

Timber Lakes Water Special Service District

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2007

Annual Drinking Water Quality \ Report Timber Lakes Water SSD

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water sources are springs, they are known as Lone Pine 1&2, Cove East Cove and Cove West, and Look Out Mountain.

Timber Lakes Water SSD has a Drinking Water Source Protection Plan that is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. It has been determined that we have a low susceptible level to potential sources of contamination, such as septic tanks, roads, homes etc. If you have any questions regarding source protection, contact our office to review our source protection plan. Our sources are in remote locations, and there are no potential contamination sources in the protection zones, so we consider our source to have a low susceptibility to potential contamination events.

I'm pleased to report that our drinking water meets federal and state requirements. If you have any questions about this report please contact Jody Defa at 435-654-0125 or John Schiess with Horrocks Engineering at 801-763-5100. We want our valued customer to be informed about their water utility. If you want to learn more our meetings are held on the third Tuesday of each month at 6:00 P.M. at the Wasatch County building at 25 North Main in Heber City, Utah.

Timber Lakes Water routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2007. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

ND/Low - High - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - (mandatory language) a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - (mandatory language) The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - (mandatory language) The “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Date- Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates “May” seem out of date.

Waivers (W) - Because some chemicals are not used or stored in areas around drinking water sources, some water systems have been given waivers that exempt them from having to take certain chemical samples; these waivers are also tied to Drinking Water Source Protection Plans.

| Contaminant | Violation Y/N | Level Detected ND/Low-High | Unit Measurement | MCLG | MCL | Date Sampled | Likely Source of Contamination |
|-------------------------------------|---------------|----------------------------|------------------|------|---|--------------|--------------------------------------|
| Microbiological Contaminants | | | | | | | |
| 1. Total Coliform Bacteria | N | | N/A | 0 | Presence of coliform bacteria in 5% of monthly samples | 2007 | Naturally present in the environment |
| 2. Fecal coliform and <i>E.coli</i> | N | | N/A | 0 | a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive | 2007 | Human and animal fecal waste |
| 3.a. Turbidity for Ground Water | N | | NTU | N/A | 5 | 2006 | Soil runoff |

| | | | | | | | |
|----------------------------------|---|--|-----|-----|--|------|---|
| 3.b. Turbidity for Surface Water | N | | NTU | N/A | 0.5 in at least 95% of the samples and must never exceed 5.0 | 2006 | Soil Runoff (highest single measurement & the lowest monthly percentage of samples meeting the turbidity limits) |
|----------------------------------|---|--|-----|-----|--|------|---|

Radioactive Contaminants

| | | | | | | | |
|--------------------------|---|--|-------|---|----|------|---|
| 4. Alpha emitters | N | | pCi/l | 0 | 15 | 2003 | Erosion of natural deposits |
| 5. Beta/photon emitters* | N | | pCi/L | 0 | 50 | 2003 | Decay of natural and man-made deposits. |
| 6. Combined radium | N | | pCi/l | 0 | 5 | | Erosion of natural deposits |

*Beta/photon emitters: The MCL for beta/photon emitters is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta/photon emitters.

Inorganic Contaminants

| | | | | | | | |
|-------------|---|----|-----|---|-----|------|--|
| 7. Antimony | N | ND | ppb | 6 | 6 | 2006 | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder |
| 8. Arsenic | N | ND | ppb | 0 | 50* | 2005 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |

*This Arsenic MCL is effective until January 23, 2006. At that time, the Arsenic MCL will become 10 ppb (ug/l).

| | | | | | | | |
|--|---|------------------|-----|------|---------|------|---|
| 9. Asbestos | N | W | MFL | 7 | 7 | | Decay of asbestos cement water mains; erosion of natural deposits |
| 10. Barium | N | ND-107 | ppb | 2000 | 2000 | 2006 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| 11. Beryllium | N | ND | ppb | 4 | 4 | 2006 | Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries |
| 12. Cadmium | N | ND | ppb | 5 | 5 | 2006 | Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints |
| 13. Chromium | N | ND | ppb | 100 | 100 | 2006 | Discharge from steel and pulp mills; erosion of natural deposits |
| 14. Copper a. 90% results b. # of sites that exceed the AL | N | a.185-219 b.0 | ppb | 1300 | AL=1300 | 2005 | Corrosion of household plumbing systems; erosion of natural deposits |
| 15. Cyanide | N | ND | ppb | 200 | 200 | 2006 | Discharge from steel/metal factories; discharge from plastic and fertilizer factories |
| 16. Fluoride | N | 80-100 | ppb | 4000 | 4000 | 2006 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| 17. Lead a. 90% results b. # of sites that exceed the AL | N | a. 3-4 b.0 | ppb | 0 | AL=15 | 2005 | Corrosion of household plumbing systems, erosion of natural deposits |

| | | | | | | | |
|----------------------------------|---|---------|-----|-----------------|-----------------|------|---|
| 18. Mercury (inorganic) | N | ND | ppb | 2 | 2 | 2006 | Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland |
| 19. Nitrate (as Nitrogen) | N | 390-460 | ppb | 10000 | 10000 | 2007 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| 20. Nitrite (as Nitrogen) | N | W | ppb | 10000 | 10000 | 2006 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| 21. Selenium | N | ND | ppb | 50 | 50 | 2006 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| 22. Sodium | N | 4-6 | ppm | None set by EPA | None set by EPA | 2006 | Erosion of natural deposits; discharge from refineries and factories; runoff from landfills. |
| 23. Sulfate | N | 2-5 | ppm | 500* | 500 | 2006 | Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland |
| 24. Thallium | N | ND | ppb | 1 | 2 | 2006 | Leaching from ore-processing sites; discharge from electronics, glass, and drug factories |
| 25. TDS (Total Dissolved Solids) | N | 118-162 | ppm | 1000** | 1000** | 2006 | Erosion of natural deposits |

*If the sulfate level of a public water system is greater than 500 ppm, the supplier must satisfactorily demonstrate that: a) no better water is available, and b) the water shall not be available for human consumption from commercial establishments. In no case shall water having a level above 1000 ppm be used.

**If TDS is greater than 1000 ppm the supplier shall demonstrate to the Utah Drinking Water Board that no better water is available. The Board shall not allow the use of an inferior source of water if a better source is available.

Volatile Organic Contaminants

| | | | | | | | |
|------------------------------------|---|----|-----|-----|-----|------|---|
| 26. Benzene | N | ND | ppb | 0 | 5 | 2004 | Discharge from factories; leaching from gas storage tanks and landfills |
| 27. Carbon tetrachloride | N | ND | ppb | 0 | 5 | 2004 | Discharge from chemical plants and other industrial activities |
| 28. Chlorobenzene | N | ND | ppb | 100 | 100 | N/A | Discharge from chemical and agricultural chemical factories |
| 29. o-Dichlorobenzene | N | ND | ppb | 600 | 600 | 2004 | Discharge from industrial chemical factories |
| 30. p-Dichlorobenzene | N | ND | ppb | 75 | 75 | 2004 | Discharge from industrial chemical factories |
| 31. 1,2 - Dichloromethane | N | ND | ppb | 0 | 5 | 2004 | Discharge from industrial chemical factories |
| 32. 1,1 - Dichloroethylene | N | ND | ppb | 7 | 7 | | Discharge from industrial chemical factories |
| 33. cis-1,2-ichloroethylene | N | ND | ppb | 70 | 70 | 2004 | Discharge from industrial chemical factories |
| 34. trans - 1,2 - Dichloroethylene | N | ND | ppb | 100 | 100 | 2004 | Discharge from industrial chemical factories |

| | | | | | | | |
|-------------------------------------|---|----|-----|-------|-------|------|---|
| 35. Dichloromethane | N | ND | ppb | 0 | 5 | 2004 | Discharge from pharmaceutical and chemical factories |
| 36. 1,2-Dichloropropane | N | ND | ppb | 0 | 5 | 2004 | Discharge from industrial chemical factories |
| 37. Ethyl benzene | N | ND | ppb | 700 | 700 | 2004 | Discharge from petroleum refineries |
| 38. Styrene | N | ND | ppb | 100 | 100 | 2004 | Discharge from rubber and plastic factories; leaching from landfills |
| 39. Tetrachloroethylene | N | ND | ppb | 0 | 5 | 2004 | Discharge from factories and dry cleaners. |
| 40. 1,2,4 - Trichlorobenzene | N | ND | ppb | 70 | 70 | | Discharge from textile-finishing factories |
| 41. 1,1,1 - Trichloroethane | N | ND | ppb | 200 | 200 | | Discharge from metal degreasing sites and other factories |
| 42. 1,1,2 -Trichloroethane | N | ND | ppb | 3 | 5 | | Discharge from industrial chemical factories |
| 43. Trichloroethylene | N | ND | ppb | 0 | 5 | 2004 | Discharge from metal degreasing sites and other factories |
| 44. TTHM [Total trihalomethanes] | N | ND | ppb | 0 | 100 | | By-product of drinking water disinfection |
| 45. Toluene | N | ND | ppb | 1000 | 1000 | 2004 | Discharge from petroleum factories |
| 46. Vinyl Chloride | N | ND | ppb | 0 | 2 | 2004 | Leaching from PVC piping; discharge from plastics factories |
| 47. Xylenes | N | ND | ppb | 10000 | 10000 | 2004 | Discharge from petroleum factories; discharge from chemical factories |
| Haloacetic Acids | N | 7 | ppb | 60 | n/a | 2007 | By-product of drinking water disinfection |
| Chlorine | N | ND | ppm | 4 | 4 | 2007 | Water additive used to control microbes |

The following is additional information concerning Volatile Organic Contaminants:

(26) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

(27) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(28) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

(29) o-Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

(30) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

(31) 1, 2-Dichloroethane. Some people who drink water containing 1, 2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

- (32) 1, 1-Dichloroethylene. Some people who drink water containing 1, 1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
- (33) cis-1, 2-Dichloroethylene. Some people who drink water containing cis-1, 2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
- (34) trans-1, 2-Dichloroethylene. Some people who drink water containing trans-1, 2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
- (35) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
- (36) 1, 2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
- (37) Ethyl benzene. Some people who drink water containing ethyl benzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
- (38) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
- (39) Tetrachloroethylene. Some people who drink water containing Tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
- (40) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
- (41) 1,1,1,-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
- (42) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
- (43) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
- (44) TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
- (45) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
- (46) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
- (47) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

In addition to the sampling outlined above, we have also sampled for (31 Synthetic Organic Contaminants, and 1 Unregulated Contaminant including Pesticides). These additional chemicals were not detected.

All Sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man made. Those constituents can be microbes, organic or inorganic chemicals or radioactive materials. All drinking water including bottled water, may reasonably expect to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one in a million chance of having a described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791).