Santa Clara Valley Water District

File No.: 20-0601

Agenda Date: 8/11/2020
Item No.: 5.2.

BOARD AGENDA MEMORANDUM

SUBJECT:
Update on Per- and Polyfluoroalkyl Substances (PFAS).

RECOMMENDATION:
Receive information on Per- and Polyfluoroalkyl Substances (PFAS).

SUMMARY:
Santa Clara Valley Water District (Valley Water) continues to track the emerging technical and regulatory issues related to a group of widely used but unregulated chemicals known as PFAS (short for Per- and Polyfluoroalkyl Substances). PFAS are persistent in the environment and have known and suspected adverse health effects. This item provides background on PFAS and an update on local conditions.

Background
PFAS are a family of more than 7,000 chemicals found in many products that resist heat, oils, stains, and water. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are two common types of PFAS. Products manufactured with PFAS include non-stick cookware, food packaging, stain- and water-repellent fabrics, including clothing and carpets, and other products. They also were used in fire-fighting foam, a known source of groundwater contamination at airports and military bases.

PFAS have been called “Forever Chemicals” because they are extremely stable in the environment and in the human body, meaning that they do not break down and can accumulate over time. Health experts have identified PFOA as a possible carcinogen, and studies suggest PFAS exposure can cause other adverse effects.

Regulatory Status
State and federal lawmakers and regulators are moving toward stricter standards and guidelines for the detection, public notification, and treatment of PFOA and PFOS in drinking water. Currently, these compounds remain unregulated both at the federal and state level, with no maximum contaminant level established for drinking water. At both the federal and state level, non-enforceable health-advisory levels have been established; exceeding these health-advisory levels prompts certain state requirements and recommendations as described below.

The federal Environmental Protection Agency (EPA) has established a drinking water health advisory of 70 parts per trillion (ppt) for a combined concentration of PFOA and PFOS. For reference, a part per trillion is the equivalent of one grain of sand in an Olympic-size swimming pool. If exceeded, EPA recommends water providers assess the contamination, inform customers, and limit exposure. EPA will be establishing drinking water regulations for PFOA and PFOS by setting an enforceable Maximum Contaminant Level, a process that is expected to take several years.

The State Water Resources Control Board (State Board) has established drinking water notification levels for PFOA (5.1 ppt) and for PFOS (6.5 ppt). If exceeded, water providers are required to notify their governing bodies, and it is recommended that they inform customers. The State Board has also set response levels for PFOA (10 ppt) and for PFOS (40 ppt). If response levels are exceeded, the water provider must remove the drinking water source from service, treat the water delivered, or provide public notification.

In 2019, the State Board began issuing orders for phased well testing throughout the state to help inform potential drinking water standards. The first phase required testing at over 600 public water supply wells near airports, landfills, and chrome plating facilities. Additional phases focus on other potential sources, including non-airport fire training/response sites and wastewater treatment plants. In a March 2020 update, the State Board noted that PFOA, PFOS and other PFAS chemicals have been detected in roughly 50 percent of wells sampled, and that investigations at airports and landfills show a high number of PFAS detections. The State Board continues to issue monitoring orders and analyze related data to help inform potential regulations.

Local PFAS Testing
Valley Water conducts voluntary, ongoing groundwater testing of PFAS in limited areas near recycled water irrigation sites since PFAS are often found in wastewater. Results from this ongoing monitoring are summarized below:

- North County: PFOA and PFOS are sporadically detected above current health advisory levels in shallow monitoring wells.
- South County: PFOA and PFOS are consistently detected above current health advisory levels in some monitoring wells. These wells are not used for drinking water supply.

To assess the occurrence and extent of PFAS in groundwater beyond the limited areas tested through ongoing monitoring, Valley Water conducted voluntary sampling of 55 monitoring wells throughout Santa Clara County in February 2020. Results from this sampling do not indicate widespread presence of PFOA and PFOS above current health advisory levels in the county's groundwater basins. Results are summarized below.

- PFOA was not detected in 51 monitoring wells (93%).
- PFOS was not detected in 43 monitoring wells (78%).
- Low levels (below health advisory levels) were detected in two wells for PFOA and 10 wells for PFOS.
- Three monitoring wells (in North San Jose, Mountain View, and south of Gilroy) had PFOA or PFOS above current health-advisory levels. None of these wells is used for water supply.

As part of the State Board orders, Valley Water was required to test PFAS at the Campbell Well Field.

Valley Water detected PFOA and PFOS in two of the three water supply wells we own for emergency backup supply. No water from these wells has been delivered to water retailers (or consumers), and the levels of PFOA and PFOS detected are below the notification levels set by the State Board.

Several local water retailers have conducted voluntary PFAS testing in water supply wells. San Jose Water Company (SJWC) detected PFOS above the notification level in eight of their 83 active water supply wells. SJWC notified affected customers (Attachment 1) and discontinued the use of these wells out of an abundance of caution. Two additional wells that were out of service were also placed on standby due to PFOS. No water supply wells in Santa Clara County have had PFAS detections above the response level, which requires taking the source out of service, treatment, or notification.

Next Steps
Valley Water is currently analyzing all available data on PFAS, including data from State Board mandated sampling, contaminant release sites, and voluntary data provided by water retailers. This evaluation will focus on the extent of PFAS in groundwater, including specific areas and/or depths where PFAS is present. Modeling tools may also be used to assess potential source locations. Valley Water will continue to collaborate with water retailers and regulatory agencies to better understand PFAS occurrence, evaluate potential sources, and identify any action that may be needed to protect local water supplies.

Regulatory and treatment technology developments related to PFAS are evolving rapidly, and Valley Water continues to monitor and engage in these developments. Recently, our own water quality laboratory received state accreditation to analyze PFAS in drinking water.

Valley Water continues to maintain and share updated PFAS information to the community through fact sheets (Attachment 2) and social media tools like the Valley Water blog. Staff will continue to keep the Board of Directors updated on PFAS.

FINANCIAL IMPACT:
There is no financial impact associated with this item.

CEQA:
The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:
Attachment 1: SJWC Customer Notifications
Attachment 2: PFAS Fact Sheet
Attachment 3: PowerPoint

UNCLASSIFIED MANAGER:

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