

Annual Water Quality Report

Water testing
performed in 2012

6332 CLARK ROAD
PARADISE, CA 95969



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YOUR WATER DISTRICT:
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Your water— Clean. Fresh. Pure.

Paradise Irrigation District

Este informe contiene información muy importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Paradise Irrigation District is something special—it belongs to us all!

Do you have questions about the water you drink and use? You don't have to go to a huge utility company to get the answers you need—Paradise Irrigation District is a public agency. It is operated to benefit water consumers in our area and governed by local people we've elected.

Unlike privately-owned utility companies, PID makes all of its decisions right here in our community. PID actively seeks citizen input—both by attending meetings as well as participating on the water district's board of directors. Board members represent one of five divisions in our service area and are elected in November every two years (terms are four years and rotate).

Keeping our water supply clean and plentiful is our community's responsibility; it's our water and our water district.



Learn about our community's great water!

We're proud to present our annual water quality report covering all testing performed between Jan. 1 and Dec. 31, 2012, or earlier.

At Paradise Irrigation District we're committed to delivering the best-quality drinking water possible. We remain vigilant in meeting the challenges of new regulations, water source protection, water conservation and community outreach and education while continuing to serve the needs of our water users.

Thank you for allowing us to continue providing you and your family with high quality drinking water.

Please share your thoughts with us on the information in this report. And, if you have any questions or concerns, we're here to help. Call George Barber at 530/877-4971.



We can tell you about a leak before you know you have one—but we need your phone number!

Marge Eggers was on a much-deserved vacation. She and her husband were relaxing, spending a few weeks off the ridge; they weren't even thinking about the house they were having built back in Paradise.

Until Marge got a phone call from Paradise Irrigation District.

"One of the women from the front office called and told me that, according to their information, we had a leak at the house," recalls Egger of the incident last summer. "They even told me exactly what time that leak started. I was pretty surprised they could do that."

She was also thankful.

"It turned out the leak was outside and wouldn't have been seen by anyone because we weren't home. We wouldn't have even known about it until we got a big water bill the next month."

"PID called us before the leak caused a lot of problems. That was a real blessing for us."

Customers can find out about water leaks much earlier than previously, thanks to the district's new automated metering system, says PID customer service representative Mickey Rich.

"Before we had automated metering, people wouldn't be alerted to excessive water use until

they received their bill one month later—or even two months later when we did bimonthly billing," Rich says. "Now we check those numbers on a weekly basis and our customers are notified the day we're first aware of it."

A key element for success in the customer leak notification system, though, is having a phone number on file for each customer account. The phone number needs to be current as well as one that will be monitored if the customer is out of town.

"People sometimes think we automatically have a phone number for them because they've been a customer for so long," notes Laura Capra, utility billing technician. "But we don't have phone numbers on file for many, many of our customers. And, without that phone number, we won't be able to phone the customer to tell them if we detect a leak."

That's why it's so important for you to call us and give us your current phone number. Do it today!

While it remains the customer's responsibility to monitor their water usage, PID's automated phone no-

tification system (to be installed this year) will phone each customer if a leak is suspected.

"The system looks for water usage every hour for 24 hours," explains Rich. "So, if you're running a drip hose to irrigate your garden, turn it off for at least two hours a day or you'll get a call because it looks like a 'constant' leak to our system."

When a "severe" water leak is detected (over 10 units a day), the customer's location gets a visit from PID in addition to the other notification.



Call us or email us with your phone number so we can contact you if we detect a water leak.

Call 877-4971 | custserv@paradisairrigation.com

Look at how automated metering can help you:

If you're watching your water usage, Paradise Irrigation District has a new tool that can help you pinpoint when you use water so you can conserve more—and pay less!

Automated metering, which began in 2012, means that the district's customer service staff can now produce reports which show customers their water usage, right down to the day and the hour.

While automated metering reduces the cost of reading meters and increases accuracy, it also helps district personnel alert customers of constant usage over a 24-hour period, indicating a leak (see article on front page). Additionally, the system can steer customers to wiser water usage by showing them the times of day when their water use is higher.

"The most important thing about this metering system is helping people be aware of a leak earlier, before they've run up such a big bill," says Laura Capra, utility billing technician. "But there are other benefits as well.

"We can now show customers exactly when they're using water. They can tell if it's when they're doing laundry in the morning or when their sprinklers are running at night.

"By going with this system, we knew that customers could be made aware of their water usage a lot easier than it was before."

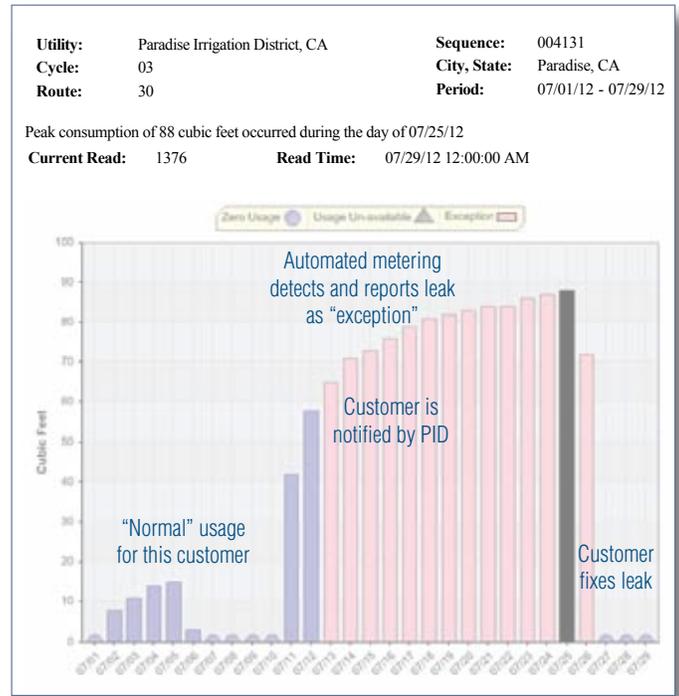
Customers can contact PID at 877-4971 and ask customer service staff to create a detailed water usage chart for them for a specified time period. The graph at right illustrates an example showing daily readings which "spiked" when a customer's outdoor pipe began leaking.

"We've had customers call us, worried because they'd forgotten to turn off a sprinkler the night before, and wanting to check if they were going to be paying a lot more in their next bill," Laura says. "We can pull up the data right away and give them the information they need.

"As a district, we're really happy because we don't want people to pay for something they don't want to use. This

system helps us to give our customers the information they need so they can use and conserve water more efficiently."

Report example shows a leak



Kids Fishing Day

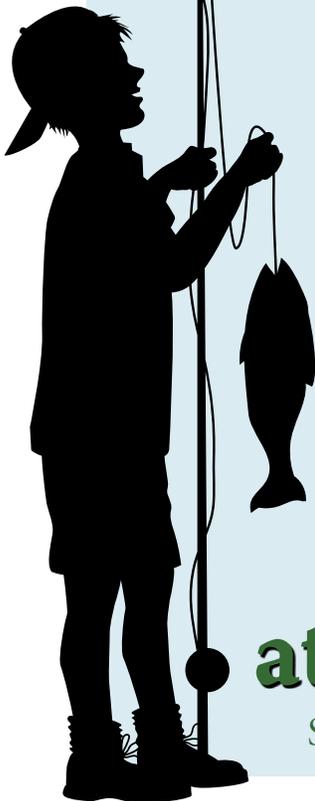
Saturday, April 20
6 am to 3 pm

Join the fun!

For kids ages 3 to 15
Raffles • Prizes
Snack Bar

at Paradise Lake

Sponsored by Paradise Irrigation District



District to improve system for "recycling" processed water

State guidelines gave PID directors two choices recently: Change the way the district treats its water or recycle the "processed" water back to the treatment plant. Directors adopted the second option and anticipate reconstruction of the settling ponds near the Treatment Plant beginning in 2014.

Either choice would cost the district about \$3 million but the chosen option allows the district to continue treating water with the same stable and successful process which produces good quality water that its customers appreciate.

Once reconstructed, the settling ponds will be lined and a system will be in place to return the "processed" water back to the Treatment Plant, not into Magalia Reservoir.

Recycling this water back to the Treatment Plant will add between 600-800 acre feet of water annually to PID's water system—meaning that much less that needs to be drawn out of Paradise Lake.

No new chemicals will be added to recycle the water and no additional pumping will be required.

Where does my water come from?

Customers of the Paradise Irrigation District are fortunate because we enjoy a high-quality water supply from the Little Butte Creek Watershed and your surface water lake or reservoir.

The PID treatment plant draws water from Magalia Reservoir and Paradise Lake, which hold a total of 12,293 acre-feet of water. The water treatment plant was constructed in 1995 and provides an average flow of 7.5 million gallons per day. Runoff is collected over 11.2 square miles of watershed located north and east of Magalia Reservoir. This watershed is heavily forested and sparsely populated, which contributes to the high-quality water we serve.

The District drilled and developed a ground water source at the D Tank reservoir site. This well produces up to 450 gallons per minute (gpm) and is used as a drought management and emergency source. This source was used less than one day in 2012; water quality testing has been done to qualify it as an approved source.



*Bill Taylor
Treatment Operations Supervisor*

PID employee stands out from the crowd

Bill Taylor is a professional. In his 14 years at Paradise Irrigation District, where he currently is Treatment Operations Supervisor, Taylor has worked hard to ensure that consumers have the highest quality water, produced safely and efficiently.

Now Taylor's peers know of his great work, too; in March he was presented with the Exemplary Operations Supervisor Award by the California-Nevada Section of the American Water Works Association (AWWA) at the organization's conference in Las Vegas, Nevada.

PID is a member of AWWA; the two-states covered in this regional section include more than 5,500 members. Taylor is the only one who received an award in that category at the Las Vegas gathering.

"This award recognizes operators working in a supervisory position for dedication toward compliance with public health standards, plant maintenance, development of new ideas, training, and outstanding achievement beyond normal operating responsibilities," according to a news release from AWWA's California-Nevada Section.

Taylor and his wife, Dara, live in Magalia with their two daughters, Emilee (11) and Baylee (4). A 20-year member of Butte County Search and Rescue, Taylor enjoys spending time with his family and four-wheeling.

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Health information for medically-vulnerable residents of our community

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

The US EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Substances that could be 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 plants, animals or from human activity.

To make sure our tap water is safe to drink, the U.S. Environmental Protection Agency (US EPA) and the California Department of Public Health (CDPH) prescribe regulations limiting 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.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Source Water Assessment available at office

PID's 2011 Source Water Assessment Plan is available at our office for your review. This plan is an assessment of the area of influence around our listed "raw" water sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

Ground Water Supply (Well at D Tank): High-density septic systems and automobile repair shops.

Surface Water Supply (Little Butte Creek Watershed): High-density septic systems and historic mining operations.

A copy of the complete assessment may also be viewed at California Department of Public Health (CDPH) Valley District Office, 364 Knollcrest Drive, Suite 101, Redding, CA 96002, Attention: Reese Crenshaw, (530) 224-4861, or Paradise Irrigation District Office, 6332 Clark Road, Paradise, CA 95969, Attention: George Barber, (530) 877-4971.



Lead and copper and your drinking water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead and copper in drinking water is primarily from the corrosion of materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water but cannot control the variety of materials used in home plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead and copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead and/or copper in your water, you may wish to have your water tested. Information on lead and copper in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or a Quick Reference Guide at www.epa.gov/ogwdw/lcrr/pdfs/qrg_lcrr_2004.pdf.

DEFINITIONS USED IN THIS REPORT:

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

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

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. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

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 USEPA.

MFL (million fibers per liter): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

ND (Not detected): The substance was not found by laboratory analysis.

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity/cloudiness—or turbidity—of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 EPA.

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

UNITS WE USED FOR MEASUREMENT:

ppm (parts per million): One part substance per million parts water (or milligrams per liter). Imagine one ping-pong ball in an Olympic-sized swimming pool.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter). Imagine one ping-pong ball in 1,000 Olympic-sized swimming pools.

Sampling results

Paradise Irrigation District has taken thousands of regulated and unregulated water samples during the past years to determine the presence of any radioactive, biological, inorganic, volatile and synthetic organic contaminants and monitor the treatment process. The tables below show only those contaminants that were detected in the water. CDPH requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change significantly. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	PHG (MCLG) [MRDLG]	Surface Water Supply		Groundwater Supply		VIOLA- TION?	TYPICAL SOURCE
				AVERAGE DETECTED	RANGE LOW-HIGH	AVERAGE DETECTED	RANGE LOW-HIGH		
Asbestos (MFL)	2004	7	7	0.2	NA	NA	NA	No	Internal corrosion of asbestos cement water mains; erosion of natural deposits.
Chlorine (ppm)	2012	[4.0 (as Cl ₂)	[4 (as Cl ₂)]	0.75	0.57–1.22	NA	NA	No	Drinking water disinfectant added for treatment.
Chromium (ppb)	2011	50	(100)	NA	NA	12	NA	No	Discharge from pulp mills; erosion of natural deposits.
Haloacetic Acids (ppb)	2012	60	NA	26	23-39	NA	NA	No	Byproduct of drinking water disinfection.
THMs (Total Trihalomethanes) (ppb)	2012	80	NA	26	19-39	NA	NA	No	Byproduct of drinking water disinfection.
Turbidity ¹ (NTU)	2012	TT	NA	0.05	0.03–0.07	NA	NA	No	Soil run-off.
Turbidity Treatment ¹	2012	95% of samples < 0.3	NA	100%	NA	NA	NA	No	Soil run-off.
Nitrate as N (ppm)	2012	10	10	NA	NA	0.2	NA	No	Septic systems, fertilizer use.

Tap water samples were collected for lead and copper analyses from sample sites throughout the community (lead was not detected at the 90th percentile).

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90 TH %TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION?	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.2	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Surface Water Supply		Groundwater Supply		VIOLATION?	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chloride (ppm)	2011	500	NS	3	NA	NA	NA	No	Run-off/leaching from natural deposits; seawater influence
Odor-Threshold (units)	2007	3	NS	2	NA	NA	NA	No	Naturally-occurring organic materials.
Specific Conductance (µS/cm)	2012	1,600	NS	70	NA	170	NA	No	Substances which form ions when in water; seawater influence.
Sulfate (ppm)	2011	500	NS	2	NA	NA	NA	No	Run-off/leaching from natural deposits; industrial wastes.
Total Dissolved Solids (ppm)	2005	1,000	NS	44	NA	142	NA	No	Run-off/leaching from natural deposits.
Zinc (ppm)	2011	5	NS	0.3	NA	NA	NA	No	Run-off/leaching from natural deposits; industrial wastes.

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Surface Water Supply		Groundwater Supply		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AVERAGE DETECTED	RANGE LOW-HIGH	
Boron (ppb)	2002	NA	NA	156	100-213	Run-off/leaching from natural deposits; seawater influence
Chromium VI (Hexavalent Chromium) (ppb)	2004	NA	NA	2.4	1.0–3.8	Naturally-occurring organic materials.
Hardness (ppm)	2011	28	NA	79	70–89	Substances which form ions when in water; seawater influence.
Vanadium (ppb)	2002	NA	NA	7.5	3–12	Run-off/leaching from natural deposits; industrial wastes.
Sodium (ppm)	2005	1.3	NA	5.3	NA	Run-off/leaching from natural deposits.

¹ Turbidity is a measure of water's cloudiness. Indicator of our filtration system's effectiveness (treatment technique).

PID seeks community participation

You're invited to participate in our public forum and voice your concerns about your drinking water. Your PID Board of Directors meets the third Wednesday of each month, beginning at 6:30 p.m., at 6332 Clark Road, Paradise.



For more information about this report—or for answers to questions about your drinking water—call the PID Water Treatment Plant at 530/877-3554.