

MELODY WOODS WATER CO. WATER QUALITY REPORT 1996

Mission

The mission of ALL water suppliers is to provide **safe, aesthetically pleasing water** to its customers **at a reasonable cost**. The first priority is the provision of **safe water**, free from bacteria, viruses and other health hazards. The Melody Woods Water Co. (the company) has satisfied this mission in 1996.

Legal Requirements

The U.S. Congress passed the **SAFE DRINKING WATER ACT** in 1974 and has amended it several times since then. Basically, this empowers the U.S.E.P.A. to set standards and operating guidelines for all public drinking water systems. The E.P.A. has delegated most of these responsibilities to the states. In most cases, the states have accepted this responsibility and acts as the monitoring and enforcing agency. California is one of the states that has done this and all our interaction is through the California Dept. of Health Services except for the Copper and Lead Rule. California has accepted responsibility for this activity but has yet to implement the complete program. Consequently, we report on the Copper and Lead Rule to the U.S.E.P.A. with copies to the state.

Critical Testing

Since **safe drinking water** is the priority of the Company, there are two critical components that are important to what the state calls "acute risks". Acute risk is defined as an immediate health problem rather than a long-term development.

The critical components for acute risk are pathogens and nitrates.

Pathogens are disease-causing organisms that may be present in the water supply. The company is required by the State to have tests for the presence of pathogens in our water performed every month by a state certified laboratory and a report of these results forwarded to the Department of Health. Since the testing for specific pathogens would be costly and time consuming, the test procedure is limited by state regulation to a presence-absence (P-A) test which indicates that pathogens are either present or not.

In 1996 we had no incidents of pathogen presence.

We are required to have our source water tested each year for nitrate and nitrite. In addition to satisfying the state's requirement, the Company also elected to have the system water tested since it is made up from more than one source and more representative of what we drink. The **Maximum Contaminant Level (MCL)** for nitrate is 45 parts per million (ppm) and 1 ppm for nitrite as nitrogen.

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Test results showed 22 ppm for well #2 and 3.1 ppm for well #3. It should be noted that well #2 provides about 10% of our water the rest coming from well #3. The level in the water being supplied was tested to be 5.7 ppm - well within the MCL. Nitrite levels for both wells met the MCL requirements.

Source Testing

The state stipulates that every three years our source of water (wells 2 & 3) have a complete analysis for inorganic, mineral, physical characteristics and organic characteristics unless waived by them. These tests must be conducted by a state certified laboratory. In addition, radioactive characteristics must be measured and reported every four years.

In 1996 we were required to monitor and report on Volatile Organic Chemicals for well #3 and nitrate and nitrite for wells 2 and 3. In 1995 we measured and reported the inorganics and reported the reductive characteristics in 1994.

The results indicated no detected organics and the nitrate/nitrite results discussed above. MCLs were met inorganic, physical and radioactive characteristics except for iron in well #2 where the level was 1.7 ppm (the MCL is 0.3 ppm).

The complete analysis is contained in a number of pages of data. Rather than include these in this report, we will make the results available to any member who requests them. Should you be interested, contact either Dale Pennington at 353-2556 or Tom Gray at 353-3750.

Disinfection

The company uses a hypochlorination process for treating its delivered water. This is a simple process that disinfects the water; reduces and/or removes organic, inorganic and mineral contaminants in the raw (source) water. The process introduces chlorine into the water based on information gained from experience. Enough chlorine is introduced into the water to "kill the bugs", reduce/remove organics and inorganics (called chlorine demand) and still have enough chlorine left (called free residual chlorine) to disinfect the distribution system. State recommends at least 0.5 parts per million (ppm) free residual chlorine at the distribution start point and 0.2 ppm at the remote point in the system.

In 1996, the average chlorine concentration at the line's end was 0.39 ppm. The maximum value was 1.0 ppm (occurred following a pump problem at the well) and a minimum of 0.0 ppm. To achieve this we put approximately 0.35 lbs of chlorine into the system each day.

Lead and Copper Rule

There are some contaminants considered to be of special concern due to their potential health hazards. Of major concern to us is the **Lead and Copper Rule**. The EPA has established MCL's for these two contaminants but, unlike monitoring contaminants in the supplied water, these levels are to be monitored at the water tap in the user's home. This means that the home plumbing is an

Test results showed 2.1 ppm for well W3 and 1.1 ppm for well W3. It should be noted that well W3 provides about 10% of our water the rest coming from well W3. The level in the water being supplied was tested to be 2.7 ppm - well within the MCL. Nitrate levels for both wells met the MCL requirements.

Source Testing

The state stipulates that every three years our source of water (wells 2 & 3) have a complete analysis for inorganic, mineral, physical characteristics and organic characteristics unless waived by them. These tests must be conducted by a state certified laboratory. In addition, inorganic characteristics must be measured and reported every four years.

In 1996 we were required to monitor and report on Volatile Organic Chemicals for well W3 and nitrate and nitrite for wells 2 and 3. In 1995 we measured and reported the inorganics and reported the reductive characteristics in 1994.

The results indicated no detected organics and the nitrate/nitrite results discussed above. MCLs were met inorganic, physical and radioactive characteristics except for iron in well W3 where the level was 1.7 ppm (the MCL is 0.3 ppm).

The complete analysis is contained in a number of pages of data. Rather than include these in this report, we will make the results available to any member who requests them. Should you be interested, contact either Dale Pennington at 723-2256 or Tom Gray at 353-4750.

Disinfection

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In 1996, the average chlorine concentration at the line's end was 0.39 ppm. The maximum value was 1.0 ppm (occurred following a pump problem at the well) and a minimum of 0.0 ppm. To achieve this we put approximately 0.2 lbs of chlorine into the system each day.

Lead and Copper Rule

There are some contaminants considered to be of special concern due to their potential health hazards. Of major concern to us is the Lead and Copper Rule. The EPA has established MCLs for these two contaminants but, unlike monitoring contaminants in the supplied water, these levels are to be monitored at the water tap in the user's home. This means that the home plumbing is an

integral part of the monitored system. In fact, the home plumbing becomes the dominating factor in most systems.

The company is required to get a representative sampling of the water system users' MCL's for these contaminants with sampling priority given to the most likely problem sites.

The company conducted these tests in 10 homes twice during 1996. For both of these tests, we met the MCL requirements. As a result of this we can now reduce our sampling to once a year and take samples from only 5 homes.

Additional Sampling

In an effort to plan for potential future regulations and to gain a better insight into our system, we have performed additional testing of our water not required at this time by the state. Parameters measured are; pH, temperature, alkalinity, iron, taste, appearance and odor. These tests are performed by the Company without an outside laboratory. Tests are performed on water samples taken at the system inlet (the 88K gallon tank).

Results are:

<u>Component</u>	<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Suggested MCL</u>
pH	6.75	6.92	6.60	6.5 to 8.5
Temp	60.3F	70.0F	50.0F	None
Alkalinity	297ppm	410ppm	240ppm	50 to 150ppm
Iron	0.738ppm	2.5ppm	0.10ppm	0.30ppm

Taste, appearance and odor at the sample point have consistently been good. There have been no reported complaints about the taste and odor. We have had several times when "dirty" water has been reported. Corrective action taken so far has been to flush the delivery lines. We have done this 4 times in 1996.

Tom Gray
December 3, 1996

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The company is required to get a representative sampling of the water system used. MCL's for these contaminants with sampling priority given to the most likely problem sites.

The company conducted these tests in 10 homes twice during 1996. For both of these tests, we met the MCL requirements. As a result of this we can now reduce our sampling to once a year and take samples from only 2 homes.

Additional Sampling

In an effort to plan for potential future regulations and to gain a better insight into our system, we have performed additional testing of our water not required at this time by the state. Parameters measured are: pH, temperature, alkalinity, iron, taste, appearance and odor. These tests are performed by the Company without an outside laboratory. Tests are performed on water samples taken at the system inlet (the 88K gallon tank).

Results are:

Component Average Maximum Minimum Suggested MCL

pH	6.75	6.92	6.00	6.5 to 8.5
Temp	60.3F	70.0F	50.0F	None
Alkalinity	297ppm	410ppm	240ppm	20 to 150ppm
Iron	0.238ppm	2.2ppm	0.10ppm	0.30ppm

Taste, appearance and odor at the sample point have consistently been good. There have been no reported complaints about the taste and odor. We have had several times when "dirty" water has been reported. Corrective action taken so far has been to flush the delivery lines. We have done this 4 times in 1996.

Tom Gray
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