CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Public Hearing to Consider Comments on Public Health Goals Report

MEETING DATE: August 19, 1998

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council consider comments on and accept the required Public Health Goals Report.

BACKGROUND INFORMATION: Attached is a report prepared by staff comparing Lodi's drinking water quality with California EPA's public health goals (PHGs) and with the US EPA's maximum contaminant level goals (MCLGs). PHGs and MCLGs are not enforceable standards and no action to meet them is mandated.

SB 1307 (Calderone-Sher; effective January 1, 1997) added new provisions to the California Health and Safety Code which mandate that a report be prepared on or before July 1, 1998. The attached report is intended to provide information to the public in addition to the Annual Water Quality Report mailed to each customer in April 1998. On July 1, 1998, a public notice appeared in the *Lodi News Sentinel* to inform any interested party of the Public Health Goals Report and its availability.

The new law also requires that a public hearing be held (which can be part of a regularly scheduled public meeting) for the purpose of accepting and responding to public comment on the report. A notice of public hearing was published in the *Lodi News Sentinel* on July 18, 1998.

Our water system complies with all of the health-based drinking water standards and maximum contaminant levels (MCLs) as required by the California Department of Health Services and the US EPA. No additional actions are required or recommended.

FUNDING: Not applicable.

Richard C. Prima, Jr.
Public Works Director

Prepared by Frank Beeler, Assistant Water/Wastewater Superintendent

RCP/FB/dsg

Attachment

cc: Water/Wastewater Superintendent
Assistant Wastewater Treatment Superintendent

APPROVED: _____
H. Dixon Flynn -- City Manager

CITY OF LODI

REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS July 1, 1998

Background

Recently enacted provisions of the California Health and Safety Code specify that larger water utilities (more than10,000 service connections) are required to prepare a special report on or before July 1, 1998, if their water quality measurements have exceeded any Public Health Goals (PHGs). These are **non-enforceable** goals established by the Cal-EPA's Office of Environmental Health Hazard Assessment. The first 27 of these PHGs were adopted by Cal. EPA on December 31, 1997, but the PHG for uranium was later withdrawn. The law also requires that where Cal. EPA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goals (MCLGs) adopted by the United States Environmental Protection Agency (U.S.EPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed per regulations.

The new law specified what information is to be provided in the report. If a constituent was detected in the water supply in 1997 at a level exceeding an applicable PHG or MCLG, this report provides the information required by the law. Included 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.

What Are PHGs?

PHGs are set by the California Office of Environmental Health Hazard Assessment which is part of Cal-EPA and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the U.S.EPA or the California Department of Health Services in setting drinking water standards (Maximum Contaminant Levels or MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology available, benefits and costs. The PHGs are **not enforceable and are not required to be met** by any public water system. MCLGs are the federal equivalent to PHGs.

Water Quality Data Considered:

All of the water quality data collected by our water system in 1997 for purposes of determining compliance with drinking water standards was considered. This data was all summarized in the attached 1997 Annual Water Quality Report which was mailed to all of our customers in April 1998.

Guidelines Followed:

The Association of California Water Agencies prepared guidelines for water utilities to use in preparing these newly required reports, and these guidelines were used in the preparation of our report. No guidance was available from state regulatory agencies.

Best Available Treatment Technology and Cost Estimates:

Both the U.S.EPA and the California Department of Health Services adopt what are known as Best Available Technologies or BATs which are the best known methods of reducing contaminant levels to the MCL. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible nor feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG, many of which are set at zero. 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.

Constituents Detected That Exceed a PHG or a MCLG:

The following is a discussion of constituents that were detected in one or more of our drinking water sources at levels above the PHG, or if no PHG, above the MCLG.

Trichloroethylene (TCE): There is no PHG for TCE, but the MCLG set by the U.S. EPA is zero. The MCL or drinking water standard for TCE is 0.005 milligrams per liter (mg/l or parts per million). We detected TCE at levels not exceeding the MCL in three (3) of Lodi's 21 wells used in 1997. The averages for these wells in 1997 were:

Well No. 2	-	0.0048 mg/l;
Well No. 12	-	0.0007 mg/l, and
Well No. 24	-	0.0011 mg/l.

The category of health risk associated with TCE, and the reason that a drinking water standard was adopted for it, is the people who drink water containing TCE above the MCL throughout their lifetime could theoretically experience an increased risk of getting cancer. The California Department of Health Services says that "Drinking water which meets this standard (the MCL) is associated with little to none of this risk and should be considered safe with respect to TCE." (*CDHS Blue Book of drinking water law and regulations, Section 64468.2, Title 22, CCR.*) The numerical heath risk for an MCLG of zero is zero. The Best Available Technology for TCE to lower the level below the MCL is either Granular Activated

Carbon or Packed Tower Aeration. Since the TCE level in these three wells is already below the MCL, a Granular Activated Carbon Treatment System with a long empty bed contact time would likely be required to attempt to lower the TCE level to zero. The estimated cost to install such a treatment system on Wells No. 2, 12 and 24 that would reliably reduce the TCE level to zero would be roughly $1.5 million and require annual Operation and Maintenance at a cost of roughly $200,000 per year. This would result in an assumed increased cost for each customer of over $16 per year*.

Dibromochloropropane (DBCP): There is no PHG for DBCP, but the MCLG set by the U.S. EPA is zero. The MCL for DBCP is 0.0002 mg/l. We detected DBCP at levels not exceeding the MCL in 11 of Lodi's 21 wells used in 1997. The annual averages for these wells in 1997 were:

Well No. 1R - 0.00012 mg/l;
Well No. 6R - 0.00005 mg/l;
Well No. 8 - 0.00017 mg/l;
Well No. 9 - 0.00003 mg/l;
Well No. 13 - 0.00011 mg/l;
Well No. 14 - 0.00016 mg/l;
Well No. 16 - 0.00009 mg/l;
Well No. 17 - 0.00007 mg/l;
Well No. 21 - 0.00002 mg/l;
Well No. 22 - 0.00010 mg/l; and
Well No. 23 - 0.00010 mg/l.

The category of health risk associated with DBCP, and the reason that a drinking water standard was adopted for it, is the people who drink water containing DBCP above the MCL throughout their lifetime could theoretically experience an increased risk of getting cancer. The California Department of Health Services says that "Drinking water which meets this standard (the MCL) is associated with little to none of this risk and should be considered safe with respect to DBCP." (*CDHS Blue Book of drinking water law and regulations, Section 64468.3, Title 22, CCR.*) The numerical heath risk for an MCLG of zero is zero. The Best Available Technology for DBCP to lower the level below the MCL is either Granular Activated Carbon or Packed Tower Aeration. To attempt to maintain the DBCP levels at zero, Granular Activated Carbon Treatment Systems with longer empty bed contact times and more frequent carbon change-outs would likely be required. The estimated cost to install such a treatment system on 9 Wells, and enhance capacities on 4 Wells with existing treatment systems (including Well No. 4R that was not listed earlier), that would reliably reduce the DBCP level to zero would be roughly $4.8 million. The increased annual Operation and Maintenance costs would be roughly $580,000 per year. This would result in an assumed increased cost for each customer of over $50 per year*. (Note: this increased cost may not be reimbursable under the terms of Lodi's settlement agreement with DBCP manufacturers.)

* All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual operation and maintenance costs divided by 21,000 customers.

Coliform Bacteria: In 1997, we collected over 1,000 samples from our distribution system for coliform analysis. Of these samples, 1.4% were positive for coliform bacteria. In 1997 a maximum of 4.7% of these samples were positive for one month.

The MCL for coliform is 5% positive samples of all samples per month and the MCLG is zero. The reason for the coliform drinking water standard is to minimize the possibility of the water containing pathogens which are organisms that cause waterborne disease. Because coliform is only an indicator of the potential presence of pathogens, it is not possible to state a specific numerical health risk. While U.S. EPA normally sets MCLGs "at a level where no known or anticipated adverse effects on persons would occur", they indicate that they cannot do so with coliforms.

Coliform bacteria are organisms that are found just about everywhere in nature and are not generally considered harmful. They are 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 and follow up sampling done. It is not at all 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. A further test that is performed on all total coliform positive results is for Fecal Coliform or E. Coli. There were **no positive** Fecal Coliform or E. Coli results in 1997.

To reduce the number of positive results for coliform bacteria, the City of Lodi occasionally chlorinates the water system. The sources of water (Wells) and all new or repaired water mains follow disinfection procedures and pass bacteriological testing before being allowed "on-line". We are working on updating monitoring and operational procedures to further prevent occurrences of Coliform bacteria levels exceeding the MCL.

Full time chlorination will not guarantee that a system will never get a positive sample. If the City were to go to full time chlorination of the drinking water system, the estimated cost to install chlorine generation systems on 24 Wells would be roughly $800,000 and annual Operation and Maintenance cost would be roughly $50,000 per year. This would result in an assumed increased cost for each customer of over $6 per year*.

Lead: The category of health risk for lead is damage to the kidneys or nervous system of humans. Numerical health risk data on lead has not yet been provided by CAL. EPA, the State agency responsible for providing that information.

Our water system is in full compliance with the Federal and State Lead and Copper Rule. Based on past sampling performed according to Federal and State regulatory requirements, we meet the Action Levels for Lead. We are also deemed by the Federal and State Lead and

* All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual operation and maintenance costs divided by 21,000 customers.

Copper Rule to have naturally occurring "optimized corrosion control" for our system. This determination was established by testing for Lead and Copper at customers taps in Lodi and an evaluation of the naturally occurring minerals and characteristics found in Lodi's water.

Analyses for Lead are also performed at the individual wells. The PHG for Lead is 0.002 mg/l. We detected Lead at a level not exceeding the MCL but over the PHG in one (1) of Lodi's 21 wells used in 1997 at a level of 0.009 mg/l at Well No. 5. A follow up sample at Well No. 5 in 1998 showed **no detectable levels of Lead**.

In general, optimizing corrosion control is considered the best available technology to deal with corrosion issues and with any lead or copper findings. Therefore, having "optimized corrosion control" and the fact that Well No. 5 no longer shows any level of Lead, there is no further action that can be practically taken to further reduce lead levels in the water system.

Recommendations For Further Action:

The drinking water quality of the City of Lodi Public Water System meets all State of California, Department of Health Services and U.S. EPA drinking water standards set to protect public health. To further reduce the levels of the constituent's identified in this report that are already below the health-based Maximum Contaminant Levels established to provide "safe drinking water", additional costly treatment processes would be required. The effectiveness of the treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain. The theoretical health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, staff is not recommending further action at this time. However, the point of this process is to provide you with information on the quality of your drinking water and rough costs to make certain improvements.

This report was completed by City of Lodi Public Works Department staff. Any questions relating to this report should be directed to: City of Lodi, Assistant Water/Wastewater Superintendent Frank Beeler, 1331 South Ham Lane, Lodi, CA 95242 or call (209) 333-6740.

CITY OF LODI

Carnegie Forum
305 West Pine Street, Lodi

NOTICE OF PUBLIC HEARING

Date: August 19, 1998

Time: 7:00 p.m.

For information regarding this notice please contact:
Alice M. Reimche
City Clerk
Telephone: (209) 333-6702

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that on **Wednesday, August 19, 1998** at the hour of 7:00 p.m., or as soon thereafter as the matter may be heard, the City Council will conduct a Public Hearing at the Carnegie Forum, 305 West Pine Street, Lodi, to consider the following matter:

a) receive comments on and accept the required Public Health Goals Report.

All interested persons are invited to present their views and comments on this matter. Written statements may be filed with the City Clerk at any time prior to the hearing scheduled herein, and oral statements may be made at said hearing.

If you challenge the subject matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice or in written correspondence delivered to the City Clerk, P.O. Box 3006, at or prior to the Public Hearing.

Alice M. Reimche
City Clerk

Dated: July 15, 1998

Approved as to form:

Randall A. Hays
City Attorney