

# 2010 Consumer Confidence Report

Water System Name: City of Hughson

Report Date: February 2011

*We test the drinking water quality for many constituents as required by state and federal regulations. This reports shows the results of our monitoring for the period of January 1 - December 31, 2010*

**Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.**

**Type of water sources(s) in use:** Wells 3, 4, & 5 - According to DHS records, this Source is Groundwater. This Assessment was done using the Default Groundwater System Method.

Wells 6 & 7 - This info is not available, as this water system does not have a completed assessment on file. Please see the Drinking Water Source Assessment Information section located at the end of this report for more details.

**Your water comes from 5 sources:** Well 03, Well 04, Well 05, Well 06 and Well 07.

For more information about this report, or for any questions relating to your drinking water, please call (209) 883 - 4054 and ask for Sam Rush, or visit our website at <http://www.hughson.org/> Daily meetings held between Distribution Operator Eric Lovejoy and Superintendent Sam Rush to discuss any happenings.

## TERMS USED IN THIS REPORT:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**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 are set by the U.S. Environmental Protection Agency.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**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.

**Primary Drinking Water Standards (PDWS):** MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, order, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Variiances and Exemptions:** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**ND:** not detectable at testing limit

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion or micrograms per liter ( $\mu\text{g/L}$ )

**ppt:** parts per trillion or nanograms per liter (ng/L)

**ppq:** parts per quadrillion or picograms per liter (pg/L)

**pCi/l:** picocuries per liter (a measure of radioactivity)

**The sources of drinking water**(both tap water and bottled water) included rivers, lakes, streams, ponds, reservoirs, spring, 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.

# 2010 Consumer Confidence Report

**Contaminants that may be present in source water include:**

- *Microbial contaminants*, such as viruses and bacteria, which 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Radioactive contaminants*, which can be naturally occurring or the result of oil production and mining activities.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Health Services (Department) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Tables 1,2,3,4,5 and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituents. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, through representative of the water quality, are more than one year old.

<b>TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA</b>					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Sources of Contaminant
Total Coliform Bacteria	2/mo. (2010)	1	no more than 1 positive monthly sample	0	Naturally present in the environment.
Heterotrophic Plate Count	1/mo. (2010)	0	None	0	Naturally present in the environment.

Any violation of MCL,AL or MRDL is shaded. Additional information regarding the violation is provided later in this report.

<b>TABLE 2 - SAMPLING RESULTS COPPER AND LEAD</b>						
Chemical or Constituent (and reporting units)	No. of Samples Collected	90 <sup>th</sup> Percentile level detected	No. sites exceeding AL	AL	PHG	Typical Sources of Contaminant
Copper (ppb)				15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Lead (ppb)				1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

<b>TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS</b>						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Sodium (ppm)	2009	64	45 - 84	none	none	Salt present in the water and is generally naturally occurring

# 2010 Consumer Confidence Report

**TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Hardness (ppm)	2010	51	30 - 89	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**TABLE 4 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG) [MRDLG]	Typical Sources of Contaminant
Arsenic (As) ppb	2010	13.8	9 - 26	10	n/a	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (Ba) ppm	2009	0.1	0.05 - 0.2	1	2	Discharge from oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (Total Cr) ppb	2009	2	ND - 2	50.0	n/a	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (F) ppm	2009	0.16	0.1 - 0.2	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (NO <sub>3</sub> ) ppm	2010	21.5	ND - 36	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Gross Alpha pCi/L	2010	4.3	0.5 - 14	15	n/a	Erosion of natural deposits.
Uranium pCi/L	2010	8.2	6 - 10	20	0.5	Erosion of natural deposits
Carbon Tetrachloride ppt	2008	200	ND - 1400	500	n/a	Discharge from chemical plants and other industrial activities
1,2-Dichloroethane (1,2-DCA) ppt	2008	85.7	ND - 600.0	500	400	Discharge from industrial chemical Factories
Dibromochloropropane (DBCP) ppt	2010	168	60 - 270	200	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit

Any violation of MCL,AL or MRDL is shaded. Additional information regarding the violation is provided later in this report.

**TABLE 5 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Chloride ppm	2009	15	11 - 19	500	n/a	Runoff/leaching from natural deposits; seawater influence
Corrosivity (Langlier Index)	2009	-0.3	-0.6 - -0.1	> 0	n/a	Natural or industrial-influenced balance of hydrogen, carbon and oxygen in the water, affected by temperature and other factors.

## 2010 Consumer Confidence Report

**TABLE 5 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Iron (Fe) ppb	2010	900	ND - 4900	300	n/a	Leaching from natural deposits; Industrial Wastes
Manganese (Mn) ppb	2010	52	ND - 230	5	9	Leaching from natural deposits
Specific Conductance umhos/cm	2009	456	328 - 639	1600	n/a	Substances that form ions when in water; seawater influence
Sulfate (SO <sub>4</sub> ) ppm	2010	9.22	ND - 16	500	n/a	Runoff/leaching from natural deposits; industrial wastes
TDS ppm	2009	306	220 - 420	1000	n/a	Runoff/leaching from natural deposits

Any violation of MCL,AL or MRDL is shaded. Additional information regarding the violation is provided later in this report.

**TABLE 6 - DETECTION OF UNREGULATED CONTAMINANTS**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Boron ppm	2009	0.04	ND - 0.2 (2009)	1000	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Vanadium ppm	2010	0.01	0.003 - 0.03 (2010)	50	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals.

**TABLE 6 - DETECTION OF FEDERAL DISINFECTANT/DISINFECTANT BYPRODUCT RULE**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Total Trihalomethanes (TTHMs) ppb	2010	3	3 - 3	80	n/a	By-product of drinking water disinfection

### Additional General Information on 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 USEPA's Safe Drinking Water Hotline (800-426-4791).

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 provider. USEPA/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 Drinking Water Hotline (800-426-4791)

## 2010 Consumer Confidence Report

**For Lead (Pb),** 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. *City of Hughson* 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 or at <http://www.epa.gov/safewater/lead>.

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### Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a violation of Any Treatment Technique or Monitoring and Reporting Requirement

**About our Total Coliform Bacteria:** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

**For Arsenic (As) results above 5 ppb up to and including 10 ppb:** Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

We addressed the violation for As every quarter, Hughson residents notified by letter in monthly utility bill, published statement in local newspaper, and submitted compliance plan to state (awaiting approval).

**For Nitrate (NO3) results above 23 ppm (50% of the MCL) but below 45 ppm (the MCL):** Nitrate in drinking water at level above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

**About our Carbon Tetrachloride:** Some people who use water containing carbon tetrachloride in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.

**About our 1,2-Dichloroethane (1,2-DCA):** Some people who use water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

In May 2008, a 1,2-Dichloroethane concentration of 600 ppt was determined from a sample taken from the storage tank at Well 07. This result exceeds the MCL for 1,2-Dichloroethane of 500 ppt. Follow up samples were all determined to be non detect for 1,2-Dichloroethane.

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

**About our Dibromochloropropane (DBCP):** Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer. Two samples from April 2009 and one sample from October 2009 taken at Well 05 were found to have Dibromochloropropane concentrations of 240 ppt, 250 ppt, and 240 ppt. These results exceed the MCL for Dibromochloropropane of 200 ppt. All other samples were in compliance with the MCL.

## 2010 Consumer Confidence Report

Some people who use water containing Dibromochloropropane in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

**About our Corrosivity (Langlier Index):** Corrosivity less than 0 indicates your water may be corrosive to the plumbing and fixtures. The Corrosivity MCL was set to protect you against unpleasant aesthetic affects such as color, taste and odor. Violating this MCL does not pose a risk to public health.

**About our Iron (Fe):** Iron was found at levels that exceed the secondary MCL. The Iron MCL was set to protect you against unpleasant aesthetic affects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. Violating this MCL does not pose a risk to public health. In January 2009, an iron concentration of 370 ppb was determined from a sample taken from Well 05. This result exceeds the MCL of 300 ppb. All other samples were in compliance with the MCL.

Iron was found at levels that exceed the secondary MCL. The Iron MCL was set to protect you against unpleasant aesthetic affects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. Violating this MCL does not pose a risk to public health.

**About our Manganese (Mn):** Manganese was found at levels that exceed the secondary MCL. The Manganese MCL was set to protect you against unpleasant aesthetic affects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. Violating this MCL does not pose a risk to public health.

Manganese (Mn) result found exceeded California Department of Public Health(CDPH) notification level. The notification level for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system.

### Drinking Water Source Assessment Information

#### Assessment Info

A source water assessment was conducted for the WELL 03, WELL 04, and WELL 05 of the HUGHSON, CITY OF water system in January, 2001. According to the Drinking Water Source Assessment and Protection Program's Source Water Assessments Public Access web page, the Public Water Sources WELL 06 and WELL 07 of the HUGHSON, CITY OF water system number 5010008, does not have a completed Source Water Assessment on file.

Well 03 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:  
Sewer collection systems

Well 04 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:  
Historic gas stations

Well 05 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:  
Historic gas stations

Well 06 - This info is not available, as this water system does not have a completed assessment on file.

Well 07 - This info is not available, as this water system does not have a completed assessment on file.

#### Discussion of Vulnerability

Assessment summaries are not available for some sources. This is because:

- The Assessment has not been completed. Contact the local Department of Health Services (DHS) Drinking Water field office or the water system to find out when the Assessment is scheduled to be done.
- The source is not active. It may be out of service, or new and not yet in service.

## **2010 Consumer Confidence Report**

- The Assessment was not submitted electronically. The site used to obtain Assessments only provides access to Assessment summaries submitted electronically.

### **Acquiring Info**

A copy of the complete assessment may be viewed at:

Department Of Health Services  
Office Of Drinking Water  
31 East Channel Street, Room 270  
Stockton, CA 95202

You may request a summary of the assessment be sent to you by contacting:

Joseph O. Spano  
District Engineer  
(209) 948-3816