



# The Waterfront

## Water Leaks: From Report to Repair

Maintenance of over 1,400 miles of underground water pipes can be quite a challenge, and aging infrastructure for this now 90-year old water district is a big part of that challenge.

When a water leak or break occurs, the sooner we know about it the better. EID encourages our customers, or anyone in the county who may see a water leak, to report it to us as soon as possible. With over 220 square miles of service area to cover it's good to have the citizens' help.

So, what happens when you report a leak? What is the process and how long will it take to repair?

When a concerned citizen calls in or makes a leak report on our website, EID staff dispatchers first determine if the leak is in our service area. If it is, then dispatch notifies a water distribution operator who schedules a site visit. Very large breaks that create, or have the potential to create, large outages are treated as emergencies and crews are sent to the site immediately.

Once the operator evaluates the leak and determines that the repair is EID's responsibility, the excavation area is marked with white paint. EID staff then calls USA North to initiate an underground service alert (USA). The USA is required by law to be completed before excavation so that other underground utilities like cable, gas, or power lines can be marked and safe excavation can begin. The USA process allows utilities two working days to respond and mark their utilities in the marked area of proposed excavation.

The distribution operator also reports their findings to dispatch where work orders are generated then forwarded to the construction supervisor who prioritizes the work. Prioritization is very important, because we have such a vast and complex service area and limited construction staff. Routine leak repairs are normally completed within two weeks.

To report leaks you can call 530-642-4000 or visit our website at [www.eid.org/ReportWaterLeak](http://www.eid.org/ReportWaterLeak).



## Drought Update, Winter Indoor Usage Tips

EID is required to reduce its water consumption by 28 percent from June 2015 through February 2016, compared to the same months in 2013, under a mandate issued by the State Water Resources Control Board.

In November 2015, Governor Jerry Brown issued an executive order that intensifies the state's drought response by extending emergency conservation regulations through October 2016 if drought persists through January 2016. We will update the EID drought page with news as we receive it at [www.eid.org/drought](http://www.eid.org/drought).

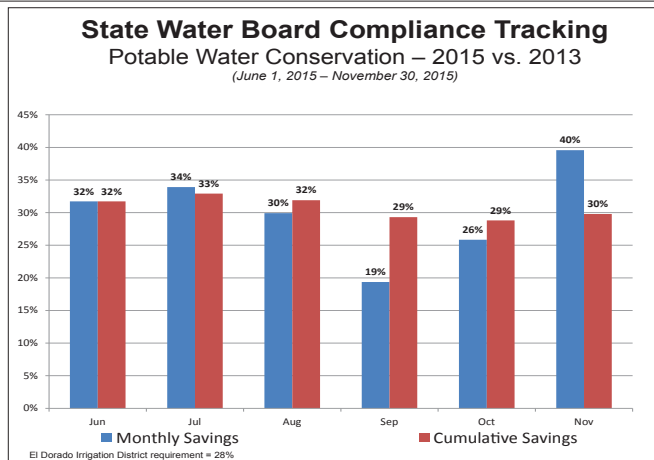
June was the first month covered under the state's mandatory water-reduction targets and in that month, EID customers achieved 32 percent conservation. In July, customers achieved a 34 percent conservation and 30 percent for August. September saw a 19 percent conservation, well short of the 28 percent requirement. October's numbers ticked up to 26 percent, just under the mandate, and November came in with a strong 40 percent reduction. As this edition of *The Waterfront* goes to press (December 21), cumulative conservation from June 1 to date is 30 percent—exceeding the state's mandate.

Here are some tips to save water indoors:

**Limit shower time:** Less time in the shower can pay off with big savings, even if you already have a water-efficient showerhead. Keeping showers to five minutes (instead of 10) will save 12.5 gallons every time.

**Check plumbing and appliances for leaks and fix them within 48 hours:** Steady faucet drips and running toilets are common sources of leaks that can waste thousands of gallons of water each month. Fixing them can be as simple as replacing a washer or toilet flapper. When you find leaks, be sure to turn off water to the problem area until it can be repaired.

**Wash only full loads of laundry:** Waiting until the washer is full can save 15 to 45 gallons per load, depending upon the efficiency of your machine.





## Message from the General Manager

### Safe and Reliable Service for another Ninety Years

Jim Abercrombie

As I write this column, EID’s ninetieth year is coming to a close. In 1925, just a few generations after Marshall discovered gold in Coloma, and in the face of growing competition for water from hydropower producers, El Dorado County residents voted to form El Dorado Irrigation District.

Why did they do it? To protect water filings, ensure a secure water supply, and keep irrigation rates reasonable. In those early days our emphasis on agriculture was understandable. By 1920, thousands of acres were in crop production, fed mostly by old mining ditches that relied on uncertain precipitation patterns and little storage.

“We will continue to scrutinize every project and every dollar, to ensure our ratepayers’ investment in this community infrastructure is well spent.”

— Jim Abercrombie

The district has come a long way since those early days of delivering ditch water to agriculture. EID has transformed itself in the intervening years as its customer base increased and the needs of our county grew. Today we are a thriving public agency dedicated to providing high quality water, wastewater treatment, recycled water, hydropower, and recreation services in an environmentally responsible manner.

As I look ahead to 2016 and beyond, EID is well positioned to extend its long history of service to this community. We continue to produce regularly updated

financial plans and capital improvement schedules that will allow us to maintain and enhance an infrastructure that provides safe and reliable service to our customers twenty-four hours a day, year round.

With a system of infrastructure as diverse as EID’s—more than \$900 million dollars of historical value in pipes, treatment plants, a hydroelectric power plant, flumes, canals, and more—we must spend money wisely to ensure this system remains intact and reliable.

For some of the high-cost rehabilitations and replacements, we’ll need to go to bond financing. It makes sense: the flumes that we will repair and replace will have a service life of at least 50 years. Other projects have equal or longer horizons. Bond financing—acquiring “smart” debt—helps us manage the cost and spread it equitably across the generations of customers who will benefit from the needed repairs and improvements.

EID’s Board of Directors plays an important role in this process. They scrutinize our capital improvement plans, ask the hard questions about the district’s needs, and ultimately evaluate each project as it comes before them.

The efficient operation of El Dorado Irrigation District is of utmost importance to me, my staff, and your Board of Directors. We will continue to scrutinize every project and every dollar, to ensure our ratepayers’ investment in this community infrastructure is well spent. Our aim—all of us—is to ensure our customers and the wider community we serve continues to receive the reliable services they expect from us. Not just in the near term, but for the next ninety years and beyond.

## Water Efficiency Rebates in 2016

A rebate of up to \$100 per water service account is available to EID customers on a first-come, first-served basis while funding lasts for purchases made in 2016. Qualifying devices include high-efficiency toilets and clothes washers, irrigation efficiency upgrades, hot water recirculating pumps, and weather-based irrigation controls. Rebate applications must be submitted within 60 days of the qualifying purchase.

Save water indoors by replacing older high-volume toilets and clothes washers with water-efficient models. Save water outdoors by upgrading your irrigation system to drip, install high-efficiency nozzles, or convert timers to a weather-based irrigation controller. To obtain a rebate application and learn more about qualifying high-efficiency toilets, weather-based irrigation controllers, and clothes washers that are EPA Water Sense and CEE rated, visit our website at [www.eid.org/WaterEfficiency](http://www.eid.org/WaterEfficiency).



## Sly Park Honored as “Best Recreation Facility” in 2015

Readers of the *Mountain Democrat* have again honored Sly Park by voting it “Best Recreation Facility” in that paper’s annual Readers’ Choice Awards.



This is the ninth consecutive year the park has received this recognition.

Sly Park Recreation Area is a great local get-away for the day or overnight camping. Enjoy biking, hiking, equestrian trails, fishing, and boating. It’s also a great place to play in the snow! To learn more, call 530-295-6824, or go online at [www.eid.org](http://www.eid.org) and click on the Recreation tab.

# Needed Flume Replacement Increases Reliability and Resilience of Water System

The El Dorado Hydroelectric Project is owned and operated under the Federal Energy Regulatory Commission License 184. EID acquired Project 184 in 1999. It consists of four alpine reservoirs located in three different counties, a diversion dam on the South Fork American River near Kyburz, and 22 miles of canals, flumes, and tunnels ending in the El Dorado Forebay. From there, up to 15,080 acre-feet of water is sent to a water treatment plant for consumptive use and the rest is sent down a penstock to the El Dorado Powerhouse to generate state-certified green electricity and then returned to the river.

Flumes are a vital component of this complex water conveyance system. They deliver approximately one-third of EID's drinking water supply to its customers. The canal and its flumes run through steep and often hard-to-reach terrain in areas prone to landslide and fire, as well as tree and rock fall.

"The canals and flumes in the Project 184 system are an important part of EID's integrated water system," said EID General Manager Jim Abercrombie. "Flume replacement significantly reduces the risk of catastrophic failure and enhances EID's ability to transfer and bank water in Sly Park's Jenkinson Lake, which is especially important during times of drought."



Flume 44, located directly above Highway 50, is a 67-year-old elevated wood flume that was last replaced in 1948. The flume traverses an active landslide that will be stabilized as part of its replacement.



These pictures of Flume 48 show detail of the 139-year-old hand-stacked bench upon which the flume is built. The photo above shows the same cutout in the bench in 1923 that is shown in the 2015 picture below it.

Each year, the condition of the wooden flumes along the El Dorado Canal is assessed. EID staff identifies flume sections that are high priority for replacement in order to remain in service. Additional flume sections are identified for replacement in the five-year capital improvement plan and it will be important to remain diligent in addressing these assets to avoid potential failures and outages.

Flume replacement and repairs are performed during the district's outage period from October 1 to mid-December each year. Large and complex flume projects may be constructed in phases over multiple scheduled canal outages.

The El Dorado Canal system is the primary means of supply to the northern portion of EID's service area and also contributes significantly to supplying the rest of the service area by gravity. The communities of Pollock Pines, Cedar Grove, and Camino are exclusively served by water from the El Dorado Canal. The Apple Hill and Gold Hill agricultural areas, the city of Placerville, and communities west of Placerville to Cameron Park are served jointly by water from the El Dorado Canal and Sly Park's Jenkinson Lake. The canal even contributes to supplying El Dorado Hills for a good portion of the year.

The majority of the canal system is constructed on a bench occupying a relatively steep, north-facing slope. This exposed location has been subject to failure, primarily due to natural events including occasional disasters caused by fire and landslide.

On April 9, 1983, a massive landslide destroyed 3,610 lineal feet of the canal and major portions of Highway 50. This event impaired operation of the system for 13 months. The combination of extensive damage and interrupted highway access was a major local disaster during that year affecting more than just water system operations.

"Rebuilding dilapidated flumes in the system helps to enhance water supply and power generation reliability," said Abercrombie. "And since they are such long-lived assets—with a useful life of 50 or more years—we can use smart debt to pay for this vital infrastructure so it is more equitably spread across the decades of different customers who will benefit from them."

**Recent and Planned Canal and Flume Repairs from Board-Approved Capital Improvement Plan**

**Flume 42/43**—completed during the 2014 outage

**Flume 38, 39/40**—construction planned in 2016 to replace existing flumes

**Flume 44**—two phases of construction planned in 2016 and 2017 to stabilize the bench and slope and replace the existing flume

**Flume 45 Bench Stabilization**—construction planned to commence in 2019

**Flume 48**—construction planned in 2020 to stabilize the unmortared hand-stacked rock bench and full replacement of the wood flume structure

**Esmeralda Tunnel Emergency Repairs Continue**

On September 21, 2014, a portion of the Esmeralda tunnel collapsed due to a failure of its timber support structures, completely blocking the tunnel with earth and debris. On October 14, 2014, the EID Board of Directors declared an emergency for repair of the tunnel and awarded a contract for crews to begin mobilizing the following week.

The Esmeralda tunnel is a segment of EID’s federally licensed Project 184 El Dorado canal and flume system located east of Pacific House. It delivers up to 15,080 acre-feet of drinking water to EID’s customers. The 1,500-foot tunnel was constructed in 1930 to bypass an old section of the canal that was impacted by rockslides and landslides which took out a large portion of the canal downstream.

“EID’s infrastructure consists of a wide variety of important pieces like the Esmeralda tunnel,” said EID General Manager Jim Abercrombie. “We use our capital planning process to identify and prioritize the regular repair and replacement of this vital infrastructure. But emergencies like the tunnel collapse happen and we prepare for that as well.”



The repair of the tunnel initially required an extended outage of the El Dorado canal—this formed the first phase of the repair. The loss of the tunnel resulted in a loss of power generation at the hydroelectric plant as well increased pumping costs. Since EID has an integrated water system, water was diverted from Jenkinson Lake during the outage and—most importantly—customers did not see an impact to their water service.

“To pay for some expensive, long-lived repairs—emergency or planned—we use bonds to finance them, spreading the cost over a longer period,” said Abercrombie. “The funds expended on the emergency Esmeralda repairs—\$6.1 million by the time it’s complete—can be reimbursed to the district from the proposed bond issuance detailed in the Proposition 218 notice.”

Work is continuing on the second phase of the tunnel project during EID’s regularly scheduled canal outage until late January of 2016. After that time, the tunnel will be operated to transport water as normal. Workers will begin work on the third and final phase of the project during the regular 2016 canal outage period.


EID undertakes a comprehensive capital planning process to maintain, repair, and sometimes rebuild its extensive water, wastewater, recycled water, and hydroelectric infrastructure. A capital improvement plan (CIP) is a five-year plan that EID staff updates each year to identify and plan for necessary improvements that ensure the safety and reliability of the district's infrastructure—to keep things in good repair and head off emergencies before they happen.

“Emergencies can happen at any time,” said Abercrombie. “In conjunction with the important infrastructure repair and replacement scheduled in the district’s CIP, EID remains vigilant and prepared for emergencies year round.”

**2016 REGULAR BOARD MEETINGS**

January	February	March	April	May	June	July	August	September	October	November	December
11	8	14	11	9	13	11*	8	12	11 (T)	14	12
25	22	28	25	23*	27	25	22	26	24	—	—

Board meetings generally occur on the second and fourth Monday of each month. The date marked (T) take place on a Tuesday. Dates with an asterisk are tentative.

 In accordance with the Americans with Disabilities Act and California law, it is the policy of the El Dorado Irrigation District to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format; or if you require any other accommodation, please contact the ADA Coordinator at the number or address below at least 72 hours prior to the meeting or when you desire to receive services. Advance notification within this guideline will enable the District to make reasonable arrangements to ensure accessibility. The District ADA Coordinator can be reached by phone at (530) 642-4013 or e-mail at [adacoordinator@eid.org](mailto:adacoordinator@eid.org).

*The Waterfront is written and designed by EID’s Communications Department.*