Annual Drinking Water Quality Report

January 1, 2012 – December 31, 2012

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 (US 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. This report is a snapshot of your water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. From April 2010 to present day, the Tribe has been receiving water from two new water wells on TBR. Chloride levels are far below regulatory standards and pH levels are elevated (ph levels ~7.90-8.10) but meet secondary regulations (pH levels 6.5-8.5). The pH level of our water is not associated with negative health impacts.

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 Reservation. As the water is pumped into the storage tank, it is treated with fluoride for children's teeth and then disinfected with chlorine. Beginning April 2010, potassium permanganate was removed from treatment because water quality from the new wells 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.

Where does my water come from?

Your water was supplied from two sources located on TBR:

- The first is a 600' deep well (the water is pumped from the well at a depth of 260') located on the west boundary of the Reservation
- The second is 500' deep well (the water is pumped from the well at a depth of 180') located on the southeast boundary of the Reservation.

The Sphere of Influence encompasses an area of 1000' surrounding each wellhead that could have impact on our water from potential contaminant sources.

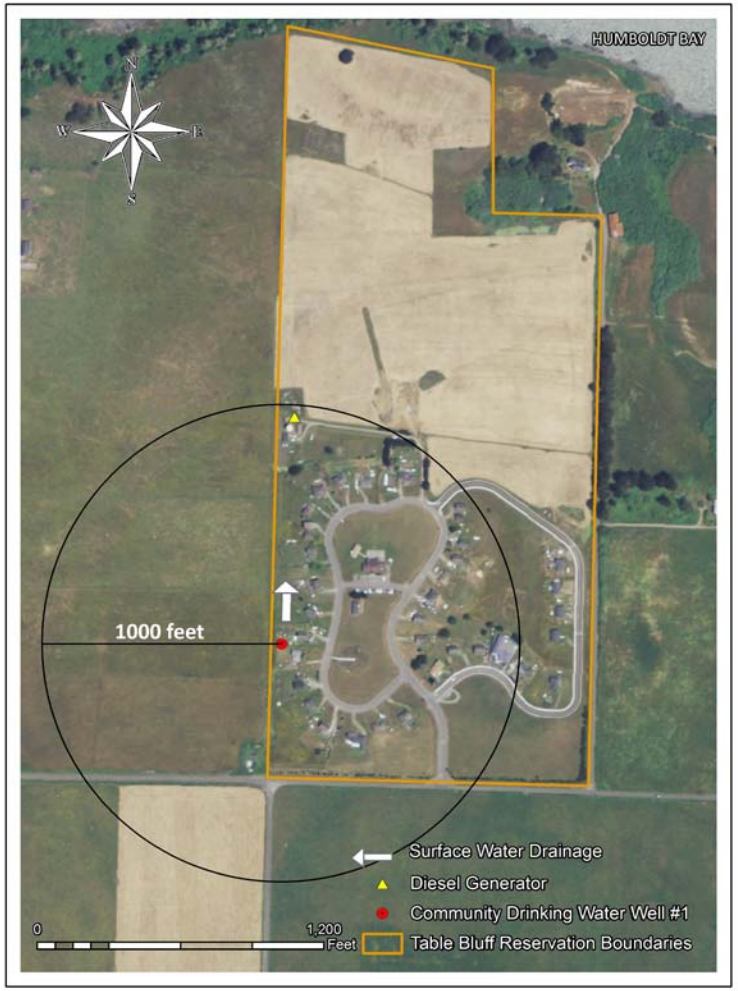

Figure 1. Sphere of Influence for well #1 on Table Bluff Reservation

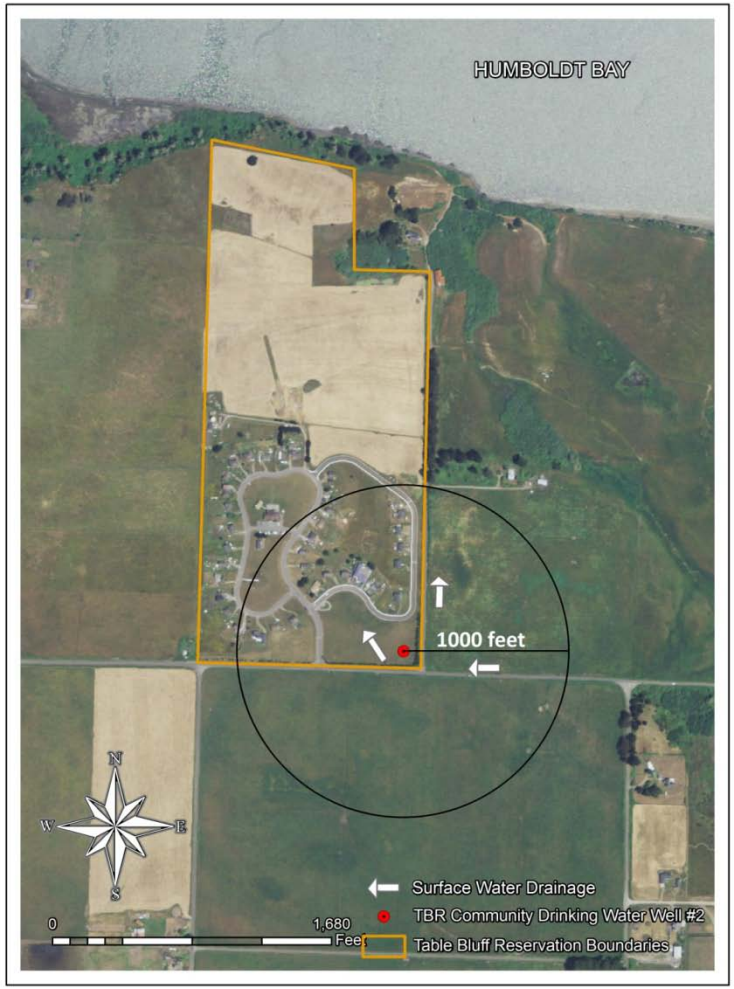

Figure 2. Sphere of Influence for well #2 on Table Bluff Reservation

Presently, the significant sources of possible contamination to our water source on TBR are: agriculture (dairy farming), hydrocarbons and heavy metals from vehicles (both operational and non-operational), and illegal dumping.

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 US EPA'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, US 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. US 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 US EPA's Safe Water Drinking Hotline (800-426-4791)

Trivia Time...

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

2012						
Contaminant	**Violation Y/N**	**Level Detected**	**Unit Measurement**	**MCL**	**MCLG**	**Likely Source of Contamination**
Total Coliform Bacteria	N	Absent	presence/ absence	2 or more positive samples/month	0	Naturally present in the environment
Fecal coliform and E.coli	N	Absent	presence/ absence	2 or more positive samples/month	0	Human and animal waste
Nitrate						
Nitrate (as Nitrogen)	N	0.17	ppm	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Special Education Statements

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. PWS system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead/leadfactsheet.html.

Water Quality Data Table

The table above lists all of the regulated drinking water contaminants that we were required to test for in the past calendar year. If the presence of contaminates 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 US 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:

MCL - Maximum Contaminant Level; 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.

MCLG - Maximum Contaminant Level Goal; 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.

MNR – Monitored Not Regulated

MPL - State Assigned Maximum Permissible Level

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

MRDLG – Maximum Residual Disinfection Level Goal; 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.

N/A – Not Applicable.

ND – Not Detected; laboratory analysis indicates that the constituent is not present.

NR – Monitoring not required, but recommended.

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.

% Positive Samples/Month - % of samples taken monthly that were positive

Positive Samples – the number of positive samples taken that year

AL – Regulatory Action Level; the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

TT – Treatment Technique; a required process intended to reduce the level of a contaminant in drinking water.

Variances and Exemptions – State or US EPA permission not to meet an MCL or a treatment technique under certain conditions.

News: New Water Sources for Table Bluff Reservation

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 gave the water an unpleasant "briny" flavor, and are very expensive to treat. This 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 (IHS) to provide engineering services to develop a new drinking water source for TBR. After a geophysical study and electrotelluric soundings were performed in 2006, it was determined that water-bearing formations existed under TBR 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.

In December 2010, the Tribe began drilling a second well in the southeast corner of the Reservation in order to provide more water for the residents of TBR. Estimates were 15-20 gallons per minute (gpm), similar to the first well on the new Reservation, but currently the well produces 35-40 gpm. Construction ended July 2011 and the well was online providing more water for TBR shortly thereafter.

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