



Annual Drinking Water Quality Report

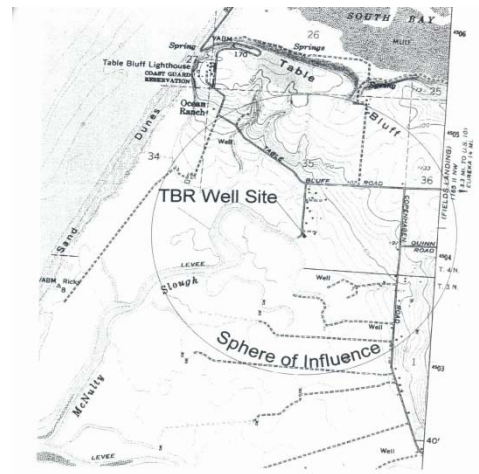
January 1, 2010 – December 31, 2010



Table Bluff Reservation – Wiyot Tribe Public Water System #0605124

Is my water safe?

Last year, your tap water met all U.S. Environmental Protection Agency (EPA) primary drinking water health standards. Here at Table Bluff Reservation (TBR) we vigilantly safeguard our water supplies and we are proud to report that our system has not violated a primary drinking water maximum contaminant level. However, we have detected concentrations of chloride that violate secondary water quality standards [non-enforceable guidelines regulating contaminants that may cause aesthetic effects (such as taste, odor, or color) in drinking water]. Chloride is not associated with negative health impacts. The high chloride levels were detected in the water source on the old Reservation, which was your water supply until April 2010. From April 2010 to present day, the Tribe has been receiving water from a new water well on Table Bluff Reservation. Chloride levels are far below regulatory standards but pH levels are elevated and do not meet secondary regulations. The pH level of our water is not associated with negative health impacts.



Well Site Sphere of Influence for Table Bluff Reservation
COPY FROM CANNIBAL ISLAND 7.5 MINUTE QUAD

Where does our water come from?

- The water you received in 2010 came from two sources. From January to April, water was supplied from a well located on the old Reservation, by McNulty Slough. Starting April 2010, your water began to come from a newly installed well on the new Reservation.
- The Sphere of Influence encompasses the areas that could have impact on our water.
- Significant sources of possible contamination to our water source on the old Reservation were: agriculture (dairy farming), septic tanks, historic illegal dumps, road run-off, and saltwater intrusion. Presently, the significant sources of possible contamination to our water source on Table Bluff Reservation are: agriculture (dairy farming), hydrocarbons and heavy metals from vehicles (both operational and non-operational), and illegal dumping.

How does water get to my faucet?



In a typical community water supply system, water is transported under pressure through a distribution network of buried pipes. Smaller pipes, called house service lines, are attached to the main water lines to bring water from the distribution network to your house. In TBR's

community water supply system, water pressure is provided by booster pumps and a hydro-pneumatic tank next to the 105,000 gallon water storage tank on the west side of the new Reservation. As the water is pumped into the storage tank, it is treated with fluoride for children's teeth, potassium permanganate to assist in the removal of iron and manganese, and then disinfected with chlorine. Beginning April 2010, potassium permanganate was removed from treatment because water quality from the new well showed iron and manganese levels well below regulatory limits. The water is then pumped into the distribution lines, which deliver the water to each house.

And where does my water come from?

From January to April, the Reservation was supplied by ground water from a 107' deep well (the water is pumped from the well at a depth of 100') that is located on the old Reservation, near McNulty Slough, about 1.5 miles away. It is likely that the source of excessive chloride concentrations in the water was the proximity of the well to McNulty Slough. Salt water (sodium chloride) from a slough, bay, or the ocean, can work its way into an aquifer and contaminate the ground water with either or both of its constituents, sodium and chloride. While chloride concentrations were elevated in our drinking water, sodium has never been detected in concentrations that exceed primary or secondary drinking water standards. Beginning in April 2010, your water was supplied from a 600' deep well (the water is pumped from the well at a depth of 260') located on the west boundary of the new Reservation. The one remaining water quality parameter that does not meet secondary regulations is pH, which ranges from 8.6 to 8.9 (the secondary regulation for pH is a range of 6.5 to 8.5). There are no health risks associated with water this basic, nor are there cosmetic issues such as flavor, odor, or staining of clothes. The reason elevated pH is a secondary regulated parameter is that it can complicate water treatment management.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that 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 (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, are by-products

of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Do I need to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791)

Trivial Information...

How much water do we use in a day?

Taking a bath or shower	15-30 gallons
Watering the lawn	180 gallons
Washing the dishes	15-60 gallons
Washing clothes	30 gallons
Flushing the toilet	4-7 gallons
Brushing our teeth	1 gallon
Drinking water	0.5 gallon
TOTAL	245-308 gallons/day

Test Results

2010						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCL	MCLG	Likely Source of Contamination
Total Coliform Bacteria	N	Absent	presence/absence	Presence of coliform bacteria more than one sample	0	Naturally present in the environment
Fecal coliform and E.coli	N	Absent	presence/absence	A routine or repeat sample is total coliform positive and a separate routine or repeat is also fecal coliform or E. coli positive	0	Human and animal waste
Lead & Copper						
Copper	N	.031-.066 (range)	ppm	AL = 1.3	1.3	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Lead	N	ND	ppb	AL = 15	0	Corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate						
Nitrate (as Nitrogen)	N	ND	ppm	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection By-Product Contaminants						
Trihalomethanes (TTHMs)	N	0.033	ppm	0.08	N/A	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5)	N	0.0057	ppm	0.06	N/A	Byproduct of drinking water disinfection

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCL	MCLG	Likely Source of Contamination
Inorganic Contaminants						
Antimony	N	2.7	ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	ND	ppb	10	N/A	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	N	0.026	ppm	2	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Beryllium	N	ND	ppb	4	4	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
Cadmium	N	ND	ppb	5	5	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories and metal refineries; runoff from waste batteries and paints
Chromium	N	ND	ppb	100	100	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride	N	0.92	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury	N	ND	ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Selenium	N	ND	ppb	50	50	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Thallium	N	ND	ppb	2	0.05	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Water Quality Data Table

The table above lists all of the regulated drinking water contaminants that we tested for in the past calendar year. If the presence of contaminants is found, this does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Definitions:

In this 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.

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 (µg/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.

Regulatory 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 - (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 - (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.

News: New Water Sources for Table Bluff Reservation

Beginning in April 2010, Table Bluff Reservation received drinking water from a new location. In the past, the community water system drew its water from a site adjacent to the Eel River Estuary, some 20 yards from McNulty Slough. Since the well’s development in the early 1990’s, chloride concentrations in well water have climbed to far exceed the US EPA’s secondary contaminant regulation, likely the result of saltwater intrusion. While not intrinsically hazardous to human health, the intense chloride concentrations give the water an unpleasant “briny” flavor, and are very expensive to treat. This has made finding alternative sources of drinking water for the community a high priority for years.

In 2004 and 2005, the tribe secured monies from the US EPA and a commitment from the Indian Health Service to provide engineering services to develop a new drinking water source for the reservation. After a geophysical study and electrotelluric soundings were performed in 2006, it was determined that water-bearing formations existed under the new reservation on Table Bluff, at depths of 500 to 700 feet. In autumn of 2008, the tribe drilled and developed a well in one of the sites showing the most promise of good quality and quantity of water. In 2009, electrical service was brought to the new well site, and the well was outfitted with a pump and controls. The water quality from the new well is much better than the water from the old well and due to very low iron and manganese concentrations, the water does not need to be green-sand filtered. Chlorides are no longer an issue, and the water tastes much better. The only water quality issue from the new well is pH, which is elevated at 8.8. pH is a secondarily US EPA regulated parameter – elevated pH does not pose a health risk, nor does it negatively affect water flavor.

In 2010, Table Bluff Reservation began drilling a second well in the southeast corner of the Reservation in order to provide more water for the residents of Table Bluff Reservation. Estimates were 15-20 gallons per minute (gpm), similar to the first well on the new Reservation, but pump tests showed a range between 35-40 gpm. Construction continued into 2011 and it is hopeful that this new drinking source will be used before summer 2011. Water quality results do not reflect the water quality of this well and will not be available until next year.



”How can I get involved?”

The water system is governed by the Tribal Council and public forums can be held at the Tribal Council Meetings. Call the Tribal office for additional information, 707.733.5055.

For more information contact: George Buckley (h2o@wiyot.com) or Tim Nelson (tim@wiyot.com), Wiyot Tribe, Table Bluff Reservation, 1000 Wiyot Drive, Loleta, CA 95551