COUNCIL AGENDA: 08-17-10
ITEM: 7.1

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: John Stufflebean

SUBJECT: SEE BELOW

DATE: 07-26-10

Approved

Date 7/30/10

COUNCIL DISTRICT: 2, 7, 8

SUBJECT: APPROVAL OF SAN JOSÉ MUNICIPAL WATER SYSTEM'S 2010 PUBLIC HEALTH GOALS REPORT ON WATER QUALITY (2007-2009)

RECOMMENDATION

(a) Hold a public hearing to accept and respond to public comment on the Municipal Water System's 2010 Public Health Goals Report on Water Quality.

(b) Approve report and direct staff to file with the California Department of Public Health.

OUTCOME

Approval of the recommendation will allow staff to file a report with the California Department of Public Health, which will complete the regulatory requirements associated with the preparation of this report.

BACKGROUND

Provisions of the California Health and Safety Code require all California water retailers serving more than 10,000 service connections to prepare a report every three years to inform consumers of water quality constituents that exceeded the Public Health Goals (PHGs). PHGs are non-enforceable water quality goals established by the California Office of Environmental Health Hazard Assessment and are based solely on public health risk considerations. Maximum Contaminant Level Goals (MCLG), established by the U.S. Environmental Protection Agency, are the federal equivalent to PHGs.

Public water systems are also required to hold a public hearing for the purpose of accepting and responding to public comment on the report, which may be done as part of a regularly scheduled

meeting. The report is now being presented to Council to satisfy the public hearing requirements and to obtain Council approval before submittal to the California Department of Public Health.

ANALYSIS

San José Municipal Water System has prepared the Public Health Goals Report in compliance with the July 2010 deadline. The report represents an analysis of water quality data that has been collected over the past three years. The 2010 report covers data collected from 2007 through 2009 in the Evergreen, Edenvale and Coyote Valley areas. Since the North San José/Alviso service area is an individually permitted water system with less than 10,000 service connections, a PHG report was not required for this water system.

One contaminant, coliform bacteria, was detected above the federal MCLG and is discussed in the report. The drinking water standard for coliform bacteria was not exceeded during the reporting period. There is no known treatment technology that can be added which could ensure complete absence of coliform bacteria in all water samples; therefore, no further action is proposed at this time.

The PHG report (attached) satisfies the requirements of the Health and Safety Code by presenting the following information:

- Contaminants identified in the local water supply that exceeded the PHG or MCLG during the past three years;
- Numerical public health risk associated with the maximum contaminant level and the PHG for each contaminant identified in exceedance;
- Public health risk categories and definitions of these categories for the contaminants identified in excess of the PHG or MCLG;
- The Best Available Technology (BAT) to remove or reduce the concentration of the identified contaminants, if any;
- An estimate of the cost to incorporate the identified BAT into the local water treatment in order to reduce the contaminant level to or below the PHG;
- Recommended action for reduction of contaminants exceeding PHGs and basis for that decision.

The San José Municipal Water System meets all primary drinking water standards set by the state and federal governments to protect public health. No further action is proposed at this time.

EVALUATION AND FOLLOW-UP

This report is required to be completed every three years. No additional follow up actions with Council are expected at this time.

PUBLIC OUTREACH/INTEREST

- ☐ **Criteria 1**: Requires Council action on the use of public funds equal to $1 million or greater. **(Required: Website Posting)**
- ☐ **Criteria 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

No public outreach is required according to the given criteria.

A public meeting was scheduled for August 5, 2010 at the San José Municipal Water System office to receive public input and comments on the proposed report. A notice of the public meeting was published in the Evergreen Times and San José Post Record. A notice was also posted on San José Municipal Water System's website. Notice of the August 17, 2010 public hearing was published in the San José Post Record.

COORDINATION

This report was coordinated with the City Attorney's Office.

CEQA

Not a project. PP10-069 (a), Reports involving no approvals of City actions.

/s/
JOHN STUFFLEBEAN
Director, Environmental Services

For questions please contact Mansour Nasser, Deputy Director, at 277-4218.

Attachment

Attachment

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

PUBLIC HEALTH GOALS
REPORT ON WATER QUALITY

CITY OF SAN JOSE
MUNICIPAL WATER SYSTEM –
EVERGREEN, EDENVALE AND COYOTE
System No. 4310020

JUNE 2010

City of San Jose
Environmental Services Department

SAN JOSE MUNICIPAL WATER SYSTEM
PUBLIC HEALTH GOALS REPORT ON WATER QUALITY

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SECTION 1: BACKGROUND INFORMATION

WHAT ARE PUBLIC HEALTH GOALS (PHGS)?

PHGs are water quality goals established by the California Office of Environmental Health Hazard Assessment (OEHHA) and are based solely on public health risk considerations. In setting the PHGs, OEHHA does not take into account any of the practical risk-management factors which are considered by the United States Environmental Protection Agency (USEPA) and the State Department of Public Health (CDPH) when setting drinking water standards such as Maximum Contaminant Levels (MCLs), including factors such as analytical detection capability, treatment technology available, benefits and costs. PHGs are non-enforceable and are not required to be met by public water systems. Maximum Contaminant Level Goals (MCLGs), established by USEPA, are the federal equivalent to PHGs.

REPORTING REQUIREMENTS:

Provisions of the California Health and Safety Code specify that public water systems serving more than 10,000 service connections must prepare a special report if their water quality measurements have exceeded any PHGs. Reporting must be done every three years. The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the MCLGs adopted by USEPA.

The purpose of this report is to inform consumers of constituents in San Jose Municipal Water System's (SJMWS) drinking water that exceeded the PHGs or MCLGs during 2007, 2008, and 2009. Included in PHG reports are the numerical public health risk associated with the Maximum Contaminant Level (MCL) and the PHG or MCLG, the category or type of risk to health that could be associated with each constituent, the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it is appropriate and feasible. For general information about the quality of the water delivered by SJMWS, please refer to the latest Annual Water Quality Report.

WATER QUALITY DATA CONSIDERED:

The water quality data collected by our water system and by our water suppliers between 2007 and 2009 were considered for the purpose of determining compliance with drinking water standards and PHG reporting requirements. This data was all summarized in our Annual Water Quality Reports, which have previously been mailed to customers. For each regulated contaminant, CDPH establishes Detection Limits for Purposes of Reporting (DLR). DLRs are the minimum levels at which any analytical result must be reported to CDPH. Analytical results below the DLRs cannot be quantified with any certainty. In some cases, PHGs are set below the DLRs.

GUIDELINES FOLLOWED:

The Association of California Water Agencies (ACWA) formed a workgroup which prepared guidelines for water utilities to use in preparing these PHG reports. ACWA guidelines were used in the preparation of this report.

BEST AVAILABLE TREATMENT TECHNOLOGY AND COST ESTIMATES:

Both USEPA and CDPH adopted Best Available Technologies (BATs), which are the best known methods of reducing contaminant levels to the MCL. However, since many PHGs and MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to

further reduce a constituent to or below the PHG or MCLG. Where the MCLG or PHG is set at zero, there may not be commercially available technology to reach that level. Estimating the costs to reduce a constituent to zero is difficult, if not impossible because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality.

SECTION 2: CONSTITUENTS DETECTED THAT EXCEED PHGS OR MCLGS

Following is a discussion of the one constituent that was detected at levels above the PHG/MCLG.

COLIFORM BACTERIA:

The MCL for coliform is more than 5.0% of samples testing positive for the presence of coliforms per month, and the MCLG is zero percent of samples with presence of coliform per month. Between 2007 and 2009, SJMWS collected between 97 and 125 samples each month for coliform analysis. Coliform bacteria exceeded the MCLG of zero in 12 of the 36 months, with a high of 4.5% of positive samples in any one month and an average of 0.7% positive over the 3-year period. Check samples were negative and follow up actions were taken, and the MCL was not exceeded.

The reason for the coliform drinking water standard is to minimize the possibility that the water contains pathogens, which are organisms that cause waterborne disease. If a positive sample is found, it indicates a potential problem that needs to be investigated and follow up sampling is required. It is not unusual for a system to have an occasional positive sample. It is difficult, if not impossible, to assure that a system will never get a positive sample. Additionally, due to the sensitive nature of the laboratory analysis method used throughout the time period, some positive results may be caused by sample contamination.

Coliform bacteria are an indicator organism that are ubiquitous in nature and are not generally considered harmful. They are used as an indicator because of the ease of monitoring and analysis. Because coliform is only a surrogate indicator of the potential presence of pathogens, it is not possible to state a specific numerical health risk or public health risk category.

Other equally important measures that have been implemented to protect drinking water include an effective cross-connection control program, maintenance of a disinfectant residual within surface water supplies, an effective monitoring and surveillance program, and maintaining positive pressures in the distribution system. SJMWS has already taken steps described by CDPH as "best available technology" for coliform bacteria in Section 64447, Title 22, CCR.

SECTION 3: RECOMMENDATIONS

CDPH and USEPA set primary drinking water standards to protect public health, which are met by SJMWS. There is no known treatment technology that can be added which could ensure complete absence of coliform bacteria in all water samples; therefore, the costs associated with incorporating any additional technology may be better utilized to provide greater public health protection benefits if spent in other aspects, such as operations, maintenance, and water quality monitoring programs. Therefore, no further action is proposed at this time.

ATTACHMENT 1

EXERPT FROM CALIFORNIA HEALTH & SAFETY CODE SECTION 116470

(b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.

(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.

(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.

(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.

(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.

(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

...

(f) Pending adoption of a public health goal by the Office of Environmental Health hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

ATTACHMENT 2

CALIFORNIA MCLS & PHGS AND FEDERAL MCLGS

PARAMETERS/CONSTITUENTS	Units	State MCL	DLR	PHG or (MCLG)	PHG EXCEEDED?
INORGANICS					
ALUMINUM	mg/L	1	0.05	0.6	NO
ANTIMONY	mg/L	0.006	0.006	0.02	NO
ARSENIC	mg/L	0.010	0.002	0.000004	NO
ASBESTOS	million fibers/L	7	0.2	7	NO
BARIUM	mg/L	1	0.1	2	NO
BERYLLIUM	mg/L	0.004	0.001	0.001	NO
CADMIUM	mg/L	0.005	0.001	0.00004	NO
CHROMIUM	mg/L	0.05	0.01	withdrawn	NO
CHROMIUM 6	mg/L	--	0.001	0.00006	NO
COPPER (at-the-tap; 90th percentile)	mg/L	1.3	0.05	0.3	NO
CYANIDE	mg/L	0.15	0.1	0.15	NO
FLUORIDE	mg/L	2	0.1	1	NO
LEAD (at-the-tap; 90th percentile)	mg/L	0.015	0.005	0.0002	NO
MERCURY	mg/L	0.002	0.001	0.0012	NO
NICKEL	mg/L	0.1	0.01	0.012	NO
NITRATE [as N03]	mg/L	45	2	45	NO
NITRATE + NITRITE [as N]	mg/L	10	--	10	NO
NITRITE [as N]	mg/L	1	0.4	1	NO
PERCHLORATE	mg/L	0.006	0.004	0.006	NO
SELENIUM	mg/L	0.05	0.005	(0.05)	NO
THALLIUM	mg/L	0.002	0.001	0.0001	NO
ORGANIC CHEMICALS					
ALACHLOR	mg/L	0.002	0.001	0.004	NO
ATRAZINE	mg/L	0.001	0.0005	0.00015	NO
BENTAZON	mg/L	0.018	0.002	0.2	NO
BENZO (a) PYRENE	mg/L	0.0002	0.0001	0.000004	NO
BROMATE	mg/L	0.01	0.005	0.0001	NO
CARBOFURAN	mg/L	0.018	0.005	0.0017	NO
CHLORDANE	mg/L	0.0001	0.0001	0.00003	NO
CHLORITE	mg/L	1	0.02	0.05	NO
2,4-DICHLOROPHENOXYACETIC ACID	mg/L	0.07	0.01	0.02	NO
DALAPON	mg/L	0.2	0.01	0.79	NO
DIBROMOCHLOROPROPANE [DBCP]	mg/L	0.0002	0.00001	0.0000017	NO
DI (2-ETHYLHEXYL) ADIPATE	mg/L	0.4	0.005	0.2	NO
DI (2-ETHYLHEXYL) PHTHALATE	mg/L	0.004	0.003	0.012	NO
DINOSEB	mg/L	0.007	0.002	0.014	NO
DIOXIN [2,3,7,8 - TCDD]	mg/L	3x10-8	5x10-9	(0)	NO
DIQUAT	mg/L	0.02	0.004	0.015	NO
ENDOTHALL	mg/L	0.1	0.045	0.58	NO
ENDRIN	mg/L	0.002	0.0001	0.0018	NO
ETHYLENE DIBROMIDE [EDB]	mg/L	0.00005	0.00002	0.00001	NO
GLYPHOSATE	mg/L	0.7	0.025	0.9	NO
HEPTACHLOR	mg/L	0.00001	0.00001	0.000008	NO
HEPTACHLOR EPOXIDE	mg/L	0.00001	0.00001	0.000006	NO
HEXACHLOROBENZENE	mg/L	0.001	0.0005	0.00003	NO
HEXACHLOROCYCLOPENTADIENE	mg/L	0.05	0.001	0.05	NO
LINDANE	mg/L	0.0002	0.0002	0.000032	NO
METHOXYCHLOR	mg/L	0.03	0.01	0.03	NO

PARAMETERS/CONSTITUENTS	Units	State MCL	DLR	PHG or (MCLG)	PHG EXCEEDED?
MOLINATE	mg/L	0.02	0.002	0.001	NO
OXAMYL	mg/L	0.05	0.02	0.026	NO
PENTACHLOROPHENOL	mg/L	0.001	0.0002	0.0003	NO
PICLORAM	mg/L	0.5	0.001	0.5	NO
POLYCHLORINATED BIPHENYLS [PCBs]	mg/L	0.0005	0.0005	0.00009	NO
SILVEX [2,4,5-TP]	mg/L	0.05	0.001	0.025	NO
SIMAZINE	mg/L	0.004	0.004	0.004	NO
THIOBENCARB	mg/L	0.07	0.001	0.07	NO
TOXAPHENE	mg/L	0.003	0.001	0.00003	NO
BENZENE	mg/L	0.001	0.0005	0.00015	NO
CARBON TETRACHLORIDE	mg/L	0.0005	0.0005	0.0001	NO
1,2-DICHLOROBENZENE [ORTHO]	mg/L	0.6	0.0005	0.6	NO
1,4-DICHLOROBENZENE [PARA]	mg/L	0.005	0.0005	0.006	NO
1,1-DICHLOROETHANE [1,1-DCA]	mg/L	0.005	0.0005	0.003	NO
1,2-DICHLOROETHANE [1,2-DCA]	mg/L	0.0005	0.0005	0.0004	NO
1,1-DICHLOROETHENE [1,1-DCE]	mg/L	0.006	0.0005	0.01	NO
CIS-1,2-DICHLOROETHYLENE	mg/L	0.006	0.0005	0.1	NO
TRANS-1,2-DICHLOROETHYLENE	mg/L	0.01	0.0005	0.06	NO
DICHLOROMETHANE (METHYLENE CHLORIDE)	mg/L	0.005	0.0005	0.004	NO
1,2-DICHLOROPROPANE	mg/L	0.005	0.0005	0.0005	NO
1,3-DICHLOROPROPENE	mg/L	0.0005	0.0005	0.0002	NO
ETHYLBENZENE	mg/L	0.3	0.0005	0.3	NO
METHYL TERT BUTYL ETHER (MTBE)	mg/l	0.013	0.003	0.013	NO
MONOCHLOROBENZENE	mg/L	0.07	0.0005	0.2	NO
STYRENE	mg/L	0.1	0.0005	(0.1)	NO
1,1,2,2-TETRACHLOROETHANE	mg/L	0.001	0.0005	0.0001	NO
TETRACHLOROETHYLENE [PCE]	mg/L	0.005	0.0005	0.00006	NO
TOLUENE	mg/L	0.15	0.0005	0.15	NO
1,2,4-TRICHLOROBENZENE	mg/L	0.005	0.0005	0.005	NO
1,1,1-TRICHLOROETHANE [1,1,1-TCA]	mg/L	0.2	0.0005	1	NO
1,1,2-TRICHLOROETHANE [1,1,2-TCA]	mg/L	0.005	0.0005	0.0003	NO
TRICHLOROETHYLENE [TCE]	mg/L	0.005	0.0005	0.0017	NO
TRICHLOROFLUOROMETHANE (FREON 11)	mg/L	0.15	0.005	0.7	NO
TRICHLOROTRIFUOROETHANE (FREON 113)	mg/L	1.2	0.01	4	NO
VINYL CHLORIDE	mg/L	0.0005	0.0005	0.00005	NO
XYLENES [SUM OF ISOMERS]	mg/L	1.75	0.0005	1.8	NO
MICROBIOLOGICAL					
COLIFORM % POSITIVE SAMPLES	%	5		(zero)	YES
CRYPTOSPORIDIUM*		TT		(zero)	NO
GIARDIA LAMBLIA		TT		(zero)	NO
LEGIONELLA		TT		(zero)	NO
VIRUSES		TT		(zero)	NO
RADIOLOGICAL					
ALPHA ACTIVITY, GROSS	pCi/L	15	3	(zero)	NO
BETA ACTIVITY, GROSS	pCi/L	4 mrem/yr	4	(zero)	NO
RADIUM 226	pCi/L	--	1	0.05	NO
RADIUM 228	pCi/L	--	1	0.019	NO
RADIUM 226 + RADIUM 228	pCi/L	5	--	--	NO
STRONTIUM 90	pCi/L	8	2	0.35	NO
TRITIUM	pCi/L	20000	1000	400	NO
URANIUM	pCi/L	20	1	0.43	NO

Abbreviations: MCL = Maximum Contaminant Level; MCLG = Maximum Contaminant Level Goal; PHG = Public Health Goal; DLR = Detection Limit for purposes of Reporting, set by CDPH; TT = Treatment Technique