City of **Westminster**
Water Division

2011 Water Quality Report

Water Conservation Demonstration Garden

Your 2011 Water Quality Report

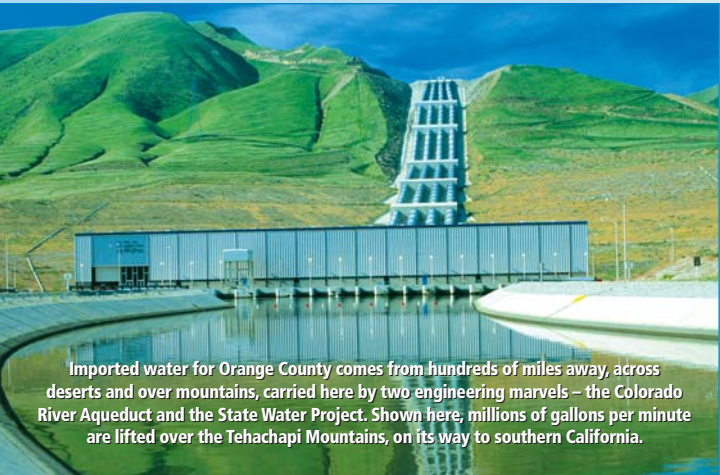
Drinking Water Quality

Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. This year's report covers all drinking water quality testing performed in calendar year 2010. The City of Westminster Water Division vigilantly safeguards its water supply and, as in years past, the water delivered to your home meets the quality standards required by federal and state regulatory agencies. The U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) are the agencies responsible for establishing and enforcing drinking water quality standards.

In some cases, the City goes beyond what is required by testing for unregulated chemicals that may have known health risks but do not have drinking water standards. In addition, the Orange County Water District (OCWD), which manages the groundwater basin, and the Metropolitan Water District of Southern California (MWD), which supplies imported treated surface water to the City, test for unregulated chemicals in our water supply. Unregulated chemical monitoring helps USEPA and CDPH determine where certain chemicals occur and whether new standards need to be established for those chemicals.

Through drinking water quality compliance testing programs carried out by OCWD for groundwater, MWD for treated surface water, and the Westminster Water Division for the water production and distribution system, your drinking water is constantly monitored from source to tap for regulated and unregulated constituents.

The State allows us to monitor for some 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.



Imported water for Orange County comes from hundreds of miles away, across deserts and over mountains, carried here by two engineering marvels – the Colorado River Aqueduct and the State Water Project. Shown here, millions of gallons per minute are lifted over the Tehachapi Mountains, on its way to southern California.

What You Need to Know About Your Water, and How it May Affect You

Water Quality Meets State and Federal Standards

As you read this report, you will find laboratory test results show that the City of Westminster's water system once again meets all the water quality standards put forth by the United States Environmental Protection Agency (USEPA) and the State of California Department of Public Health (CDPH). Your drinking water has been tested more than 64,000 times last year for regulated and non-regulated contaminants.

Sources of Supply

The City of Westminster's water supply is a blend of groundwater managed by the Orange County Water District (OCWD) and water imported from Northern California and the Colorado River. Imported water is purchased from the Metropolitan Water District of Southern California by the Municipal Water District of Orange County (MWDOC), who distributes it to water agencies in Orange County. Groundwater comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall, and imported water. The groundwater basin is 350 square miles and lies beneath north and central Orange County from Irvine to the Los Angeles border, and from Yorba Linda to the Pacific Ocean.

Westminster has 11 groundwater wells located throughout the City and three import water connections. Last year, on average 74% of our drinking water was produced from our wells and 26% was imported.

Orange County's Water Future

For years, Orange County has enjoyed an abundant, seemingly endless supply of high-quality water. However, as water demand continues to increase statewide, we must be even more conscientious about our water supply and maximize the efficient use of this precious natural resource.

OCWD and MWDOC work cooperatively to evaluate new and innovative water management and supply development programs, including water reuse and recycling, wetlands expansion, recharge facility construction, ocean and brackish water desalination, surface storage and water use efficiency programs. These efforts are helping to enhance long-term countywide water reliability and water quality.

A healthy water future for Orange County rests on finding and developing new water supplies, as well as protecting and improving the quality of the water that we have today. Your local and regional water agencies are committed to making the necessary investments today in new water supply and management projects to ensure an abundant and high-quality water supply for our future.

Questions about your water? Contact us for answers.

For information about this report, or your water quality in general, please contact Wil Davee at (714) 548-3694. To find out about opportunities to participate in public meetings, contact the Westminster City Clerk's office at (714) 898-3311. The City Council meets every second and fourth Wednesday in the Council Chambers at 8200 Westminster Boulevard. We are also reachable by mail at the City of Westminster Water Division, 14381 Olive Street, Westminster, California 92683.

For more information about the health effects of the listed contaminants in the following tables, call the U.S. Environmental Protection Agency hotline at (800) 426-4791.

For after hours water quality emergencies, call the Westminster Police Department at (714) 898-3315.

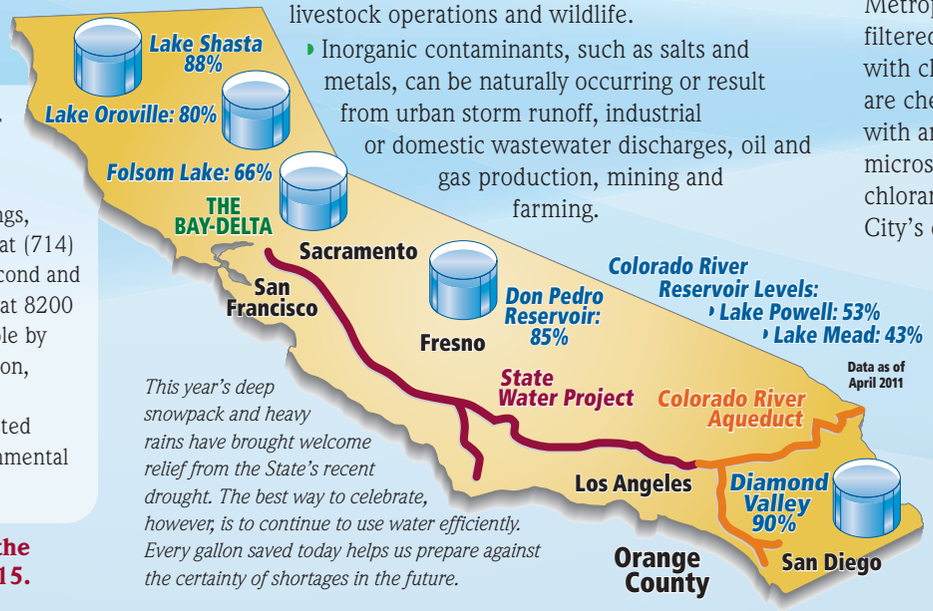
Basic Information About Drinking Water Contaminants

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 land or through the layers of the ground it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and 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, can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- Radioactive contaminants can be naturally occurring or the result of oil and gas production or mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban storm water runoff, agricultural application and septic systems.
- Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

In order to ensure that tap water is safe to drink, USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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 at (800) 426-4791.



This year's deep snowpack and heavy rains have brought welcome relief from the State's recent drought. The best way to celebrate, however, is to continue to use water efficiently. Every gallon saved today helps us prepare against the certainty of shortages in the future.

Chloramines

The City of Westminster imports treated drinking water from the Metropolitan Water District of Southern California. Metropolitan treats its filtered surface water with chloramines, which are chemical disinfectants formed by combining chlorine with ammonia. Chloramines are effective killers of microscopic organisms that may cause disease and chloramines also help prevent re-growth of bacteria in the City's distribution system. Chloramines form fewer disinfection byproducts than other disinfectants and have no odor when properly used. People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment. Customers who maintain fish ponds, tanks, or aquariums should also make necessary adjustments in water quality treatment, as these chloramines are toxic to fish.

For further information or if you have any questions about chloramines, please call Wil Davee, Water Quality Supervisor, (714) 548-3694.

The Quality of Your Water is Our Primary Concern

About Lead in Tap Water

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. The City of Westminster Water Division 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: www.epa.gov/safewater/lead.

Arsenic Advisory

The following advisory is issued because in 2010 we recorded an arsenic measurement in the drinking water supply between 5 and 10 micrograms per liter. While your drinking water meets the federal and state standard for arsenic of 10 micrograms per liter, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

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 (1-800-426-4791).

What are Water Quality Standards?

Drinking water standards established by USEPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **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.
- **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.
- **Secondary MCLs:** Set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- **Regulatory Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- parts per million (ppm) or milligrams per liter (mg/L)
- parts per billion (ppb) or micrograms per liter (µg/L)
- parts per trillion (ppt) or nanograms per liter (ng/L)

What is a Water Quality Goal?

In addition to mandatory water quality standards, USEPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes three types of water quality goals:

- **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 USEPA.
- **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.
- **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.

2010 City of Westminster Drinking Water Quality
Local Groundwater and Metropolitan Water District Treated Surface Water

Chemical	MCL	PHG (MCLG)	Avg. Groundwater Amount	Avg. Imported MWD Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Radiologicals – Tested in 2008 and 2009							
Alpha Radiation (pCi/L)	15	(0)	ND	5.6	ND – 9.3	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	NR	4.3	ND – 6.4	No	Decay of Man-made or Natural Deposits
Combined Radium (pCi/L)	5	(0)	<1	ND	ND – 1.4	No	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	6.4	3.3	1.3 – 15	No	Erosion of Natural Deposits
Inorganic Chemicals – Tested in 2010							
Aluminum (ppm)	1	0.6	ND	0.17	ND – 0.23	No	Treatment Process Residue, Natural Deposits
Arsenic (ppb)	10	0.004	<2	2.3	ND – 5.1	No	Runoff or Leaching from Natural Deposits
Barium (ppm)	1	2	<0.1	0.11	ND – 0.12	No	Runoff or Leaching from Natural Deposits
Fluoride (ppm) treatment-related*	Control Range 0.7 – 1.3 ppm Optimal Level 0.8 ppm		NR	0.8	0.4 – 1.0	No	Water Additive for Dental Health
Fluoride (ppm) naturally-occurring	2	1	0.46	NR	0.37 – 0.51	No	Runoff or Leaching from Natural Deposits
Nitrate (ppm as NO_3)	45	45	5.1	ND	ND – 11	No	Agriculture Runoff and Sewage
Nitrate+Nitrite (ppm as N)	10	10	1.2	ND	ND – 2.5	No	Agriculture Runoff and Sewage
Secondary Standards* – Tested in 2010							
Aluminum (ppb)	200*	600	ND	170	ND – 230	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	33	93	13 – 93	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	ND	1	ND – 2	No	Runoff or Leaching from Natural Deposits
Manganese (ppb)	50*	n/a	<20	ND	ND – 29	No	Runoff or Leaching from Natural Deposits
Odor (threshold odor number)	3*	n/a	ND	2	ND – 2	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	577	970	395 – 1,000	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	73	230	38 – 240	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	349	590	240 – 618	No	Runoff or Leaching from Natural Deposits
Turbidity (ntu)	5*	n/a	0.14	0.04	ND – 0.30	No	Runoff or Leaching from Natural Deposits
Unregulated Contaminants Requiring Monitoring – Tested in 2010							
Alkalinity, total (ppm as $CaCO_3$)	Not Regulated	n/a	174	110	67 – 219	n/a	Runoff or Leaching from Natural Deposits
Boron (ppb)	Not Regulated	n/a	ND	120	ND – 130	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	71	66	38 – 132	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (ppm as $CaCO_3$)	Not Regulated	n/a	228	270	92 – 426	n/a	Runoff or Leaching from Natural Deposits
Hexavalent Chromium (ppb)	Not Regulated	n/a	<1	ND	ND – 1.5	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	12	27	7.9 – 28	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	8.1	7.9	7.5 – 8.3	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	2.9	4.7	1.9 – 4.8	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	36	95	31 – 95	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	Not Regulated	TT	<0.3	2.2	ND – 2.3	n/a	Runoff or Leaching from Natural Deposits
Vanadium (ppb)	Not Regulated	n/a	<3	3.0	ND – 4.1	n/a	Various Natural and Man-made Sources

ppb = parts-per-billion; **ppm** = parts-per-million; **ppt** = parts-per-trillion; **pCi/L** = picoCuries per liter; **ntu** = nephelometric turbidity units; **µmho/cm** = micromhos per centimeter;
NR = Not Required to be analyzed; **ND** = not detected; **<** = average is less than the detection limit for reporting purposes; **MCL** = Maximum Contaminant Level; **(MCLG)** = federal MCL Goal;
PHG = California Public Health Goal; **n/a** = not applicable; **TT** = treatment technique *Contaminant is regulated by a secondary standard.

Turbidity – combined filter effluent Metropolitan Water District Diemer Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.08	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms.
Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT).
A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

Flushing Fire Hydrants

Throughout the year, you may see City Water employees releasing water from fire hydrants in the community.

This process, called "flushing," allows us to test hydrants to ensure they work properly. The increase in velocity of water in the pipeline when the hydrant is opened also removes sediment from pipes, which enhances the performance of the distribution system and helps to maintain water clarity.

Listed in the tables here are the constituents that were detected in our water system.
If a chemical is not listed in the tables, it was not found in our water system above the Detection Limit.

Want Additional Information? There's a wealth of information on the internet about Drinking Water Quality and water issues in general. Some good sites — both local and national — to begin your own research are:

City of Westminster: www.westminster-ca.gov • **Municipal Water District of Orange County:** www.mwdoc.com

Orange County Water District: www.ocwd.com • **Water Education Foundation:** www.watereducation.org

Metropolitan Water District of Southern California: www.mwdh2o.com

California Department of Public Health, Division of Drinking Water and Environmental Management: www.cdph.ca.gov/certlic/drinkingwater

U.S. Environmental Protection Agency: www.epa.gov/safewater/

California Department of Water Resources: www.water.ca.gov

Water Conservation Tips: www.bewaterwise.com • www.wateruseitwisely.com

2010 City of Westminster Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Color (color units)	15*	<1	ND – 1	No	Erosion of Natural Deposits
Odor (ton)	3*	<1	ND – 1	No	Erosion of Natural Deposits
Turbidity (ntu)	5*	<0.1	ND – 0.2	No	Erosion of Natural Deposits
Disinfection Byproducts**					
Total Trihalomethanes (ppb)	80	10	ND – 69	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	3.3	ND – 24	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	0.8	0.2 – 2.2	No	Disinfectant Added for Treatment

Eight locations in the distribution system are tested quarterly for disinfection byproducts; fifteen locations are tested monthly for color, odor and turbidity.
MRDL = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **ntu** = nephelometric turbidity units; **ND** = not detected;
ppb = parts-per-billion; **ppm** = parts-per-million; ton = threshold odor number; **<** = average amount is less than the reporting limit
*Contaminant is regulated by a secondary standard to maintain aesthetic qualities. **Disinfection Byproducts average values are based on a running annual average.

Lead and Copper Action Levels at Residential Taps

	Action Level (AL)	Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant
Lead (ppb)	15	0.2	1.8	0 / 43	No	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.24	0 / 43	No	Corrosion of Household Plumbing

In 1992, the USEPA found that Westminster's water system did not exceed the Action Level (AL) for lead and copper and had optimized corrosion control.
In 2009, the City of Westminster participated in reduced monitoring. Forty-three (43) residences were sampled and tested for lead and copper at-the-tap.
Neither lead nor copper was detected above the respective regulatory AL.
A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Source Water Assessments

Imported (Metropolitan) Water Assessment

Every five years, Metropolitan Water District of Southern California is required by CDPH to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

Metropolitan's most recent Watershed Sanitary Surveys were completed in December 2006 (Colorado River) and June 2007 (State Water Project). Both source waters are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.

Copies of summaries for these Sanitary Surveys can be obtained by calling Metropolitan at (213) 217-6850.

Groundwater Assessment

An assessment of the drinking water sources for the City of Westminster was completed in December of 2002. Westminster groundwater supply wells are considered most vulnerable to the following potential contaminant sources: gas stations, high density housing, dry cleaners, parks, and road right of ways. You may request a summary or copy of this assessment by contacting Scott Miller, Water Superintendent, Westminster Water Division at (714) 548-3693.

The Westminster Water Conservation Demonstration Garden

Located adjacent to the Westminster Lanes/Big Lots center at the corner of Willow Lane and California Avenue, the garden features an assortment of drought tolerant plants, as well as hardscape designs residents can use to conserve water, save money, and create a beautiful yard. Signage throughout the garden identifies the features and provides local contact information for retailers and contractors who can help with installation.

City of Westminster
Water Division
14381 Olive Street
Westminster, California 92683

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This report contains important information about your drinking water.

Translate it, or speak with someone who understands it.

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Mr. Willie Cobar. Telefono: 714-548-3685.

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。