms similar to Parkinson's disease, including muscular dysfunction, tremor, and dementia. Manganese ingested in water is associated with neurotoxic effects that include intellectual impairment, muscular weakness, and delayed reproductive development. Chronic exposure in children and infants is associated with neurobehavioral issues, as well as lower scores on math, language, and IQ tests.

c) **Federal Regulation of Manganese.** The US Environmental Protection Agency (U.S. EPA) maintains a secondary MCL of 0.05 mg/L for manganese due to the contaminant's aesthetic effects on drinking water, which can include black to brown coloration, black staining, and bitter taste. U.S. EPA establishes secondary MCLs for contaminants that are not considered to pose a risk to human health when present at the MCL. U.S. EPA secondary MCLs are established for guidance purposes only and are non-enforceable. However, due to potential health effects associated with chronic exposure to manganese, U.S. EPA also maintains specific non-enforceable health advisory levels that serve as technical guidance to assist regulatory officials with protecting public health.

d) **State Regulation of Manganese.** California also maintains a secondary MCL for manganese, set at 0.05 mg/L, based only on the contaminant's aesthetic effects. The state's secondary MCLs, unlike US EPA's, are enforceable. In addition, California maintains a notification level of 0.5 mg/L for manganese. When manganese is present in water at concentrations greater than the notification level, specific requirements and recommendations apply. Studies have documented detrimental health effects in children exposed to manganese concentrations as low as 100 micrograms (µg)/L, which is five times lower than the state's current notification level for manganese. According to the World Health Organization, manganese deposits within distribution systems can contribute to drinking water contamination by manganese and other co-occurring contaminants, including lead and arsenic. From July 2011 through March 2019, 435 sources belonging to 322 water systems, spread across 47 of the state's 58 counties reported detections greater than the state's 0.5 mg/L notification level. On March 29, 2022, the State Water Board initiated the process for developing revised notification and response levels for manganese.

e) **Opposition.** This bill is opposed by several organizations, including the California Special Districts Association, the Association of California Water Agencies, and the California Municipal Utilities Association (CMUA.) CMUA notes:

> Manganese is currently regulated with a secondary drinking water standard (MCL) and also has a notification level. A secondary MCL is enforceable in California and water systems can apply for funding to mitigate the effects of a contaminant with this type of MCL…CMUA's primary concern is the circumvention of the regulatory process and the assumption that a PHG and/or primary MCL is even needed for manganese. The State has robust regulatory processes to determine the best approach for addressing contamination in drinking water and this should be the default when looking at whether more work is needed to address manganese.

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