

DATE: September 21, 2010
TO: Mayor and City Council
FROM: Robert Bauman, Director of Public Works
SUBJECT: Water System: Report on Public Health Goals

RECOMMENDATION

That Council reviews the attached 2010 Public Health Goal Report, conducts a public hearing to receive and respond to comments on the information contained in the report, and adopts the attached resolution directing the Director of Public Works to inform the California Department of Public Health of these actions.

BACKGROUND

The California Health and Safety Code (Code) states that water systems serving more than 10,000 service connections must prepare a written report every three years if any water quality measurement has exceeded public health goals (PHGs) in the three prior years. PHGs are maximum contaminant levels in drinking water, set by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment. Maximum contaminant level goals (MCLGs) are the federal equivalent and are adopted by the United States Environmental Protection Agency. For the purpose of simplifying this report, public health goals and maximum contaminant level goals are herein collectively referred to as PHGs. PHGs are based strictly on health risk assessment, without consideration of technical and economic feasibility. The PHG report is required in addition to the Water Quality Report that is mailed to all customers annually.

The Code specifies the information that must be included in the PHG report, including a health risk assessment associated with the PHG exceedance, discussion of the best available treatment technologies for reducing the contaminant, and the cost of providing that treatment. Further, a public hearing must be conducted by the governing body to receive comments regarding the content of the report. The report must be completed prior to July 1, 2010, and the public hearing conducted within a reasonable period of time after July 1. Staff prepared the attached 2010 Public Health Goal Report in accordance with State law and is presenting it to City Council for review and a public hearing.

DISCUSSION

A review of the applicable sampling data indicates that one constituent, total coliform bacteria, was detected at levels above the applicable health goal during the three-year reporting period. The City's Public Health Goal Report discusses in detail the 2007, 2008, and 2009 sampling results for coliform, the health risk assessment, and available treatment technologies. The major points contained in the report are summarized below:

- Health goals are *non-enforceable* maximum contaminant levels, based solely on public health risk considerations and without consideration of other relevant factors, such as the technological and economic feasibility of achieving the goals. Maximum contaminant levels (MCLs), on the other hand, are the *enforceable* levels of contaminants allowed by the State in drinking water. MCLs are set at very low levels to protect consumers from all but a negligible risk and are achievable with current technology. The City met all MCLs, including coliform, during the past three years.
- Coliform bacteria are widely and naturally present in the environment. Coliform itself is not considered harmful, but acts as an indicator that other, potentially harmful, bacteria may be present.
- No specific health risk has been identified for coliform.
- Of the nearly 4,800 samples collected over the three-year period, coliform bacteria were detected in twenty-five samples. In all cases, repeat samples taken at the sampling site, and upstream and downstream of the site, were negative.
- The MCL threshold for coliform is currently set at 5% positive each month. This means coliform cannot be detected in any more than 5% of samples taken in a given month. So, theoretically, the Hayward Water System could have had up to 240 positive samples (distributed evenly over 36 months) and still have met the MCL requirements for coliform.
- The MCLG for coliform is set at 0% positive each month. Given that about 120 samples per month are collected from the Hayward water system, a single positive sample would exceed the threshold and make it necessary for the City to prepare a public health goal report and hold a public hearing. Periodic positive coliform samples are not unusual; in fact, staff is not aware of any agency subject to the public health goal reporting requirements that has and had no positive coliform samples during the three-year period.
- The City has taken all of the steps considered to be the best available treatment techniques for coliform, including proper maintenance of the water system and appropriate disinfectant residual. In addition, the City has implemented other measures, such as effective cross-connection control, water main flushing, and pressure management, to reduce the incidence of coliform.

- No further action is recommended at this time. Staff will continue to implement the preventative measures identified in the Report and monitor coliform bacteria levels.

ECONOMIC IMPACT

There has been no economic impact associated with the occasional positive coliform sample.

FISCAL IMPACT

There is no fiscal impact associated with the 2010 Public Health Goal Report, as no additional water treatment is recommended.

PUBLIC CONTACT

A notice of public hearing was published in the *Daily Review* on September 11, 2010. Copies of the Report were available in the City Clerk's Office or by request.

NEXT STEPS

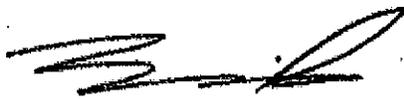
If City Council adopts the attached resolution, staff will notify the California Department of Public Health that the City has complied with public health goal reporting requirements.

Staff will continue to monitor coliform bacteria, as well as all other drinking water constituents, pursuant to existing laws and regulations, and take further action, as needed, to ensure that Hayward water meets drinking water standards.

Prepared by: Alex Ameri, Deputy Director of Public Works

Recommended by: Robert Bauman, Director of Public Works

Approved by:



Fran David, City Manager

Attachments:

- Attachment I - Draft Resolution
- Attachment II - 2010 Public Health Goal Report

DRAFT

HAYWARD CITY COUNCIL

RESOLUTION NO. 10-_____

Introduced by Council Member _____

RESOLUTION DIRECTING THE DIRECTOR OF PUBLIC WORKS TO INFORM THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH THAT THE 2010 PUBLIC HEALTH GOAL REPORT HAS BEEN PREPARED AND REVIEWED BY THE CITY COUNCIL, AND A PUBLIC HEARING HAS BEEN CONDUCTED TO RECEIVE AND RESPOND TO COMMENTS ON THE REPORT.

WHEREAS, the California Health and Safety Code Section 116470(b) specifies that public water systems serving more than 10,000 service connections must prepare a written report every three years if one or more contaminants in drinking water exceed the applicable public health goal; and

WHEREAS, the drinking water supplied by the City of Hayward met all enforceable regulatory levels known as Maximum Contaminant Levels, including those related to coliform, during the three-year period from 2007 to 2009, but exceeded the Public Health Goal for coliform; and

WHEREAS, the 2010 Public Health Goal Report has been prepared in accordance with the requirements of the California Health and Safety Code ; and

WHEREAS, the City of Hayward has implemented the best available technology and treatment techniques for achieving compliance with coliform, as documented in the 2010 Public Health Goal Report; and

WHEREAS, the Hayward City Council reviewed the Report and conducted a public hearing on September 21, 2010 for the purpose of receiving and responding to public comments on the Report.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Hayward that the Director of Public Works is directed to notify the California Department of Public Health that the 2010 Public Health Goal Report was prepared and reviewed by the City Council, and that a public hearing was conducted to receive and respond to comments on the Report.

IN COUNCIL, HAYWARD, CALIFORNIA _____, 2010

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward

CITY OF HAYWARD

2010 PUBLIC HEALTH GOAL REPORT

BACKGROUND

The City of Hayward purchases all of its water from the San Francisco Public Utilities Commission (SFPUC) regional water system. The majority of this supply is received from the Hetch Hetchy system, in which spring snow melt runs down the Tuolumne River and is stored in the Hetch Hetchy reservoir, located within Yosemite National Park. SFPUC also receives a small amount of water from local watersheds, which is stored in two nearby reservoirs.

California Health and Safety Code Section 116470 (b) specifies that public water systems serving more than 10,000 services connections must prepare a written report every three years, if their water quality measurements have exceeded the Public Health Goals (PHGs). The PHG report is intended to provide drinking water information to policymakers and the public in addition to the Annual Water Quality Report (also known as the Consumer Confidence Report) that is mailed each year to all water system customers. The Code further requires that a public hearing is to be held for the purpose of accepting the report and receiving public comments on its content.

PHGs are *non-enforceable* health protection goals adopted by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA). When a PHG does not exist for a contaminant, agencies are required to compare the detected level with the Maximum Contaminant Level Goal (MCLG), which are adopted by the United States Environmental Protection Agency (EPA) are considered to be the federal equivalent of PHGs. (PHGs and MCLGs are collectively referred to as health goals for the purposes of this report.) Health goals are based solely on public health risk considerations and the best health risk data available in scientific literature, but do not consider other risk management factors. They do not, for example, take into account the technical or economic feasibility of achieving the goals. No action to meet the goal is required; however, water system governing bodies must take note of the fact that the goal(s) have been exceeded, and understand what, if anything, can be done to reduce the contaminant levels and the associated cost, regardless of how minimal the risk may be.

It is important to distinguish PHGs and MCLGs from Maximum Contaminant Levels (MCLs), which are established by the EPA and the California Department of Health Services (CDHS) and are the *enforceable* levels of contaminants allowed in drinking water. MCLs are set at very low levels to protect consumers from all but a very low to negligible risk, and are the compliance criteria for public water systems. Factors used to establish MCLs include analytical detection capability, available treatment technology, benefits, and costs. Adopted MCLs are the criteria for regulatory compliance, rather than PHGs and MCLGs.

HEALTH GOAL EVALUATION

Staff reviewed 2007, 2008 and 2009 sampling data for chemical, microbiological and radiological contaminants for which MCLs and health goals have been established. The City met all MCLs. One constituent, total coliform bacteria, was detected at levels above the applicable health goal. The following discussion summarizes the MCL and MCLG for total coliform bacteria, the health risk that could be associated with the contaminant, the best available technology that could be used to reduce the contaminant level, and the estimated cost to install the technology, if appropriate and feasible.

Coliform Bacteria

Coliform bacteria are naturally and widely present in the environment and are not generally considered harmful. They are surrogate indicators that other, potentially harmful bacteria may be present; therefore, a positive sample may indicate a potential problem that needs further investigation and follow-up sampling. It is not unusual for a system to have periodic positive samples for coliform, and in fact, it is difficult, if not impossible, to ensure that a system will never have a positive sample.

Compliance with total coliform bacteria limits is based on a "percent positive" value; that is, the number of positive samples (samples in which the presence of coliform is detected) divided by the total number of samples collected. The MCL for total coliform bacteria is that no more than 5 percent of samples collected can be positive in any given month. The MCLG is zero percent, and no PHG has been adopted.

Coliform Bacterial Sampling Results

During the 36-month period from January 2007 through December 2009, the City collected a total of 4,785 water samples for coliform analysis, an average of 133 per month, from various sampling points throughout the distribution system. Total coliform bacteria exceeded the MCLG of zero in 12 of the 36 months, with a total of 25 samples being positive out of the 4,785 collected. The highest percentage of positive samples detected in any month in 2007, 2008, and 2009 was 3.7%, 3.0%, and 1.9% respectively. In all cases, check samples (repeat samples that are taken within 24 hours at the sampling site, as well as upstream and downstream of the site) were negative. The MCL for coliform bacteria was not exceeded during this period.

Health Risk Assessment

The Health and Safety Code requires that PHG reports include a discussion of the health risk category, such as acute toxicity, reproductive effects, and carcinogenicity, associated with any constituents that exceed health goals. In addition, the report must include the numerical public health risk. In the case of coliform bacteria, no specific health risk category has been identified. Further, because, coliform is an indicator of the potential presence of drinking water pathogens, the EPA has indicated it is not possible to determine a numerical health risk associated with coliform levels.

Best Available Treatment Technologies and Costs

At this time, there is no action that could be taken to ensure with any certainty that Hayward's water system would achieve a zero percent positive coliform sample every month, and thus no cost estimates can be provided. The City has taken all of the steps described in Section 64447, Title 22, CCR as the best available technology and treatment techniques for achieving compliance with the MCL for coliform bacteria, including proper maintenance of the distribution system and maintenance of a disinfectant residual throughout the system. In addition, the City had implemented other measures to address coliform levels, such as an effective cross-connection control program, a water main flushing program, system monitoring and surveillance, and maintenance of positive pressure in the distribution system. The City continuously and consistently met all of the federal and state water quality requirements.

The one single action that would likely decrease the incidence of positive coliform samples would be to significantly increase the disinfectant levels. However, this action would result in an increase in levels of disinfectant byproducts, some of which may have adverse health impacts, beyond what is allowable in the distribution system and is not recommended. A careful balancing of treatment processes is essential to the delivery of safe drinking water.

RECOMMENDATION FOR FURTHER ACTION

Between 2007 and 2009, coliform bacteria were detected at levels above the MCLG; however, the levels did not exceed the MCL established to protect public health. The City has implemented the "best available technology" for coliform bacteria. Increasing disinfectant levels, which could reduce the incidence of coliform bacteria in the distribution system, is likely to result in higher-than-allowable disinfectant byproduct residual. Staff will continue to monitor coliform bacteria levels and implement the actions identified this report. No further action is recommended at this time.