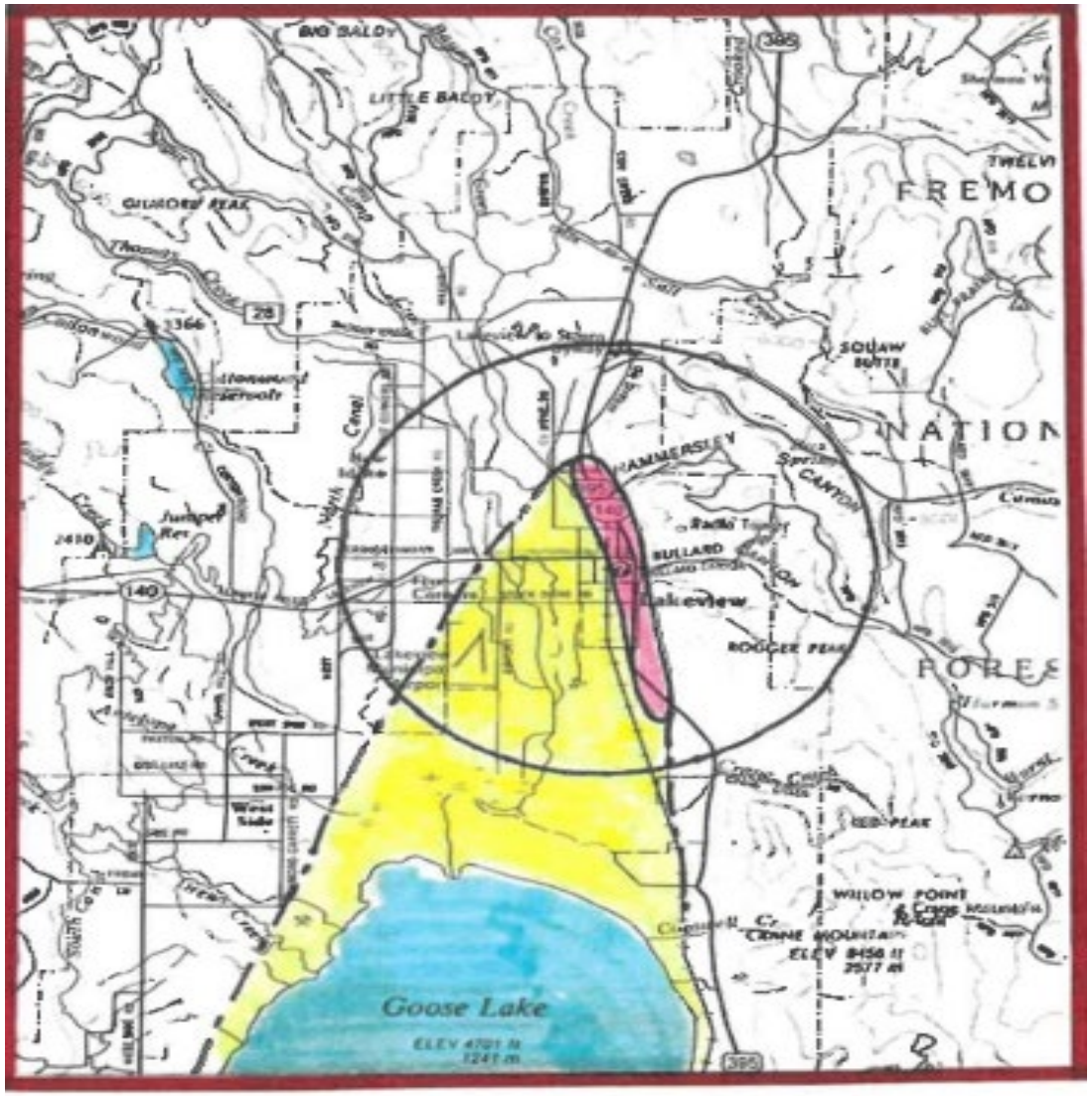
Lakeview Water System Improvements

WATER QUALITY

HUDSPETH LAND + WATER

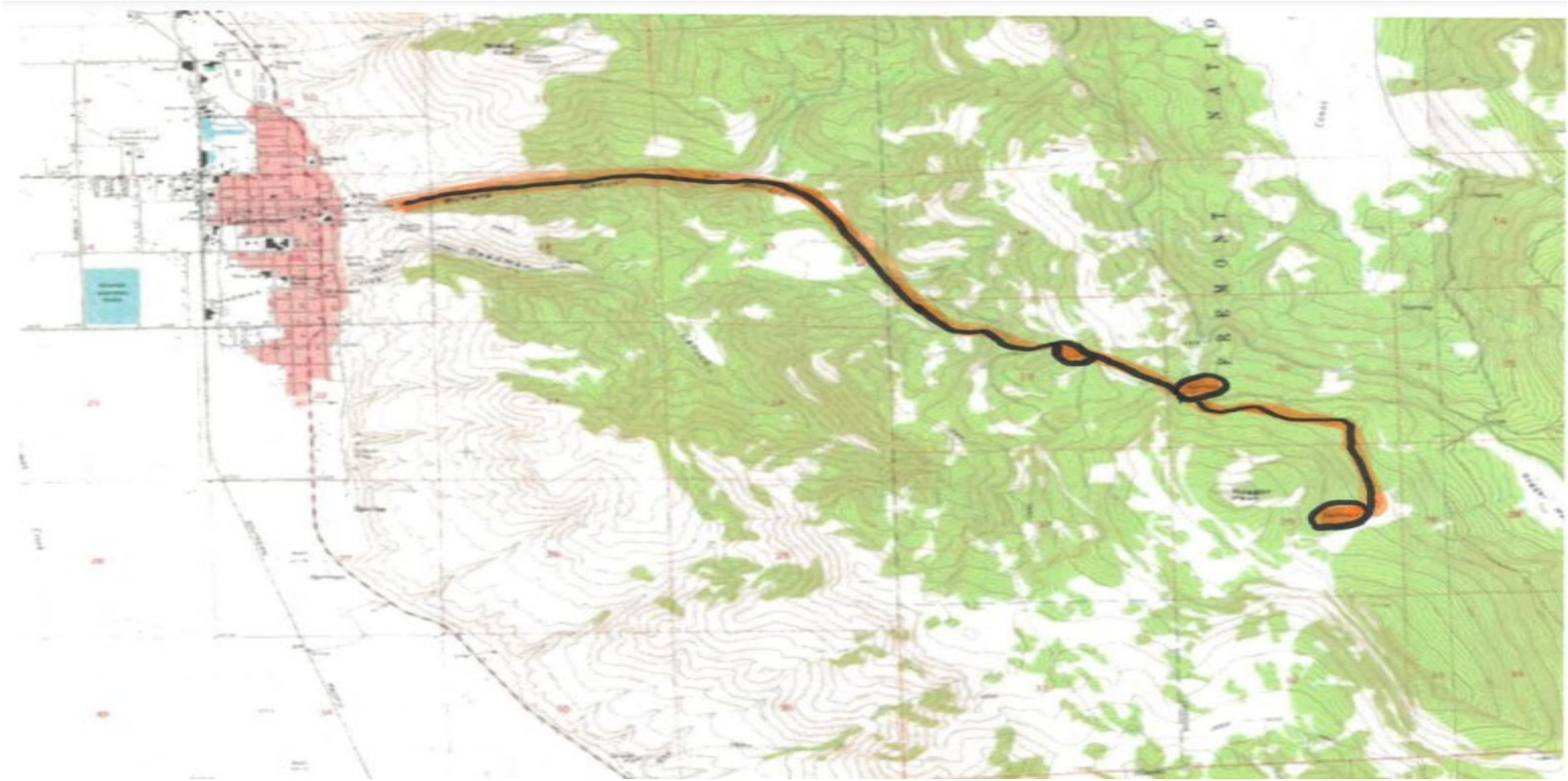
Amber Hudspeth
Principal Scientist
541.420.2710
amber@hlworegon.com



DOGAMI AND USGS, etc. 1979

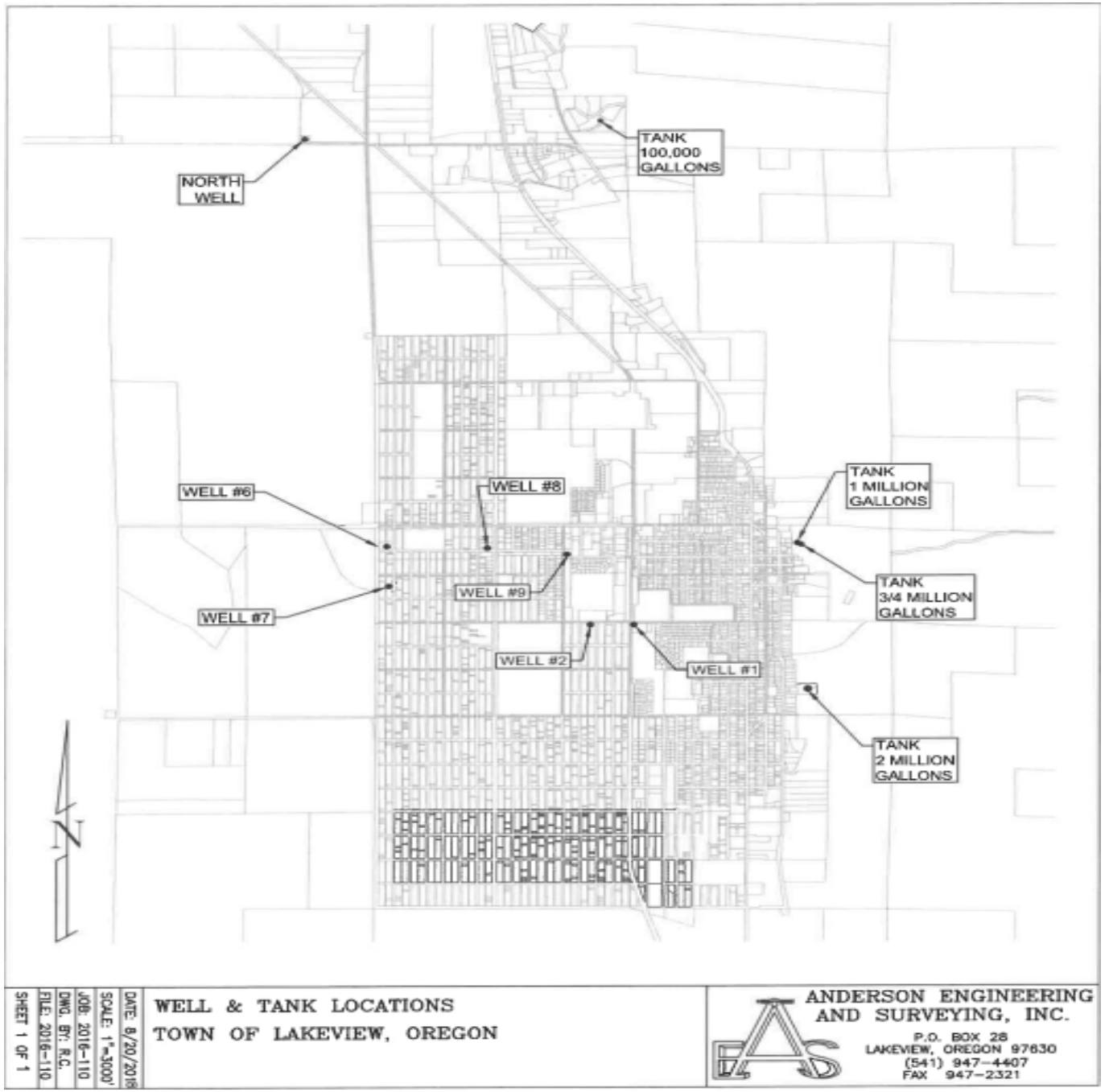
- The natural thermal water so the study area can best be described as relatively alkaline mixed ion bicarbonate waters, typical of Basin-Range deep circulation, fluid dominated systems.

Warner Mountain Springs



Lakeview

Well and Tank locations



Water Rights and Laws

- 1909 Appropriations Act
- 1955 Groundwater Act
- 1974 Safe Drinking Water Act
- All water within the state from all sources of water supply belongs to the public
- Primary Drinking Water Standards
- Secondary Standards

National Primary Drinking Water Regulations

EPA

Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[3]
Acrylamide	TT[4]	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/ wastewater treatment	zero
Alachlor	0.002	Eye, liver, kidney, or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	zero
Alpha/photon emitters	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	zero
Antimony	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	0.006
Arsenic	0.010	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes	0
Asbestos (fibers >10 micrometers)	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	7 MFL
Atrazine	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops	0.003
Barium	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	2
Benzene	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	zero
Benzo(a)pyrene (PAHs)	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	zero
Beryllium	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	0.004
Beta photon emitters	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	zero
Bromate	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	zero
Cadmium	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	0.005
Carbofuran	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa	0.04

LEGEND: DISINFECTANT, DISINFECTION BYPRODUCT, INORGANIC CHEMICAL, MICROORGANISM, ORGANIC CHEMICAL, RADIONUCLIDES

EPA 816-F-09-004 | MAY 2009

Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[3]
Carbon tetrachloride	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	zero
Chloramines (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort; anemia	Water additive used to control microbes	MRDLG=4[1]
Chlordane	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	zero
Chlorine (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	MRDLG=4[1]
Chlorine dioxide (as ClO_2)	MRDL=0.8[1]	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Water additive used to control microbes	MRDLG=0.8[1]
Chlorite	1.0	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Byproduct of drinking water disinfection	0.8
Chlorobenzene	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories	0.1
Chromium (total)	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	0.1
Copper	TT[5]; Action Level=1.3	Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	1.3
Cryptosporidium	TT[7]	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
Cyanide (as free cyanide)	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	0.2
2,4-D	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops	0.07
Dalapon	0.2	Minor kidney changes	Runoff from herbicide used on rights of way	0.2
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	zero
o-Dichlorobenzene	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories	0.6
p-Dichlorobenzene	0.075	Anemia; liver, kidney, or spleen damage; changes in blood	Discharge from industrial chemical factories	0.075
1,2-Dichloroethane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero

LEGEND: DISINFECTANT, DISINFECTION BYPRODUCT, INORGANIC CHEMICAL, MICROORGANISM, ORGANIC CHEMICAL, RADIONUCLIDES

Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[2]
1,1-Dichloroethylene	0.007	Liver problems	Discharge from industrial chemical factories	0.007
cis-1,2-Dichloroethylene	0.07	Liver problems	Discharge from industrial chemical factories	0.07
trans-1,2, Dichloroethylene	0.1	Liver problems	Discharge from industrial chemical factories	0.1
Dichloromethane	0.005	Liver problems; increased risk of cancer	Discharge from industrial chemical factories	zero
1,2-Dichloropropane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
Di(2-ethylhexyl) adipate	0.4	Weight loss, liver problems, or possible reproductive difficulties	Discharge from chemical factories	0.4
Di(2-ethylhexyl) phthalate	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories	zero
Dinoseb	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables	0.007
Dioxin (2,3,7,8-TCDD)	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories	zero
Diquat	0.02	Cataracts	Runoff from herbicide use	0.02
Endothall	0.1	Stomach and intestinal problems	Runoff from herbicide use	0.1
Endrin	0.002	Liver problems	Residue of banned insecticide	0.002
Epichlorohydrin	TT[4]	Increased cancer risk; stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	zero
Ethylbenzene	0.7	Liver or kidney problems	Discharge from petroleum refineries	0.7
Ethylene dibromide	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries	zero
Fecal coliform and *E. coli*	MCL[5]	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes may cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Human and animal fecal waste	zero[6]

LEGEND: DISINFECTANT; DISINFECTION BYPRODUCT; INORGANIC CHEMICAL; MICROORGANISM; ORGANIC CHEMICAL; RADIONUCLIDES

National Primary Drinking Water Regulations EPA 816-F-09-004 | MAY 2009

Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[2]
Fluoride	4.0	Bone disease (pain and tenderness of the bones); children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	4.0
Giardia lamblia	TT[7]	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
Glyphosate	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use	0.7
Haloacetic acids (HAA5)	0.060	Increased risk of cancer	Byproduct of drinking water disinfection	n/a[9]
Heptachlor	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide	zero
Heptachlor epoxide	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor	zero
Heterotrophic plate count (HPC)	TT[7]	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment	n/a
Hexachlorobenzene	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories	zero
Hexachloro-cyclopentadiene	0.05	Kidney or stomach problems	Discharge from chemical factories	0.05
Lead	TT[8]; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	zero
Legionella	TT[7]	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems	zero
Lindane	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, and gardens	0.0002
Mercury (inorganic)	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	0.002
Methoxychlor	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock	0.04
Nitrate (measured as Nitrogen)	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10

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Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[3]
Nitrite (measured as Nitrogen)	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	1
Oxamyl (Vydate)	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	0.2
Pentachlorophenol	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood-preserving factories	zero
Picloram	0.5	Liver problems	Herbicide runoff	0.5
Polychlorinated biphenyls (PCBs)	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals	zero
Radium 226 and Radium 228 (combined)	5 pCi/L	Increased risk of cancer	Erosion of natural deposits	zero
Selenium	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	0.05
Simazine	0.004	Problems with blood	Herbicide runoff	0.004
Styrene	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills	0.1
Tetrachloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners	zero
Thallium	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	0.0005
Toluene	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories	1
Total Coliforms	5.0 percent[6]	Coliforms are bacteria that indicate that other, potentially harmful bacteria may be present. See fecal coliforms and *E. coli*	Naturally present in the environment	zero
Total Trihalomethanes (TTHMs)	0.080	Liver, kidney, or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection	n/a[5]
Toxaphene	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle	zero
2,4,5-TP (Silvex)	0.05	Liver problems	Residue of banned herbicide	0.05
1,2,4-Trichlorobenzene	0.07	Changes in adrenal glands	Discharge from textile finishing factories	0.07

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Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from long-term[3] exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L)[3]
1,1,1-Trichloroethane	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories	0.2
1,1,2-Trichloroethane	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories	0.003
Trichloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories	zero
Turbidity	TT[7]	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites, and some bacteria. These organisms can cause short term symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff	n/a
Uranium	30µg/L	Increased risk of cancer, kidney toxicity	Erosion of natural deposits	zero
Vinyl chloride	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories	zero
Viruses (enteric)	TT[7]	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
Xylenes (total)	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories	10

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NOTES

1 Definitions
- **Maximum Contaminant Level Goal (MCLG):** 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 and are non-enforceable public health goals.
- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
- **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.
- **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.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

2 Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million (ppm).

3 Health effects are from long-term exposure unless specified as short-term exposure.

4 Each water system must certify annually, in writing, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05 percent dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01 percent dosed at 20 mg/L (or equivalent).

5 Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

6 A routine sample that is fecal coliform-positive or E. coli-positive triggers repeat samples--if any repeat sample is total coliform-positive, the system has an acute MCL violation. A routine sample that is total coliform-positive and fecal coliform-negative or E. coli-negative triggers repeat samples--if any repeat sample is fecal coliform-positive or E. coli-positive, the system has an acute MCL violation. See also Total Coliforms.

7 EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:
- **Cryptosporidium:** 99 percent removal for systems that filter. Unfiltered systems are required to include Cryptosporidium in their existing watershed control provisions.
- **Giardia lamblia:** 99.9 percent removal/inactivation
- **Viruses:** 99.9 percent removal/inactivation
- **Legionella:** No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, according to the treatment techniques in the surface water treatment rule, *Legionella* will also be controlled.
- **Turbidity:** For systems that use conventional or direct filtration, at no time can turbidity (cloudiness of water) go higher than 1 nephelometric turbidity unit (NTU), and samples for turbidity must be less than or equal to 0.3 NTU in at least 95 percent of the samples in any month. Systems that use filtration other than the conventional or direct filtration must follow state limits, which must include turbidity at no time exceeding 5 NTU.
- **HPC:** No more than 500 bacterial colonies per milliliter
- **Long Term 1 Enhanced Surface Water Treatment:** Surface water systems or ground water systems under the direct influence of surface water serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, Cryptosporidium removal requirements, updated watershed control requirements for unfiltered systems).
- **Long Term 2 Enhanced Surface Water Treatment:** This rule applies to all surface water systems or ground water systems under the direct influence of surface water. The rule targets additional *Cryptosporidium* treatment requirements for higher risk systems and includes provisions to reduce risks from uncovered finished water storages facilities and to ensure that the systems maintain microbial protection as they take steps to reduce the formation of disinfection byproducts. (Monitoring start dates are staggered by system size. The largest systems (serving at least 100,000 people) will begin monitoring in October 2006 and the smallest systems (serving fewer than 10,000 people) will not begin monitoring until October 2008. After completing monitoring and determining their treatment bin, systems generally have three years to comply with any additional treatment requirements.)
- **Filter Backwash Recycling:** The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

8 No more than 5.0 percent samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli. If two consecutive TC-positive samples, and one is also positive for E. coli or fecal coliforms, system has an acute MCL violation.

9 Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:
- **Haloacetic acids:** dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- **Trihalomethanes:** bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

NATIONAL SECONDARY DRINKING WATER REGULATION

National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, some states may choose to adopt them as enforceable standards.

Contaminant	Secondary Maximum Contaminant Level
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	Noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

FOR MORE INFORMATION ON EPA'S SAFE DRINKING WATER:

visit: **epa.gov/safewater**

call: **(800) 426-4791**

ADDITIONAL INFORMATION:

To order additional posters or other ground water and drinking water publications, please contact the National Service Center for Environmental Publications at: **(800) 490-9198**, or email: **nscep@bps-lmit.com.**

OFFICE OF GROUND WATER AND DRINKING WATER

Iron

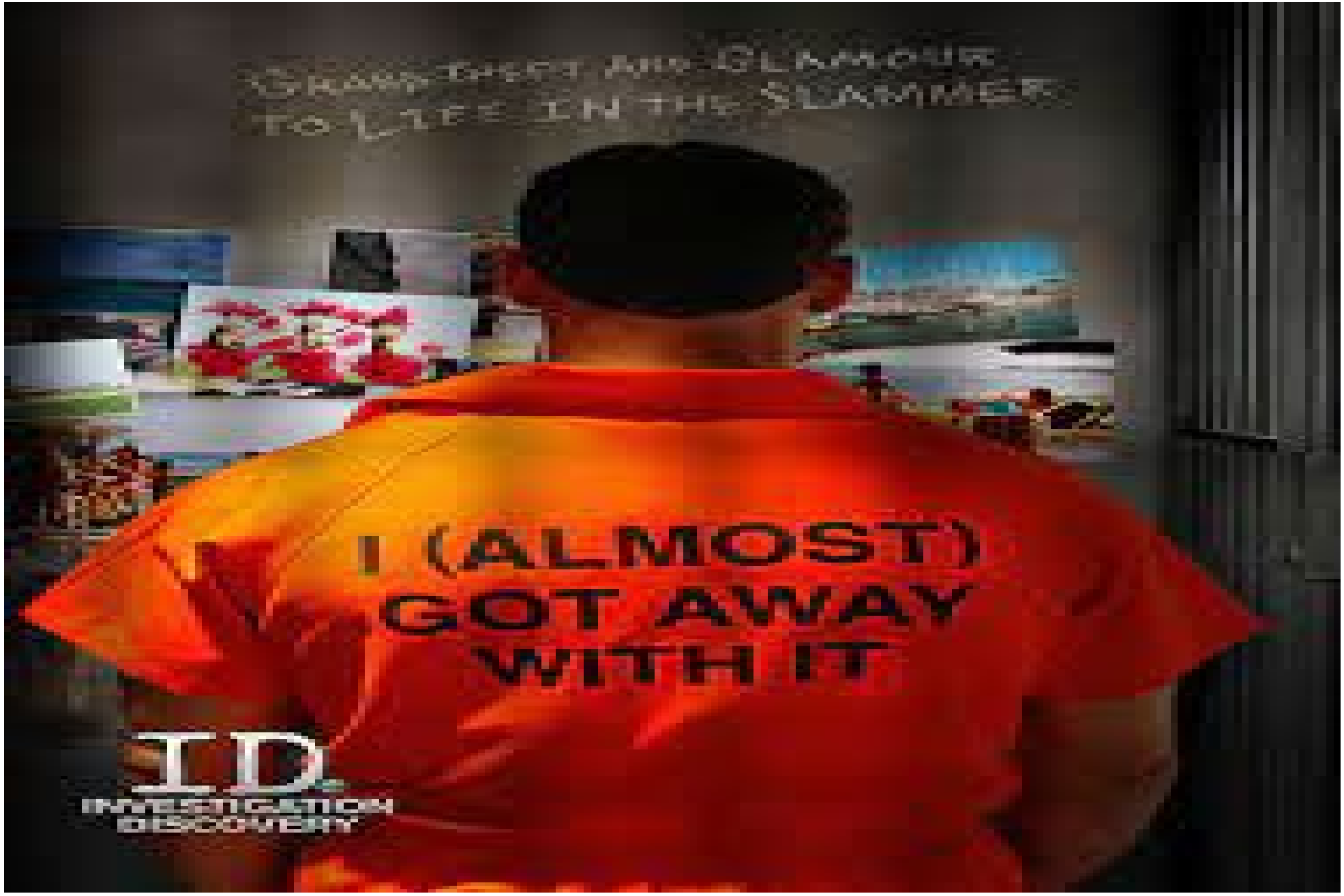
- Over 5%
- Corrosion of iron and steel pipes
- Staining of fixtures
- Food products- coffee, tea and potatoes
- Red and yellow
- Iron and organisms

Manganese

- Soil and bedrock
- Organic matter
- Orange red-brown color on fixtures
- Darker with oxygen
- Taste, color and odor

Arsenic

- Fertilizer
- Industrial activities
- Naturally occurring
- Colorless and odorless


GRAND THEFT AND GLAMOUR
TO LIFE IN THE SLAMMER
I (ALMOST)
GOT AWAY
WITH IT
ID
INVESTIGATION
DISCOVERY

Symptoms of Arsenic Poisoning

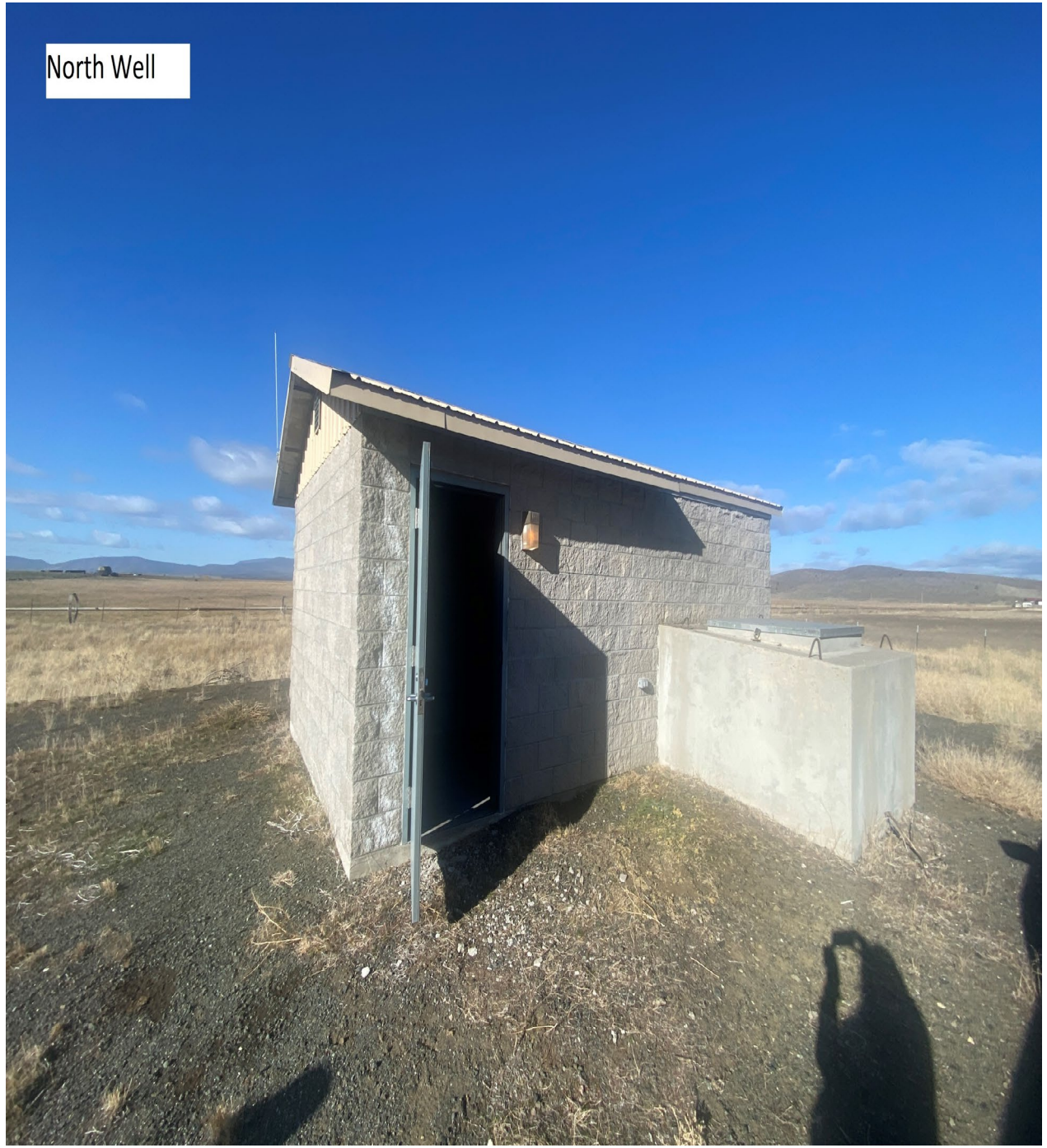
Acute

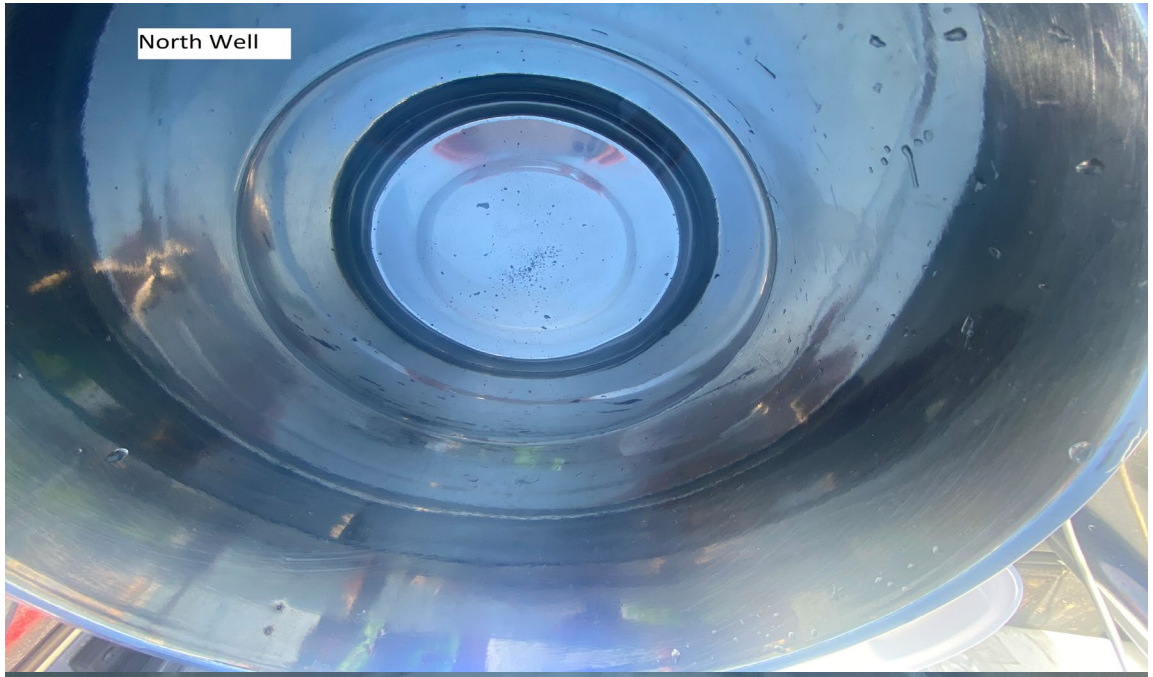
- Headache
- Severe diarrhea
- Vomiting, sometimes with blood
- Pain in the abdomen
- Metal or garlic taste

Chronic

- Partial paralysis
- Numbness in hands or feet
- Blindness
- Seizures
- Corns
- Skin discoloration or thickening

verywell


North Well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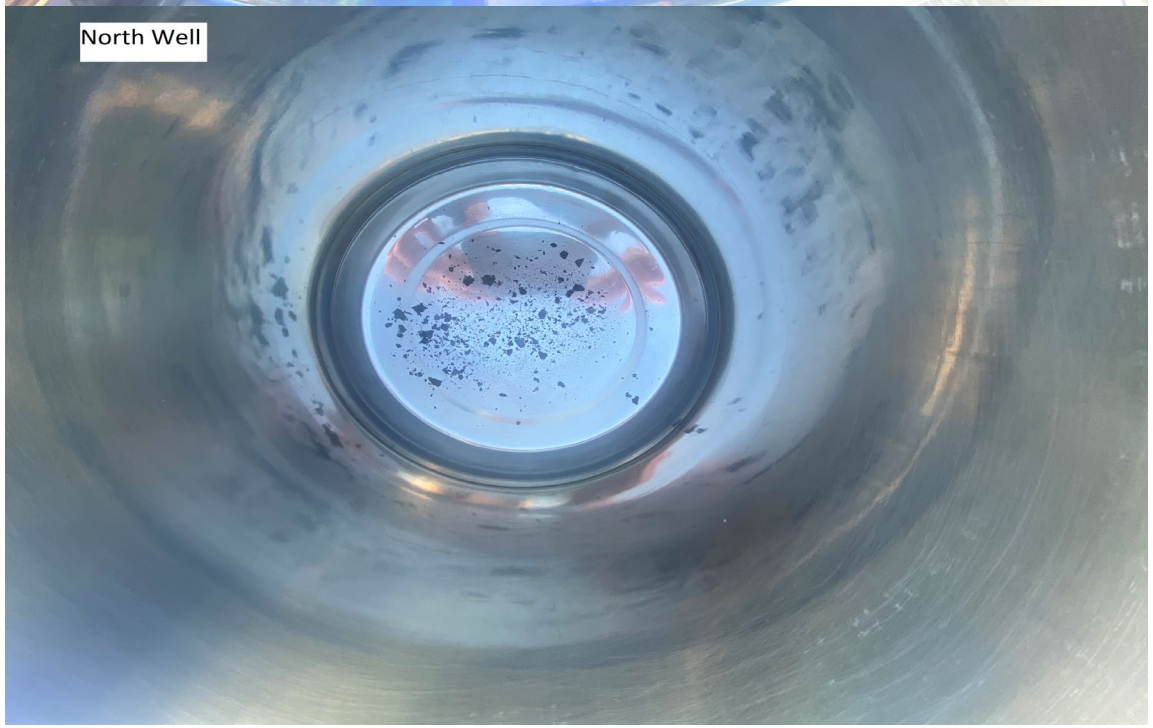

North Well

Well 2
95500
DANGER
CHLORINE

Well 2

Well 2

Well 6

Well 6

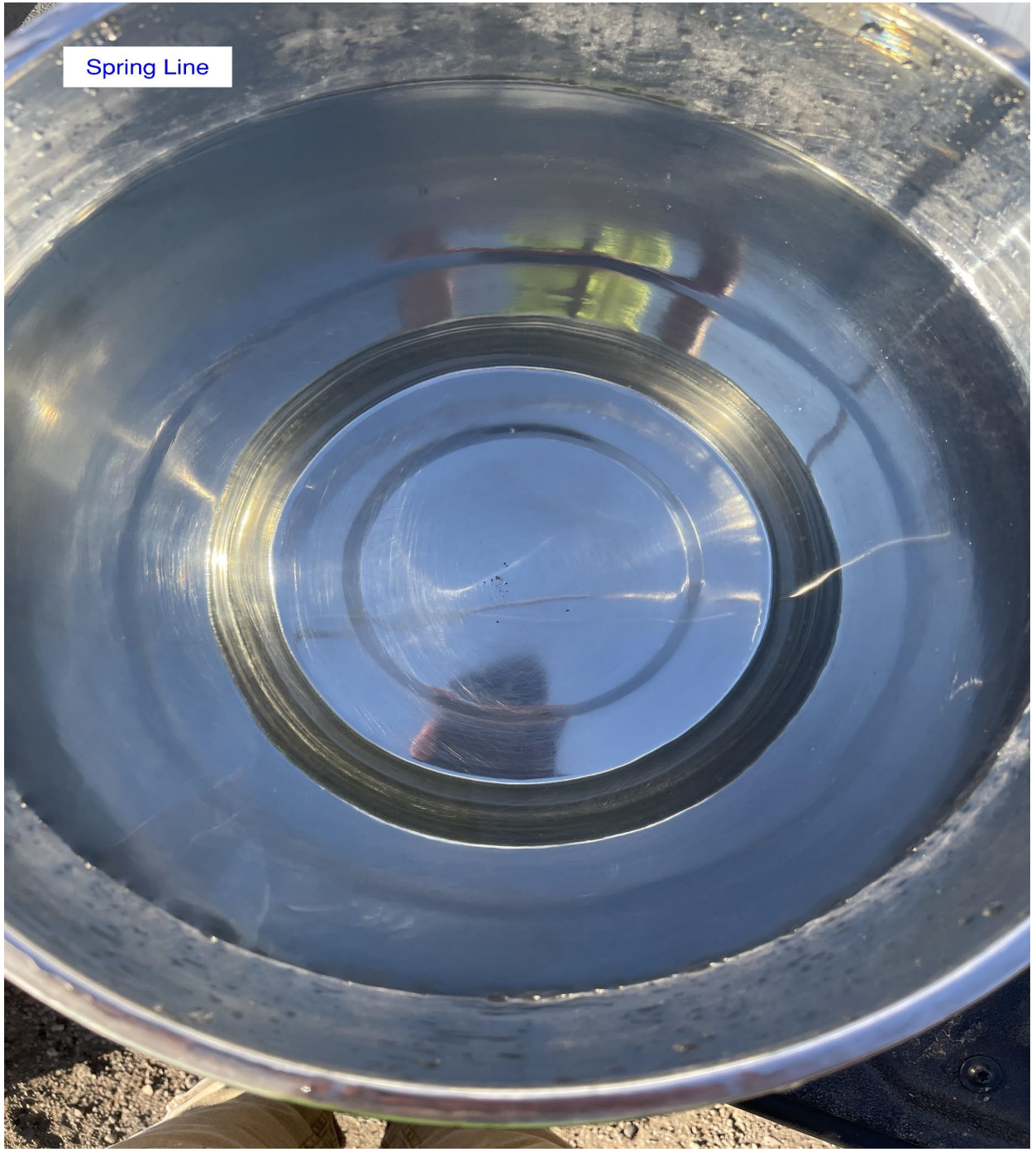
Well 7
DANGER
CHLORINE

Well 7

Well 9

Well 9

Spring Line


Spring Line

	Lakeview Well Sampling	12/9/2021									
	Compound	**Unit**	**MCL**	**North Well**	**Well # 2**	**Well # 6**	**Well # 7**	**Well # 8**	**Well # 9**	**Spring Line**	**Comment**
VOLATILE ORGANIC COMPOUNDS (VOC)	1,1 - DICHLOROETHYLENE	mg/L	0.007	ND	ND	ND	ND	ND	ND	ND	
	1,1,1 - TRICHLOROETHANE	mg/L	0.200	ND	ND	ND	ND	ND	ND	ND	
	1,1,2 - TRICHLOROETHANE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	1,2 - DICHLOROETHANE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	1,2 - DICHLOROPROPANE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	1,2,4 - TRICHLOROBENZENE	mg/L	0.070	ND	ND	ND	ND	ND	ND	ND	
	BENZENE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	CARBON TETRACHLORIDE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	CHLOROBENZENE	mg/L	0.100	ND	ND	ND	ND	ND	ND	ND	
	CIS - 1,2 - DICHLOROETHYLENE	mg/L	0.070	ND	ND	ND	ND	ND	ND	ND	
	ETHYLBENZENE	mg/L	0.700	ND	ND	ND	ND	ND	ND	ND	
	METHYLENE CHLORIDE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	O - DICHLOROBENZENE	mg/L	0.600	ND	ND	ND	ND	ND	ND	ND	
	P - DICHLOROBENZENE	mg/L	0.075	ND	ND	ND	ND	ND	ND	ND	
	STYRENE	mg/L	0.100	ND	ND	ND	ND	ND	ND	ND	
	T - 1,2 - DICHLOROETHYLENE	mg/L	0.100	ND	ND	ND	ND	ND	ND	ND	
	TETRACHLOROETHYLENE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	TOLUENE	mg/L	1.000	ND	ND	ND	ND	0.0014	ND	ND	Field Duplicate: 0.0013 mg/L
	TOTAL XYLENES	mg/L	10.000	ND	ND	ND	ND	ND	ND	ND	
	TRICHLOROETHYLENE	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	
	VINYL CHLORIDE	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	

ORGANICS IN DRINKING WATER	2,4 - D	mg/L	0.070	ND	ND	ND	ND	ND	ND	ND	
	2,4,5 - TP (SILVEX)	mg/L	0.050	ND	ND	ND	ND	ND	ND	ND	
	DI(2-ETHYLHEXYL)-ADIPATE	mg/L	0.400	ND	ND	ND	ND	ND	ND	ND	
	ALACHLOR	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	
	ATRAZINE	mg/L	0.003	ND	ND	ND	ND	ND	ND	ND	
	BENZO(A)PYRENE	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	
	LINDANE (BHC - GAMMA)	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	
	CARBOFURAN	mg/L	0.040	ND	ND	ND	ND	ND	ND	ND	
	CHLORDANE	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	
	DALAPON	mg/L	0.200	ND	ND	ND	ND	ND	ND	ND	
	1,2-DIBROMO-3-CHLOROPROPANE	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	
	DINOSEB	mg/L	0.007	ND	ND	ND	ND	ND	ND	ND	
	DIQUAT	mg/L	0.020	ND	ND	ND	ND	ND	ND	ND	
	ENDOTHALL	mg/L	0.100	ND	ND	ND	ND	ND	ND	ND	
	ENDRIN	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	
	1,2 - DIBROMOETHANE (EDB)	mg/L	0.00005	ND	ND	ND	ND	ND	ND	ND	
	GLYPHOSATE	mg/L	0.700	ND	ND	ND	ND	ND	ND	ND	
ORGANICS IN DRINKING WATER (Cont.)	HEPTACHLOR EPOXIDE "B"	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	
	HEPTACHLOR	mg/L	0.0004	ND	ND	ND	ND	ND	ND	ND	
	HEXACHLOROBENZENE	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	
	HEXACHLOROCYCLO-PENTADIENE	mg/L	0.050	ND	ND	ND	ND	ND	ND	ND	
	METHOXYCHLOR	mg/L	0.040	ND	ND	ND	ND	ND	ND	ND	
	PENTACHLOROPHENOL	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	
	DI(2-ETHYLHEXYL)-PHTHALATE	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	
	PICLORAM	mg/L	0.500	ND	ND	ND	ND	ND	ND	ND	
	SIMAZINE	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	
	TOXAPHENE	mg/L	0.003	ND	ND	ND	ND	ND	ND	ND	
	OXAMYL (VYDATE)	mg/L	0.200	ND	ND	ND	ND	ND	ND	ND	
	PCBS (Total Aroclors)	mg/L	0.0005	ND	ND	ND	ND	ND	ND	ND	

	TOTAL COLIFORM	A/P		A	A	A	A	A	A	P	A = Absent, P = Present
	E. Coli	A/P		A	A	A	A	A	A	A	A = Absent, P = Present
INORGANIC COMPOUNDS (IOC)	ASBESTOS	MFL>10um	7	ND	ND	ND	ND	ND	ND	ND	
	ANTIMONY	mg/L	0.006	ND	ND	ND	0.0018	0.0011	0.00028 J	ND	
	ARSENIC	mg/L	0.010	0.0306	0.0025	0.00997	0.0076	0.0036	0.0014	ND	
	BARIUM	mg/L	2	0.0050	0.0144	0.0139	0.0084	0.0129	0.0053	0.0047	
	BERYLLIUM	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	
	CADMIUM	mg/L	0.005	ND	ND	ND	ND	0.0002 J	ND	ND	
	CHROMIUM	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	
	CYANIDE, AVAILABLE	mg/L	0.2	ND	ND	ND	ND	ND	ND	ND	
	FLUORIDE	mg/L	4	4.64	0.21	1.03	0.83	0.92	0.72	ND	
	LEAD	mg/L	0.015	0.00026 J	0.0008 J	0.0007 J	0.00098 J	0.0202	0.0049	0.0001 J	
	MERCURY	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	
	NICKEL	mg/L		0.0003 J	0.0010	0.0019	0.0005 J	0.0116	0.0026	0.0002 J	
	NITRATE-N	mg/L	10	ND H1	ND H1	ND H1	ND H1	ND H1	ND H1	0.21 H1	
	NITRITE-N	mg/L	1	ND H1	ND H1	ND H1	ND H1	ND H1	ND H1	ND H1	
	TOTAL NITRATE+NITRITE as N	mg/L	10	ND H1	ND H1	ND H1	ND H1	ND H1	ND H1	0.21 H1	
	SELENIUM	mg/L	0.05	ND	ND	0.0008 J	0.0006 J	ND	ND	ND	
	SODIUM	mg/L	200	192	42.1	128	86.7	69.1	68.7	4.2	
	THALLIUM	mg/L	0.002	ND	ND	ND	0.0002	0.0003	ND	ND	
	TURBIDITY	mg/L	1	8.4	3.6	1.2	0.48	16	2.2	0.41	

RADIOLOGICAL	URANIUM	mg/L	0.030	ND	ND	0.0001 J	0.00008 J	0.0004 J	0.0001 J	ND	
	GROSS ALPHA	pCi/L	15	ND	ND	ND	ND	11.2	ND	ND	
	GROSS BETA	pCi/L	50	7.2900	ND	ND	ND	7.12	ND	ND	
	Radium 226	pCi/L		ND	ND	ND	ND	ND	ND	ND	
	Radium 228	pCi/L	5	ND	ND	ND	ND	ND	ND	ND	
	Radium 226,228 (combined)	pCi/L	5	ND	ND	ND	ND	ND	ND	ND	

Notes:

ND (Not Detected): indicates that the parameter was not detected above the Lower Reporting Limit (LRL).

MCL (Maximum Containment Level) maximum permissible level of a contaminant in water established by EPA.
A blank MCL value indicates a level is not currently established.

H2 - High QCS recovery due to increased detector response. No sample detections, therefore, no further action taken for this analysis set.

IEV - Acceptance criteria do not apply to estimated values.

IS - The ratio of the spike concentration to sample background was too low to meet performance criteria.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

MI – Matrix spike recovery was high; the associated blank spike recovery was acceptable. Matrix bias indicated.

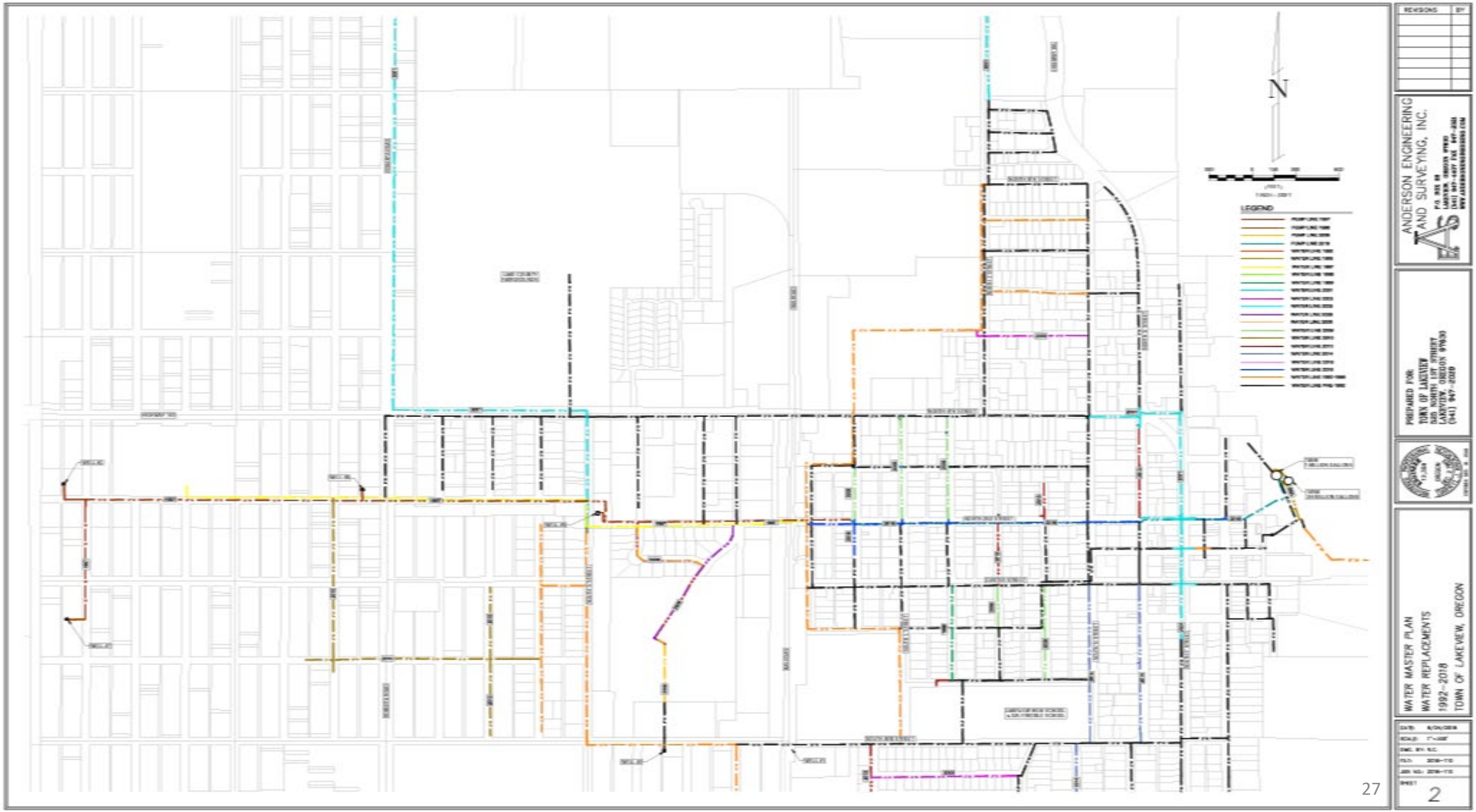
N1 – See case narrative.

Q1 – Sample integrity was not maintained. See case narrative.

Water Categories and Use

- Domestic
- Commercial
- Industrial

- Groundwater wells and spring water
- Approximately 3100
- Average annual water usage 254,123,200 gallons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LEGEND
REVISIONS
BY
ANDERSON ENGINEERING AND SURVEYING, INC.
PREPARED FOR:
TOWN OF LAKEVIEW
525 NORTH 1ST STREET
LAKEVIEW, OREGON 97630
(541) 947-2020
WATER MASTER PLAN
WATER REPLACEMENTS
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TOWN OF LAKEVIEW, OREGON
SHEET
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Questions?