

WEST BASIN MUNICIPAL WATER DISTRICT

DECEMBER 18, 2000

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INFORMATION CALENDAR

WATER QUALITY UPDATE—PUBLIC HEALTH GOALSSUMMARY:

The State Health and Safety Code Section 116365 was amended by the Calderon-Sher Safe Drinking Water Act of 1996 (formerly SB 1307) to set provisions for the development and use of Public Health Goals (PHGs) in drinking water. PHGs are similar to federal Maximum Contaminant Level Goals (MCLGs) in that they are non-enforceable, advisory levels based solely on human health concerns (i.e., they are not drinking water standards). The term "PHG" is not specifically defined in the statute, but is referred to as estimates of contaminant concentrations in drinking water that would pose no risk to an individual if the water were consumed over a lifetime. For purposes of public reporting, definitions for both PHG and MCLG mandated by DHS are identical: "The level of a contaminant in drinking water below which there is no known or expected risk to health".

OEHHA's Role

By statute, PHGs are developed and published by CalEPA's Office of Environmental Health Hazard Assessment (OEHHA). PHGs are for drinking water contaminants with established primary standards, or for newly regulated contaminants. PHGs are developed through a risk assessment evaluation, public meetings and comment period prior to PHG publication. PHG publication has been staged in from 1997 to the present for most currently existing primary drinking water standards. Although not enforceable standards, PHGs play a role in MCL standard setting. When establishing new MCLs, DHS must consider the PHG level in their standard-setting evaluation, in addition to cost-benefit and other factors.

The calculation of a PHG is to be based on a 1:1 million-cancer risk of drinking two liters per day for an average body weight over a 70-year lifetime.

Water System's Role

Public water systems must report any contaminants found at or above their respective PHG level in the water delivered to their customers (post-treatment) in their annual water quality report to customers. In addition, every large public water system in the state that serves greater than 10,000 service connections must prepare a report for public review every 3 years giving information on any contaminant detected above the PHG in post-treatment delivered water, regardless if the system complied with all Maximum Contaminant Levels (MCLs). The report must include a best available technology (BAT) cost estimate for removal or treatment. As an aside, BATs have not been defined to treat contaminants to the lower PHG levels and in many instances may not be technologically or economically feasible. Next, a public hearing must be announced and held to accept and respond to public comments on the report. The first report for large systems was due July 1, 1998. Six large systems in Central Basin and 3 large systems in West Basin prepared the report. Copper was the most commonly reported PHG, which has an enforceable action level, not a MCL. The next report is due July 1, 2001.

## Summary of PHGs

There are 58 current or proposed PHGs:

- 14 PHGs > (greater) than DHS' drinking water standards (MCLs).
- 35 PHGs < (less) than DHS' drinking water standards (MCLs) and of these, 22 are below present detection (reporting) limits.
- 9 PHGs = (equal) to DHS' drinking water standards (MCLs).

## Current Issues Regarding PHGs

- Multiple limits, such as Federal and State MCLs, PHGs, and MCLGs tend to confuse the public.
- PHGs can be easy political targets such as is the case for chromium VI.
- In some cases, there is an inconsistent approach in developing the PHG.
- PHGs are easily confused as drinking water standards.
- Particularly when PHGs are lower than MCLs, DHS can be "put-on-the-spot" to adopt a lower standard without due process and if they don't succumb to outside pressure their credibility tends to be lessened.
- There has been discussion by DHS to apply PHGs to recycled water discharge permits. This is driven by the concept of not "impairing" a present drinking water source. The term "impairment" is contained in the California Water code with respect to waste well regulation and DHS believes there is a need to address this issue in their recycled water criteria. In effect, potentially recycled water permits could be required to meet PHGs, which in general are superior (lower) than current drinking water standards. As an example, 22 PHGs are below current detection limits. By imposing PHGs, the capability of current treatment technologies may be exceeded, and at a minimum, the cost of using recycled water will rise.

## Considerations

Staff has initiated preliminary discussions with a few agencies on developing a more effective approach to the existing process. One idea is to establish a comprehensive advisory panel, through legislation, which would ultimately develop recommendations to improve how water quality limits and criteria are established. The panel would consist of experts in water quality and public health, key representatives from the regulated community, the regulators, and appropriate environmental constituencies.

## COMMITTEE STATUS

This item was reviewed by the Water Resources Committee on December 7, 2000, and agendaized to the West Basin December 18, 2000 Board meeting as information.

## RECOMMENDED MOTION:

This item is for information only.

## LIST OF EXHIBITS:

Exhibit "A" – California Public Health Goals (PHGs) Published 1997-1999

Exhibit "B" – California Public Health Goals (PHGs) Published in September 2000

Exhibit "C" – California Public Health Goals (PHGs) to be Published in December 2000

## EXHIBIT A

### CALIFORNIA PUBLIC HEALTH GOALS (PHGs) PUBLISHED 1997-1999

CHEMICAL	FEDERAL MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA PHG	CALIFORNIA REPORTING LIMIT
1,1-Dichloroethylene (1,1-DCE)	7	6 µg/l	10 ug/l	0.5 ug/l
1,2,4-Trichlorobenzene (1,2,4-TCB)	70	70 µg/l	5 ug/l	0.5 ug/l
1,2-Dichlorobenzene (1,2-DBC)	600	600 µg/l	600 ug/l	0.5 ug/l
1,2-Dichloroethane (1,2-DCA)	5	0.5 µg/l	0.4 ug/l	0.5 ug/l
1,2-Dichloropropane (1,2-DCP)	5	5 µg/l	0.5 ug/l	0.5 ug/l
1,3-Dichloropropene (1,3-DCP)	No Federal MCL	0.5 µg/l	0.2 ug/l	0.5 ug/l
1,4-Dichlorobenzene (1,4-DBC)	75	5 µg/l	6 ug/l	0.5 ug/l
2,4-Dichlorophenoxyacetic acid (2,4-D)	70	70 µg/l	70 ug/l	10 ug/l
Alachlor	2	2 µg/l	4 ug/l	1 ug/l
Antimony	6	6 µg/l	20 ug/l	6 ug/l
Atrazine	3	3 µg/l	0.15 ug/l	1 ug/l
Bentazon	No Federal MCL	18 µg/l	200 ug/l	2 ug/l
Benzo(a)pyrene	0.2	0.2 µg/l	0.004 ug/l	0.1 ug/l
Cadmium	5	5 µg/l	0.07 ug/l	1 ug/l
Chlordane	2	0.1 µg/l	0.03 ug/l	0.1 ug/l
Chromium, total	100	50 µg/l	2.5 ug/l	10 ug/l
Copper	1,300 AL*	1,300 AL* µg/l	170 ug/l	50 ug/l
Cyanide	200	200 µg/l	150 ug/l	100 ug/l
Dalapon	200	200 µg/l	790 ug/l	10 ug/l
Dibromochloropropane (DBCP)	0.2	0.2 µg/l	0.0017 ug/l	0.01 ug/l
Diethylhexylphthalate (DEHP)	6	4 µg/l	12 ug/l	3 ug/l
Dinoseb	7	7 µg/l	14 ug/l	2 ug/l
Endothall	100	100 µg/l	580 ug/l	45 ug/l
Endrin	2	2 µg/l	1.8 ug/l	0.5 ug/l
Ethylbenzene	700	700 µg/l	300 ug/l	0.5 ug/l
Fluoride	4000	2000 µg/l	1,000 ug/l	0.1 ug/l
Glyphosate	700	700 µg/l	1,000 ug/l	25 ug/l
Heptachlor	0.4	0.01 µg/l	0.008 ug/l	0.01 ug/l
Heptachlor epoxide	0.2	0.01 µg/l	0.006 ug/l	0.01 ug/l
Hexachlorocyclopentadiene	50	50 µg/l	50 ug/l	1 ug/l
Lead	15 AL*	15 AL* µg/l	2 ug/l	5 ug/l
Lindane	0.2	0.2 µg/l	0.032 ug/l	0.2 ug/l
Mercury (Inorganic)	2	2 µg/l	1.2 ug/l	1 ug/l
Methoxychlor	40	40 µg/l	30 ug/l	10 ug/l
Methyl tertiary butyl ether (MTBE)	No Federal MCL	13 µg/l	13 ug/l	3 ug/l
Nitrate	45 as NO <sub>3</sub>	45 as NO <sub>3</sub> µg/l	45 as NO <sub>3</sub> mg/l	2 as NO <sub>3</sub> mg/l
Nitrite	1,000 as N	1,000 as N µg/l	1,000 as N ug/l	400 as N ug/l
Oxamyl	200	200 µg/l	50 ug/l	20 ug/l
Pentachlorophenol (PCP)	1	1 µg/l	0.4 ug/l	0.2 ug/l
Picloram	500	500 µg/l	500 ug/l	1 ug/l
Thallium	2	2 µg/l	0.1 ug/l	1 ug/l
Toluene	1,000	150 µg/l	150 ug/l	0.5 ug/l
Trichloroethylene (TCE)	5	5 µg/l	0.8 ug/l	0.5 ug/l
Trichlorofluoroethane (Freon 113)	No Federal MCL	1,200 µg/l	4,000 ug/l	10 ug/l
Trichlorofluoromethane (Freon11)	No Federal MCL	150 µg/l	700 ug/l	5 ug/l
Xylenes (total)	10,000	1,750 µg/l	1,800 ug/l	1 ug/l

\* Action Level based on sample results from customer's taps

### Exhibit "B"

#### **CALIFORNIA PUBLIC HEALTH GOALS (PHGs) PUBLISHED IN SEPTEMBER 2000**

CHEMICAL	FEDERAL MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA PHG	CALIFORNIA REPORTING LIMIT
Carbofuran	40	18 µg/l	1.7 ug/l	5 ug/l
Carbon tetrachloride	5	0.5 µg/l	0.1 ug/l	0.5 ug/l
Diquat	20	20 µg/l	15 ug/l	4.0 ug/l
Methylene chloride (Dichloromethane)	5	5 µg/l	0.13 ug/l	0.5 ug/l
Thiobencarb	No Federal MCL	70 µg/l	70 ug/l	1 ug/l
Vinyl chloride	2	0.5 µg/l	0.043 ug/l	0.5 ug/l

### Exhibit "C"

#### **CALIFORNIA PUBLIC HEALTH GOALS (PHGs) TO BE PUBLISHED IN DEC 2000**

CHEMICAL	FEDERAL MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA MAXIMUM CONTAMINANT LEVEL (MCL)	CALIFORNIA PHG (PROPOSED) *	CALIFORNIA REPORTING LIMIT
Aluminum	No Federal MCL	1000 µg/l	60 ug/l	50 ug/l
Benzene	5	1 µg/l	0.14 ug/l	0.5 ug/l
Nickel	No Federal MCL	100 µg/l	1 ug/l	10.0 ug/l
Simazine	4	4 µg/l	0.4 ug/l	1.0 ug/l
Tetrachloroethylene (PCE)	No Federal MCL	5 µg/l	0.056 ug/l	0.5 ug/l
Uranium	No Federal MCL	20 pCi/l	0.2 pCi/l	2 pCi/l

\* THESE PHGs WERE ORIGINALLY PROPOSED IN 1999; FINAL ADOPTION BY DEC 2000.