



2218 Railroad Avenue
Redding, California 96001

voice 530.243.7234
fax 530.243.7494

3860 Morrow Lane, Suite F
Chico, California 95928

voice 530.894.8966
fax 530.894.5143

Analytical Report

AMENDED REPORT

NORTH STATE WATER TESTING
POST OFFICE BOX 1933
CHICO CA 95973

April 22, 2022
22D0755

Project Contact: PAUL BEHR
Project Name: PRIVATE WATER TESTING 7565 RED OAK

Client Sample ID: HOSE BIB Sample Date: 04/18/22 14:45
Lab Sample ID: 22D0755-01 Sample Received: 04/18/22 16:44

MICROBIOLOGY	UNITS	RESULTS	MCL	RL
Total Coliforms	Present/Absent	Absent		
E. Coli	Present/Absent	Absent		
INORGANIC CHEMICAL	UNITS	RESULTS	MCL	RL
Nitrate as N	mg/l	0.32	10	0.05

Approved By

Approved By: 
Bryan Ervin, Chico Location Supervisor
Pace Analytical Services LLC - Redding CA
California ELAP Cert #2718

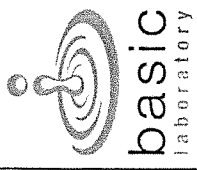
The data included in this report relate only to the specific items as received, recorded on the Chain of Custody, and analyzed at the laboratory. All data is expressed on a wet-weight basis unless otherwise noted. Interpretation and use of the information included in this report is the sole responsibility of the client. This report may not be reproduced except in full, and may not be modified in any way without prior written approval from Basic Laboratory. Use of this report in whole or part for public advertising or any other commercial purpose requires prior written authorization.

BASIC LABORATORY, INC. - CHAIN OF CUSTODY (FOR DRINKING WATER - MICROBIOLOGY)

2218 Railroad Avenue, Redding, CA 96001 (530) 243-7234 FAX (530) 243-7494
 3860 Morrow Lane, Suite F Chico, CA 95928 (530) 894-8966 FAX: (530) 894-5143

LABORATORY WORK ORDER #
22D0755

PAGE **1** OF **1**



PROJECT # **7565**

PROJECT NAME **PRIVATE WATER TESTING**

REPORT TO Email Mail Hardcopy

NAME / ATTENTION **PAUL BEHR**

PHONE **530-345-3412**

EMAIL **paulinswt@aol.com**

REGULATORY AGENCY **N/A**

CLIENT NAME **NORTH STATE WATER TESTING**

MAILING ADDRESS **POST OFFICE BOX 1933 CHICO, CA 95973**

INVOICE TO **NSWT**

SPECIAL INSTRUCTIONS / PO#

PWS # (If Applicable)

TURN AROUND TIME REQUESTED **N/A**

Standard Rush

ANALYSES REQUESTED

Field Chlorine Residual (mg/L)

Total Coliforms / E. coli (Present / Absent)

Total Coliforms / E. coli (Enumerated - Quant- Tray)

Nitrate

2

X

X

*SAMPLE TYPE CODES (NR = Non-Regulated)

1 - Routine

2 - Repeat

3 - Replacement

4 - Special (Not sent to Regulator)

5A - Source Groundwater

5B - Surface Water

6 - Other (Sent to Regulator)

SAMPLING / ANALYSIS COMMENTS

SAMPLED BY: (please print) **Jordan Hogston**

RELINQUISHED DATE / TIME: **4/18/22 1634**

NAME **Jordan Hogston**

SIGNATURE

DATE **4/18/22**

RECEIVED BY

DATE/TIME

RELINQUISHED BY

DATE/TIME

RECEIVED BY LAB

DATE/TIME **4-18-22 1644**

LOGGED BY LAB

DATE/TIME **4-18-22 1709**

For Official Lab Comments Only

* Address changed per client request, email attached - 4-22-22

FRM-002.2 - Chain of Custody (rev 1.1)



SAMPLE RECEIPT CHECKLIST

WO NUMBER 22D0755

SHIPPING INFORMATION	
Walk-In	<input checked="" type="checkbox"/>
Courier	<input type="checkbox"/>
FedEx	<input type="checkbox"/>
UPS	<input type="checkbox"/>
Other	<input type="checkbox"/>
Cooler Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Samples Received By: MW Date: 4-18-22

Samples received on ice? Yes No

Samples received the same day collected? Yes No

Ice type? Wet Blue Other _____

SAMPLE TEMPERATURES AT RECEIPT Therm. ID (Circle one): Therm-C01 Therm-C02 Other: _____

Sample ID	Corr Temp (°C)	Sample ID	Corr Temp (°C)	Sample ID	Corr Temp (°C)	Sample ID	Corr Temp (°C)
-01	<u>19.5</u>	-06		-11		-16	
-02		-07		-12		-17	
-03		-08		-13		-18	
-04		-09		-14		-19	
-05		-10		-15		-20	

SAMPLE CONDITION AND PROCESSING

Samples Processed and Labeled By: MW Date: 4-18-22

	Yes	No	NA
Custody seals present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample containers damaged?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sufficient sample volume for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are VOA vials free of headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dechlor. agent labels present (i.e., colilert, TTHMs)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAMPLE PRESERVATION NA

	Yes	No	NA
Preserved in the field?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preserved in the lab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lab Preservation Date & Time _____

H2SO4 (ID _____) HNO3 (ID _____) NaOH (ID _____)

Other (ID _____) Other (ID _____) Other (ID _____)

	Yes	No	NA
H2SO4 preserved samples confirmed to pH <2 (i.e., E350.1, SM5220, SM5310)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HNO3 preserved samples confirmed to pH <2 (i.e., E200.7, E200.8, 6010)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NaOH preserved samples confirmed to pH >10 (cyanide) or >9 (sulfide)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hexavalent Chromium (DW) preserved samples confirmed to pH >8 & Chlorine <0.1 mg/l?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hexavalent Chromium (W) preserved samples confirmed to pH 9.3 - 9.7?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are proper preservation lables present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

By: _____ Meter ID: _____

Preservation checked at Lab? Date & Time _____ Test Strip (ID _____)

Preservation and Preservation Checks performed by: _____

COMMENTS, DISCREPANCEIS, ANOMALIES

Bryan Ervin

From: paulnswt@aol.com
Sent: Thursday, April 21, 2022 17:32
To: Bryan Ervin
Subject: Re: 7560 RED OAK

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Can you please change this one to 7565 Red Oak?

Thank you,
Tara Rhoads-Manager
North State Water Testing/Pump
Office: 530-345-3412
To make a credit card payment please give Tara a call 530-774-3888
NOTE: Well Inspections are now \$350

-----Original Message-----

From: Bryan Ervin <Bryan.Ervin@pacelabs.com>
To: 'paulnswt@aol.com' <paulnswt@aol.com>
Sent: Thu, Apr 21, 2022 3:52 pm
Subject: 7560 RED OAK

Work Order: 22D0755
Client: NORTH STATE WATER TESTING
Project: PRIVATE WATER TESTING
Client Manager: PAUL BEHR
Received: 04/18/22 16:44

Thank you,
Bryan Ervin
Supervisor
530-894-8966 | pacelabs.com

PROCESS PAYMENTS ONLINE

https://login.unitedtranzactions.com/obp/pace_analytical

A 2.5% surcharge may be added to your credit card payment. Debit and ACH/e-checks incur no additional fees.

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If you have any questions about this email or if this email has been sent to you in error, please contact:

Pace Analytical Services LLC - Redding CA

2218 Railroad Avenue
Redding, CA 96001-2504
(530) 243-7234 Phone
(530) 243-6204 Fax

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HOW TO READ YOUR REPORT

TERMS

ND	Not detected; below the Reporting Limit.
<	Less than reporting limit, not detected.
mg/l	milligrams per liter or parts per million
ug/l	micrograms per liter or parts per billion
NTU	Nephelometric Turbidity Units
RL	Reporting Limit - the lowest level at which this analyte will be reported.
MCL	Maximum Contaminant Level - The level at which the EPA has determined that this element may cause negative health effects. Primary MCLs are set at, or close to the Public Health Goals (PHG) and/or Regulatory Action Levels. If your result is higher than the MCL, you should consult a water treatment specialist. California also recognizes Secondary and tiered MCLs. Secondary MCLs may be set to protect the odor, taste, and appearance of drinking water.

Basic Laboratory is not an expert in the treatment of water.

For more information about potentially toxic constituents, their causes, associated health effects, and treatment options, see the EPA's Private Well page: water.epa.gov/drink/info/well, or the National Groundwater Association: wellowner.org.

For treatment options call a local water treatment professional. Look for National Groundwater Association Certification or a state certified Drinking Water Treatment & Distribution System (T1 or D1) Operator.

MICROBIOLOGY

Total Coliforms & E. Coli

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems. The water should not be used at all until the system has been treated and a subsequent retest is negative.

These bacteria may be analyzed using either a 24 hour growth test providing either a "Present" or "Absent" result, or by an enumerated growth test which provides a number >1 if total coliform or e.coli bacteria is detected.

GENERAL MINERALS

Alkalinity

Alkalinity is a measure of the acid-neutralizing capacity of water. Low alkalinity waters (<30 mg/l CaCO₃) tend to dissolve minerals and metals. High alkalinity waters (>300 ppm CaCO₃) tend to deposit minerals and metals. Bicarbonate, Carbonate and Hydroxide are measurements of Alkalinity. There is no current EPA limit regarding safety levels.

Calcium

Calcium is a naturally occurring essential mineral for plants and animals. Calcium (and Magnesium) is used as an indicator of water hardness. Surface water typically has lower amounts (<15 mg/l) than most ground water (up to 500 mg/l). There are no established safety levels.

Chloride

Chloride is a naturally occurring element, typically associated with salty tasting water. Consistently high levels may harm metal plumbing and growing plants. CA Secondary MCL: 500 mg/l.

Hardness

Hardness is a measure of two naturally occurring minerals (Calcium and Magnesium) that are indicated in scaling of appliances with a whitish build up and soap consumption. Soft water is ideal for most appliances, result ranges are: soft: <17.1; slightly hard: 17.1 to 60; moderately hard: 60 to 120; hard: 120 to 180; very hard: >180 mg/l. There is no current EPA limit regarding safety levels.

Iron

Iron is a naturally occurring metal that can make water look rusty, leave reddish-brown stains, and have a metallic taste. It may leach from natural deposits or from industrial wastes. The current CA Secondary MCL is 300 ug/l.

Magnesium

Magnesium is an abundant, naturally occurring essential metal for plants and animals. Magnesium (with Calcium) is used as an indicator of water hardness, especially in water heaters. Surface and ground water easily contain around 5 mg/l. There are currently no established safety levels.

Manganese

Manganese is a naturally occurring metal that can leave dark brown-black stains and a bitter, metallic taste. The current CA Secondary MCL is 50 ug/l. High levels of manganese in people have been shown to result in effects of the nervous system.

pH

The measure of pH indicates an acidic, neutral, or basic character of water. Ideal drinking water is near pH 7; too low (<6.5) or too high (>8.5) may cause problems for plumbing and appliances. The current EPA recommended pH range is from 6.5 to 8.5.

Potassium

Potassium is a dietary requirement for nearly all living organisms. Potassium plays a central role in plant growth, and is a limiting factor. Potassium from dead plant and animal material is often bound to clay minerals in soils, before it dissolves in water as salts. Typical river water contains about 3 mg/l. There are currently no established safety levels, though concentrations greater than 100 mg/l are hazardous to some fish.

Sodium

Sodium is typically found in nature as a salt, sodium chloride (table salt) is the most recognizable form. Ground water and some mineral waters can easily contain around 50 mg/l. There are currently no established safety levels, though the EPA has interim suggested levels of 20 mg/l in public drinking water.



HOW TO READ YOUR REPORT

Specific Conductance or Conductivity

Conductivity measures the ability of water to carry an electrical current; it is an indirect measure of salt and mineral ions in a water sample. Higher conductivities correlate with higher levels of salts. The CA Secondary MCL is 1600 µmhos/cm.

Sulfate

Sulfate (SO₄²⁻) is a measure of the oxidized sulfur compounds found in samples, these come from natural sources or iron mining operations. Water with high sulfate will sometimes have a 'medicine' taste and can cause a laxative effect. The CA Secondary MCL is 500 mg/l.

MBAS (Surfactants / Foaming Agents)

Surfactants and foaming agents are anionic cleaning compounds (typically used in homes) that leave a filmy or foamy residue. Typical sources are household or industrial cleaning waste. The current CA Secondary MCL is 500 ug/l.

Total Dissolved Solids

Dissolved solids are tiny precipitates that appear when water is boiled or evaporated away - sourced from natural deposits or brackish water contamination. High total dissolved solids can increase water hardness and leave deposits on appliances. The current CA secondary standard is 1000 mg/l.

GENERAL PHYSICAL

Color

Tinted water is generally caused by contact with naturally-occurring organic materials. Color itself does not determine whether or not water is pure, however water's color may provide evidence that there is some form of contamination. Colored water may stain textile and fixtures. CA Secondary MCL is 15 units.

Odor

Odors in well water are generally caused by contact with naturally-occurring decomposing organic materials. Some water may also contain the chemical hydrogen sulfide gas, which smells just like rotten eggs. Water containing hydrogen sulfide can have an odor that is objectionable (and the water may taste really bad), but generally the water is not harmful to health. CA Secondary MCL is 3 units.

Turbidity

Turbidity is a measure of the clarity of water typically caused by clays, silts, and fine organic materials but has no direct health effects. A high level (>5 NTU) of turbidity can interfere with disinfection system and provide a medium for microbial growth. There is no current EPA limit regarding safety levels.

METALS

Aluminum

Aluminum is a naturally occurring non-essential metal and is often used in alum precipitation for water treatment. Higher levels (>50 ug/l) may give water samples color or tint. Some people who drink water containing aluminum in excess of 1 mg/l over many years may experience short-term gastrointestinal tract effects. The current EPA MCL is 1 mg/l.

Antimony

Antimony is a naturally occurring metal and is used in flame retardant, batteries, pigments, and ceramics/glass. Some people who drink water containing antimony in excess of 6 ug/l for many years may experience increases in blood cholesterol and decreases in blood sugar. The current EPA MCL is 6 ug/l.

Arsenic

Arsenic is a naturally occurring element in soils but is also used in wood preservation, industrial manufacturing, petroleum refining, and pesticide production. Some people who drink water containing arsenic in excess of 10 ug/l over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer. The current EPA MCL is 10 ug/l.

Barium

Barium is a lustrous metal which exists in nature only in ores containing mixtures of elements. It is used in making a wide variety of electronic components, in metal alloys, bleaches, dyes, fireworks, ceramics and glass. In particular, it is used in well drilling operations where it is directly released into the ground. Some people who drink water containing barium well in excess of 1000 ug/l for many years could experience an increase in blood pressure. The current EPA MCL is 1000 ug/l.

Beryllium

Beryllium is an inorganic metallic element of either white or colorless compounds that do not have a particular smell. Sources are waste of electrical, aerospace, defense industries, metal refineries, and coal-burning factories. Some people who drink water containing beryllium in excess of 4 ug/l for many years may develop intestinal lesions. The current EPA MCL is 4 ug/l.

Cadmium

Cadmium is a metal found in natural deposits and is used primarily for metal plating and coating operations, baking enamels, photography, television phosphors, nickel-cadmium solar batteries and pigments. Some people who drink water containing cadmium in excess of 5 ug/l for many years may experience kidney damage. The current EPA MCL is 5 ug/l.

Chromium – Total

Chromium is an odorless and tasteless metallic element. Chromium-3 and -6 are found naturally in rocks, plants, soil, volcanic dust, humans, animals, and steel mills. Chromium-3 (trivalent) is an essential human dietary element and occurs naturally in many vegetables, fruits, meats, grains and yeast; and would only be a concern in drinking water at very high levels of contamination. Chromium-6 (hexavalent) is more toxic and poses potential health risks. Some people who use water containing chromium in excess of 50 ug/l over many years may experience allergic dermatitis. The current EPA MCL is 50 ug/l.

Chromium – Hexavalent

Chromium-6 occurs naturally in the environment from the erosion of natural deposits but it can also be produced by industrial processes such as electroplating, leather tanneries, wood preservation, chemical synthesis, refractory production and textile manufacturing. Some people who drink water containing hexavalent chromium in excess of the MCL of many years may

HOW TO READ YOUR REPORT

have an increased risk of getting cancer. The current CA MCL is 10 ug/l.

Copper

Copper is a metal found in natural deposits such as ores containing other elements that may cause blue-green stains and a metallic taste. Copper may be used in household plumbing materials and can leach into water through corrosion of metal caused by a chemical reaction between water and your plumbing. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctors. The current EPA action level is 1300 ug/l.

Fluoride

Fluoride is a naturally occurring mineral, or is added to water for dental health. Some people who drink water containing fluoride in excess of the EPA MCL of 4 mg/l over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the CA MCL of 2 mg/l may get mottled teeth.

Lead

Lead is a toxic metal that was used for many years in products found in and around homes. Lead was sometimes used in household plumbing materials or in water service lines used to bring water from the main to the home. A prohibition on lead in plumbing materials has been in effect since 1986. Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure. The current EPA Action Level is 15 ug/l.

Mercury

Mercury is a liquid metal found in natural deposits or discharge from refineries and factories; runoff from landfills; and runoff from croplands. Some people who drink water containing mercury in excess of 2 ug/l over many years may experience mental disturbances, or impaired physical coordination, speech and hearing. The current EPA MCL is 2 ug/l.

Nickel

Nickel is a naturally occurring metal in soils but alternative sources are leaching from metal piping or electroplating; or industrial waste. Some people who drink water containing nickel in excess of 100 ug/l over many years may experience liver and heart effects. The current EPA MCL is 100 ug/l.

Nitrate

Nitrate (NO₃ as Nitrogen) is an inorganic compound found naturally in soils but more often associated with septic tank waste and fertilizer runoff. Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and

blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women. The current EPA MCL is 10 mg/l.

Nitrite

Nitrite (NO₂ as Nitrogen) is an inorganic compound found naturally in soils but more often associated with septic tank waste and fertilizer runoff. Infants below the age of six months who drink water containing nitrite in excess of the MCL may quickly become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin. The current EPA MCL is 1 mg/l.

Selenium

Selenium is a metal and an essential nutrient found in natural deposits and from ore processing. The greatest use of selenium compounds are in electronics, photocopier components and various industrial manufacturing. Some people who drink water containing selenium in excess of 50 ug/l over many years may experience hair or fingernail loss, numbness in fingers or toes, or circulation system problems. The current EPA MCL is 50 ug/l.

Silver

Silver is a naturally occurring metal in soils with increased levels from industrial waste or water treatment processes. Consuming large quantities have been associated with skin discoloration and greying of the white part of the eye. The current CA Secondary MCL is 100 ug/l.

Strontium

Strontium occurs naturally in rocks, soil, water, and air. Strontium concentrations may also be increased by coal ash, incinerator ash, and industrial wastes. Strontium in soil dissolves easily in water, so it is likely to enter groundwater. A typical amount in surface water is approximately 50 ug/l; while ground water can range up to 10,000 ug/l. There are currently no established safety levels.

Thallium

Thallium is a metal found in natural deposits and ore processing. The greatest use of thallium is in specialized electronic research equipment. Some people who drink water containing thallium in excess of the MCL over many years may experience hair loss, changes in their blood, or kidney, intestinal, or liver problems. The current EPA MCL is 2 ug/l.

Zinc

Zinc is a naturally occurring element in soils and is an essential nutrient; other sources include industrial wastes. Excessive amount of zinc can lead to metallic tasting water. The current CA Secondary MCL is 5000 ug/l.

HOW TO READ YOUR REPORT

MISCELLANEOUS

Corrosivity (Aggressive Index)

Corrosive water, also known as “aggressive water,” is water that may dissolve materials it comes in contact with over time. This naturally occurring water condition can become problematic when it dissolves metals from a plumbing system. Corrosive water can cause aesthetic and/or health-related problems, and may even eat holes in metal plumbing systems. An index reading of <10 = very aggressive; $10 - 11.9$ = moderately aggressive; >12 = non-aggressive.

Silica

Silica comes from the weathering of silicate minerals in the ground. When dissolved in water, silica causes no harmful effects to humans, but large amounts can cause scaling in pipes that impacts water flow, and it can interfere with iron and manganese removal.