MARIN MUNICIPAL WATER DISTRICT

ITEM NO. 3
MEETING DATE: October 18, 2019
MEETING: Operations Committee

STAFF REPORT

SUBJECT: 2019 Public Health Goals Triennial Report

SUBMITTED BY: Chris Nanney, Water Quality Laboratory Manager
Paul Sellier, Senior Engineer II
Michael Ban, Environmental & Engineering Services Division Manager

RECOMMENDED ACTION: Information

EXECUTIVE SUMMARY:

Over the last three years, MMWD's drinking water has met or surpassed all state and federal drinking water health standards. This report, published every three years, addresses Public Health Goals, which are non-enforceable goals. The purpose of this report is to give water system customers access to the information on contaminant levels even if the drinking water standards are met.

BACKGROUND:

Public Health Goals (PHGs) are non-enforceable, health-based goals established by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA). Maximum Contaminant Levels (MCL) are enforceable drinking water standards set by the United States Environmental Protection Agency (USEPA) and/or California Department of Public Health (CDPH) at conservative levels as close to their PHGs as are technically and economically feasible.

The California Health and Safety Code §116470(b) requires public water systems serving more than 10,000 service connections to prepare a brief, written report every three years if a regulated (i.e. with a MCL) drinking water contaminant exceeds the corresponding PHG. If a PHG does not exist, the law requires the use of the federal equivalent Maximum Contaminant Level Goal (MCLG) for evaluation. MCLGs are non-enforceable, health-based goals adopted by the USEPA.

The purpose of the report is to give water system customers access to the information on contaminant levels even if the drinking water standards are met.

Public Health Goals (PHG)

PHGs are set by the California Office of Environmental Health Hazard Assessment (OEHHA) and are based solely on public health risk considerations. None of the risk-management

factors that are considered by the USEPA or the DDW in setting drinking water quality standards (MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology availability, benefits, and costs. When calculating a PHG, OEHHA identifies the level of that chemical in drinking water that would not cause significant adverse health effects in people who drink two liters of that water every day for 70 years. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs, but may not be identical.

MMWD Data

This report assesses the data generated in the calendar years 2016-2018, and continues the coverage of all data since the last PHG Report in 2016.

For this report, drinking water from Marin Municipal Water District reservoirs and Sonoma County Water Agency were assessed. Between 2016 and 2018, MMWD detected the following constituents in its water samples at levels above the applicable PHGs and/or MCLGs:

- Total coliform bacteria (a bacteriological indicator)

Total Coliform Bacteria

The OEHHA has not set a PHG for total coliform. Prior to April 1, 2016, the USEPA MCL for total coliform bacteria was 5% positive and the MCLG was zero, calculated on a monthly basis. Total coliform bacteria are indicator organisms that are ubiquitous in nature and are not generally considered harmful to human health.

MMWD Water Sample Results

In the years 2016 through 2018, MMWD collected 5,604 total coliform samples as part of the USEPA's Revised Total Coliform Rule, and of these 12 were positive for total coliform bacteria. Table 1 lists the months that MMWD had at least one positive for total coliform, and therefore exceeded the MCLG of zero. The monthly percentage of total coliform positive samples ranged from 0.60% to 1.3%, all of which were significantly below the USEPA MCL of 5%. No *E. Coli* was detected in any of the coliform-positive samples. The investigations following coliform-positive results did not identify any conclusive findings of contamination sources (the follow-up samples were not positive for coliform, except one sample which was invalidated).

Table 1: Summary of Total Coliform Results

Month	Number of Samples Collected	Number of Samples Coliform Positive	Percent Positive	Number of Follow-up Samples Coliform Positive
Feb-16	171	1	0.60%	0
Apr-16	144	1	0.70%	0
Jun-16	159	1	0.60%	0
Dec-16	143	1	0.70%	0
Jan-17	185	1	0.50%	0
Apr-17	155	2	1.30%	1 (invalidated)
May-17	176	1	0.60%	0
Jun-17	146	1	0.70%	0
Nov-17	143	1	0.70%	0
Mar-18	149	1	0.70%	0
Jun-18	154	1	0.60%	0

Total coliform is used as an indicator because of the ease in monitoring and analysis. If a positive sample is found, it indicates a potential problem that needs to be investigated, which always includes follow-up sampling. It is not all that unusual for a system to have an occasional positive sample due to sampling or analytical errors. It is difficult, if not impossible to assure that a system will never get a positive sample.

As noted earlier, there is no numeric health risk developed by OEHHA for total coliform bacteria, and there is no risk category for this parameter. MMWD practices Best Available Technology (BAT) as outlined in the California Code of Regulations Title 22, Division 4, Article 12, Section 64447. Examples of these practices include disinfection and filtration of source surface water, proper disinfectant residual maintained in the distribution system and system maintenance. Other equally important measures include the annual flushing program, cross-connection control program and maintaining positive pressures in the distribution system. Cost estimates for the implementation of BATs are not applicable and MMWD plans no additional actions.

STRATEGIC PLAN ALIGNMENT:

Strategic Plan Goal 1 (Water Supply Resiliency), Strategy 4 (Ensure facilities and equipment are maintained and sufficient to support water resiliency, water quality, watershed management and a productive workforce).

REVIEWED BY:				
	Finance Manager		NA	X
	General Counsel		NA	X
	General Manager	X	NA	