East Bay Municipal Utility District

2009 Annual Water Quality Report

This report tells you more about the water you use every day – how it gets treated, where it comes from and what is in it.

In 2009, EBMUD water met or surpassed every public health requirement set by the California Department of Public Health and the U.S. Environmental Protection Agency.

One of the most important factors in water quality is its source: the purer the source, the better the water. Ninety percent of EBMUD's water comes from the 577-square-mile watershed of the Mokelumne River, which collects Sierra Nevada snowmelt and flows into Pardee Reservoir in the Sierra foothills near the town of Valley Springs. The watershed on the west slope of the Sierra Nevada is mostly undeveloped land, little affected by human activity.

The water travels to the East Bay in pipelines and is protected from pesticides, agricultural and urban runoff, municipal sewage and industrial discharges. Local East Bay watershed rainfall and runoff accounts for about 10 percent of the District's water supply.

Before the water comes to your tap, EBMUD takes many steps to ensure its quality. This includes carefully managing and protecting watershed lands and reservoirs, treating the water, operating the complex distribution system (pipes, pumping plants and reservoirs), sampling and analyzing for water quality, maintaining and replacing facilities, and investigating and correcting consumer concerns.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The CDPH regulations also establish limits for contaminants in bottled 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 at (800) 426-4791 or visiting *www.epa.gov/safewater.*

EBMUD

EBMUD 2009 ANNUAL WATER QUALITY REPORT

EBMUD tests your water daily to make sure it is safe to drink. We look for more than 100 substances in the water, including bacteria, pesticides and herbicides, asbestos, lead, copper, petroleum products and by-products of industrial and water-treatment processes.

This table shows the measured level of substances detected at EBMUD source waters, water treatment plants or in the distribution system (map on reverse side shows which treatment plant normally serves your neighborhood).

Regulations for *Primary Drinking Water Constituents* are designed to protect public health. Regulations for *Constituents Which Have Secondary MCLs* relate to the aesthetic qualities of your water such as taste and odor. *Unregulated Constituents* are chemical or microbial constituents that water agencies are required to monitor, but no maximum contaminant levels (MCL) have been established. *In 2009 EBMUD met or surpassed all water quality regulations set by the California Department of Public Health (CDPH) and the United States Environmental Protection Agency (USEPA).*

Table below lists all drinking water constituents detected at the source, the treatment plant or the distribution system in 2009.

Primary Constituents	MCL or [MRDL]	PHG (MCLG) or [MRDLG]	Average	Walnut Creek	Lafayette	Orinda	Sobrante	USL	Met Regulation	Typical Sources
Microbiological Constituents										
Total Coliforms in Distribution System (percent positive detected, highest month)	5%	(zero)	1.7%*	NR	NR	NR	NR	NR	YES	Naturally present in the environment
Turbidity (NTU), maximum level, except for Average	1 NTU	NS	0.03	0.10	0.16	0.10	0.09	0.11	YES	Soil runoff
Turbidity (NTU)	95% of the samples ≤ 0.3 NTU	NS	NR	100%	100%	100%	100%	100%	YES	Soil runoff
Cryptosporidium in Source Water, (#/L) (sampled in 2008, most recent required monitoring)	TT	zero	NA	zero	zero	zero	0.3	zero	YES	Naturally present in the environment
Radioactive Constituents - sampled in 2006-2007, most recent required monitoring										
Gross Alpha particle activity (pCi/L)	15	(zero)	<3	<3	<3	<3	<3-11	<3	YES	Erosion of natural deposits
Gross Beta particle activity (pCi/L)	20	(zero)	<4	<4	<4	<4	<4-9.1	<4	YES	Decay of natural and man-made deposits
Uranium (pCi/L)	20	0.43	NR	<1	<1	<1	<1	<1	YES	Erosion of natural deposits
Uranium was detected at 1.1 pCi/L and Gross Alpha was detected at 4.6 pCi/L in Chabot Reservoir, an emergency standby reservoir, which has not been used for water supply in more than 20 years.										
Inorganic Constituents										
Aluminum (µg/L)	1000	600	<50	<50	<50	<50	<50-100	<50-130	YES	Erosion of natural deposits; residue from some surface water treatment processes
Chloramine Residual as Cl_2 (mg/L), maximum level, except for Average	[4]	[4]	1.9***	2.6	2.3	3.3	3.3	3.2	YES	Drinking water disinfectant added for treatment
Fluoride (naturally occurring) (mg/L)**	2	1	<0.1	<0.1	<0.1	<0.1	<0.1	0.14	YES	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Organic Constituents										
Acrylamide in treatment chemical (one hundredth of one percent)	TT = 5 @ Max. Dose allowed	(zero)	NR	Met reqmt	NR	NR	NR	NR	YES	Added to water during water treatment
Control of DBP precursors (TOC)	TT	NS	NR	NR	NR	NR	Met reqmt	Met reqmt	YES	Various natural and man-made sources
Haloacetic acids, 5 species (µg/L)	60	NS	18***	15-21	15-23	12-30	6-25	6-23	YES	By-product of drinking water disinfection
Trihalomethanes (µg/L)	80	NS	32***	29-44	31-42	28-44	25-29	14-38	YES	By-product of drinking water disinfection
Constituents Which Have Secondary MCLs										
Aluminum (µg/L)	200	NS	<50	<50	<50	<50	<50-100	<50-130	YES	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (mg/L)	500	NS	7.5	4	5	5-6	13	13	YES	Runoff/leaching from natural deposits; seawater influence
Color, color units	15	NS	0.7	1	1	<1	1	1	YES	Naturally-occurring organic materials
Foaming Agents (MBAS) (µg/L)	500	NS	<50	<50	<50	83	<50	<50	YES	Municipal and industrial waste discharges
Odor–Threshold Odor Number (T.O.N.)	3	NS	1.2	1	1.3	1-1.6	1.1	1.1	YES	Naturally-occurring organic materials
Specific Conductance (umhos/cm)	1600	NS	140	53	55	57-112	231	331	YES	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	NS	12	0.8	0.7	0.8-10	30	33	YES	Runoff/leaching from natural deposits, industrial wastes
Total Dissolved Solids (mg/L)	1000	NS	91	45	46	42-72	130	210	YES	Runoff/leaching from natural deposits
Turbidity (NTU), maximum level, except for Average	5	NS	0.03	0.10	0.16	0.10	0.09	0.11	YES	Soil runoff

Unregulated Constituents	NL	PHG (MCLG)	Average	Walnut Creek	Lafayette	Orinda	Sobrante	USL		
Boron (µg/L)	1000	NS	NA	<100	<100	<100	<100	<100-110	NR	Runoff/leaching from natural deposits
Chlorate (µg/L)	800	NS	NA	160	260	150-160	150-360	230-410	NR	By-product of sodium hypochlorite decomposition
N-Nitrosodimethylamine (NDMA), (ng/L)****	10	3	NA	1.5-2.3	1.1-3.1	1.8-6.1	<2-3.3	<2-3.2	NR	By-product of drinking water chlorination

Lead and Copper (sampled in 2008, most recent required monitoring)	AL	PHG	90th Percentile Level Found	# of Sites found above the AL					
Copper (µg/L)	1300	300	65	No sites out of 53 sites				YES	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (µg/L)*****	15	0.2	4	2 sites out of 53 sites				YES	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

*Highest month

** Fluoride reported above reflects levels in source waters. Fluoride was added in the range of 0.3 to 1.2 mg/L, to help prevent dental decay in consumers. Information about fluoridation, oral health, and current issues is available from www.cdph.ca.gov/certlic/drinkingwater/pages/fluoridation.aspx.

***Highest Running Annual Average.

****Sampling locations chosen to represent worst-case scenarios.

***** 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. EBMUD 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, (800) 426-4791, or www.epa.gov/safewater/lead.

TERMS USED

AL = regulatory action level. The concentration which, if exceeded, triggers treatment or other requirements that a water system must follow.

Cl2 = chlorine, measured disinfectant residual equivalent.

DBP = disinfection by-products. Trihalomethanes (THMs), haloacetic acids (HAAs) and bromate are disinfection by-products, formed when chlorine and/or ozone reacts with natural constituents in water.

MCL = maximum contaminant level. 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.

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 are set by the U.S. Environmental Protection Agency. Chloramine has a maximum residual disinfectant level goal instead of an MCLG.

mg/L = milligrams per liter, or parts per million (ppm).

MRDL = maximum residual disinfectant level. 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.

MRDLG = maximum residual disinfectant 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.

NA = not applicable.

ng/L = nanograms per liter, or parts per trillion (ppt).

NL = notification level. Notification levels are health-based advisory levels established by CDPH for chemicals in drinking water that lack MCLs.

NR = not required for meeting regulations.

NS = no standard (MCL or PHG for example) established.

NTU = nephelometric turbidity units.

NV = no value.

pCi/L = pico curies per liter, a measure of radioactivity.

PDWS = primary drinking water standard. MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG = public health goal. 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.

Secondary drinking water standard. MCLs set to protect the odor, taste and appearance of drinking water.

TOC = total organic carbon. A measurement of organic compounds which could form by-products after disinfection. See DBP.

T.O.N. = threshold odor number, a measurement of odors in water.

TT = treatment technique. A required process intended to reduce the level of a contaminant in drinking water.

Trihalomethanes = A group of contaminants in drinking water formed as a by-product of disinfection. See DBP.

Turbidity = A measure of cloudiness of the water. See NTU.

µg/L = micrograms per liter, or parts per billion (ppb).

umhos/cm = micromhos per centimeter, a measure of electrical conductance.

USL = Upper San Leandro.

90th percentile = 90 percent of samples had lower values.

Contaminants in Drinking Water

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, bacteria and protozoa, such as Cryptosporidium, that may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.

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

Synthetic organic contaminants such as pesticides and herbicides that may come from a variety of sources, including agriculture, urban storm water and residential uses.

Volatile organic contaminants from industrial processes and petroleum production, and from gas stations, urban storm water runoff, agricultural application and septic systems.

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

Cryptosporidium is a microbial contaminant found in surface water throughout the United States. Although filtration is highly effective in removing Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in one of our source waters. Current test methods cannot determine if the organisms are dead or are capable of causing disease. Ingestion of

Cryptosporidium may cause abdominal infection with symptoms including nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their physician regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Low Resistance—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, and some elderly 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 USEPA Safe Drinking Water Hotline: (800) 426-4791 or *www.epa.gov/safewater.*

Lead—Routine testing shows that EBMUD is in compliance with state and federal lead regulations. However, household and utility plumbing can still contain lead (for additional information see footnote beneath table at left).

To further reduce consumer exposure to lead, California enacted a new "lead-free" plumbing law. Beginning on January 1, 2010, the lead content of plumbing products sold in California is limited to 0.25% or less, a significant reduction from the 4% lead content which was previously allowed.

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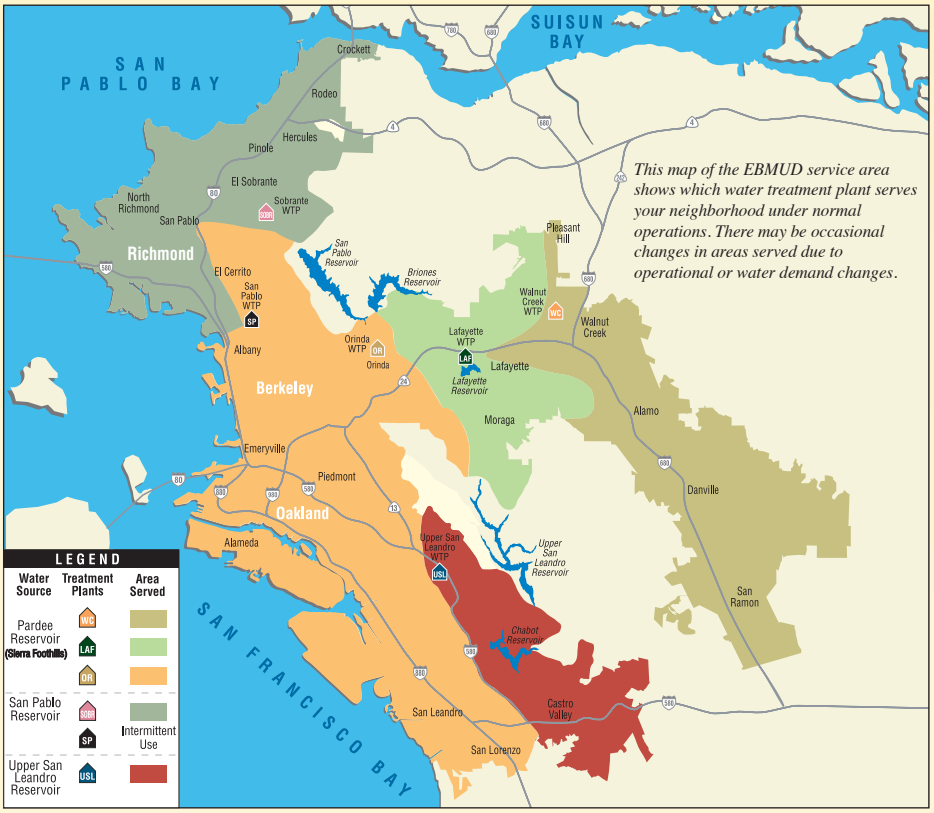

City	Treatment Plants
Alameda	Orinda/Upper San Leandro
Alamo	Walnut Creek
Albany	Orinda
Berkeley	Orinda
Castro Valley	Upper San Leandro/Orinda
Crockett	Sobrante/Orinda
Danville	Walnut Creek
El Cerrito	Orinda
El Sobrante	Sobrante/Orinda
Emeryville	Orinda
Hayward	Upper San Leandro/Orinda
Hercules	Sobrante/Orinda
Kensington	Orinda
Lafayette	Lafayette/Walnut Creek
Moraga	Lafayette/Orinda
Oakland	Orinda/Upper San Leandro
Orinda	Orinda/Lafayette
Piedmont	Orinda/Upper San Leandro
Pinole	Sobrante/Orinda
Pleasant Hill	Walnut Creek
Richmond	Sobrante/Orinda
Rodeo	Sobrante/Orinda
San Leandro	Upper San Leandro/Orinda
San Lorenzo	Upper San Leandro/Orinda
San Pablo	Sobrante/Orinda
San Ramon	Walnut Creek
Walnut Creek	Walnut Creek/Lafayette

The following table includes measurements of other water quality constituents that might be of interest to our consumers:

OTHER WATER QUALITY PARAMETERS	Walnut Creek	Lafayette	Orinda	Sobrante	USL
Alkalinity, bicarbonate (mg/L as CaCO3)	18.4	17.5	17.3-31.3	73.5	107
Alkalinity, carbonate (mg/L as CaCO3)	0.4	0.4	1.3-2.3	1.4	2.5
Calcium (mg/L)	3.9-4.8	3.8-4.8	3.9-8.9	16-19	23-31
Hardness (mg/L as CaCO3)	12-20	11-16	13-31	47-73	100-120
Magnesium (mg/L)	0.6-1.0	0.6-0.9	0.7-2.0	4.8-6.1	10-12
pH (pH units)	8.4-9.3	8.4-9.3	7.9-9.6	8.5-9.0	8.1-9.1
Potassium (mg/L)	0.4-0.6	0.5-0.7	0.5-0.8	1.1-2.0	1.4-2.0
Silica (mg/L)	8.3-11.3	8.4-10.8	8.3-11.5	6.8-11.5	1.4-5.2
Sodium (mg/L)	4.8-5.7	4.9-7.1	5.3-9.4	18-22	24-28

The table above provides useful information for certain industrial and home applications. Information on water hardness in "grains per gallon" can help improve the function of dishwashers, cooling equipment and other process applications. To convert the hardness values into grains per gallon, divide the values shown in the tables in milligrams per liter by 17. For example, water hardness in areas served by the Orinda Water Treatment Plant had a range from 13 to 31 mg/L, or 0.8 to 1.8 grains per gallon.

ADDITIONAL WATER SOURCE FOR 2009

EBMUD has emergency connections with other local agencies to provide back-up water supplies. In 2009, EBMUD received 870 million gallons of treated water (about one percent of EBMUD's water supply) from the San Francisco Public Utilities Commission (SFPUC) system through a connection in Hayward in advance of SFPUC's planned need for back-up supply in 2010. Water quality and source information for the SFPUC is available at *www.sfwater.org* or (415) 554-3289.

AWARD WINNING WATER TREATMENT PLANTS

The Orinda Water Treatment Plant is one of only six plants in the country that has received an Excellence in Water Treatment Award in the nationwide Partnership for Safe Water (PSF). In 1996, EBMUD joined with the American Water Works Association, the USEPA and over 230 other water utilities nationwide in PSF. Through the Partnership, EBMUD works to optimize water treatment plant operations to maximize drinking water quality. EBMUD's other active water treatment plants are recognized with the Partnership Directors Award for meeting higher voluntary water quality standards.

Public Participation

EBMUD encourages public participation in decisions affecting drinking-water quality and other matters at its Board meetings, which take place the second and fourth Tuesdays of each month at 1:15 p.m., 2nd floor, 375 Eleventh Street, Oakland.

To speak with someone who can provide more information about water quality or to report a water quality concern, call 1-866-40-EBMUD (1-866-403-2683).

Additional Contacts

California Department of Public Health
Drinking Water Branch - (510) 620-3463

U.S. Environmental Protection Agency Safe Drinking Water Hotline - (800) 426-4791

County Public Health Departments:
Alameda County - (510) 267-8000
Contra Costa County - (925) 313-6712

375 Eleventh Street
Oakland, CA 94607
1-866-40-EBMUD
www.ebmud.com

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ENGLISH
This report contains important information about your drinking water. Translate it, or speak with someone who understands it. To request a copy of this report in Spanish or Chinese, please call (510) 287-0138.

SPANISH
Este informe contiene importante información sobre el agua potable que usted consume. Tradúzcalo, hable con alguien que lo comprenda, o solicite un ejemplar de este informe en español llamando al (510) 287-0138.

CHINESE
這份報告包含有您飲用水的重要資訊。請翻譯該內容，或與了解內容的人討論，或者請致電(510) 287-0138索取中文報告。

JAPANESE
この報告書には、あなたの飲料水に関する重要な情報が含まれています。和訳するか、理解できる人に相談してください。

KOREAN
본 보고서에는 귀하의 음료수에 관한 중요한 정보가 나와 있습니다. 번역을 부탁하거나 그 내용을 이해하시는 분으로부터 설명을 들으십시오.

CAMBODIAN (KHMER)
របាយការណ៍នេះមានព័ត៌មានសំខាន់អំពីទឹកផឹក។ សូមរកគេឲ្យបកប្រែជូនឬពិគ្រោះជាមួយអ្នកណាដែលយល់របាយការណ៍នេះ ។

THAI
รายงานฉบับนี้มีข้อมูลสำคัญเกี่ยวกับน้ำดื่มของท่าน ขอให้แปลรายงานฉบับนี้หรือพูดคุยกับผู้ที่เข้าใจเนื้อหาในรายงานนี้.

LAO
ລາຍງານສະບັບນີ້ມີຂໍ້ມູນສຳຄັນກ່ຽວກັບນ້ຳດື່ມຂອງທ່ານ. ໃຫ້ທ່ານແປເອກະສານນີ້ເປັນພາສາລາວ, ຫລືໃຫ້ທ່ານເວົ້າປຶກສາກັບຜູ້ທີ່ເວົ້າໃຈເລື່ອງ.

PUNJABI
ਇਸ ਰਿਪੋਰਟ ਵਿੱਚ ਤੁਹਾਡੇ ਪੀਣ ਵਾਲੇ ਪਾਣੀ ਬਾਰੇ ਜ਼ਰੂਰੀ ਜਾਣਕਾਰੀ ਦਿੱਤੀ ਗਈ ਹੈ। ਇਸਦਾ ਅਨੁਵਾਦ ਕਰੋ ਜਾਂ ਕਿਸੇ ਨਾਲ ਗਲ ਕਰੋ ਜੋ ਇਸਨੂੰ ਸਮਝਦਾ ਹੋਵੇ।

GUJARATI
આ રિપોર્ટમાં તમારા પીવાના પાણી વિષે મહત્વની માહિતી છે. એનો અનુવાદ કરો, અથવા જેને એની સમજણ પડતી હોય તેની સાથે વાત કરો.

HINDI
इस रिपोर्ट में आपके पीने के पानी के बारे में महत्वपूर्ण जानकारी दी हुई है। इसका अनुवाद करें, या किसी ऐसे व्यक्ति से बात करें जो इसे समझता हो।

RUSSIAN
Здесь содержится информация о вашей питьевой воде. Переведите ее, или обратитесь к тому, кто это понимает.

BOSNIAN
U ovom izvještaju nalaze se važne informacije o vašoj vodi za piće. Prevedite ga ili razgovarajte sa nekim ko razumije ovaj izvještaj.

VIETNAMESE
Bản báo cáo này có các thông tin quan trọng về nước uống của quý vị. Hãy chuyển ngữ tài liệu này, hoặc nói chuyện với người có thể hiểu được bản báo cáo này.

FRENCH
Ce rapport contient des informations importantes concernant votre eau potable. Faites-le traduire ou adressez-vous à quelqu'un qui est en mesure de le comprendre.

TAGALOG
Ang ulat na ito ay naglalaman ng importanteng impormasyon tungkol sa inyong iniinom na tubig. Isalin ito, o makipag-usap sa isang taong nakakaintindi nito.

POLISH
Ten raport zawiera ważne informacje dotyczące wody pitnej. Przetłumacz go, lub porozmawiaj z kimś, kto go rozumie.

GREEK
Η έκθεση αυτή περιέχει σημαντικές πληροφορίες σχετικά με το πόσιμο νερό σας. Μεταφράστε την έκθεση ή μιλήστε με κάποιο άτομο που την κατανοεί.

HMONG
Daim ntawv qhia no muaj cov lus qhia tseem ceeb txog koj cov dej haus. Muab txhais, los sis nrog ib tug neeg uas nkag siab txog qhov no tham.

HEBREW
דו"ח זה מכיל מידע חשוב על מי שתייה. תרגמו אותו או שאלו מישהו שמבין את תוכנו.

ARABIC
يحتوي هذا التقرير على معلومات هامة حول مياه الشرب التي تتناولها. ترجم التقرير أو تحدث إلى شخص يستطيع فهمه.

FARSI
این گزارش حاوی اطلاعات مهمی درمورد آب آشامیدنی است. آن را ترجمه کنید. یا از کسی که مطالب آن را می فهمد سئوال کنید.

URDU
اس رپورٹ میں آپ کے پینے کے پانی سے متعلق اہم معلومات ہیں. اس کا ترجمہ کریں، یا کسی ایسے شخص سے بات کریں جو اسے سمجھتا ہو.