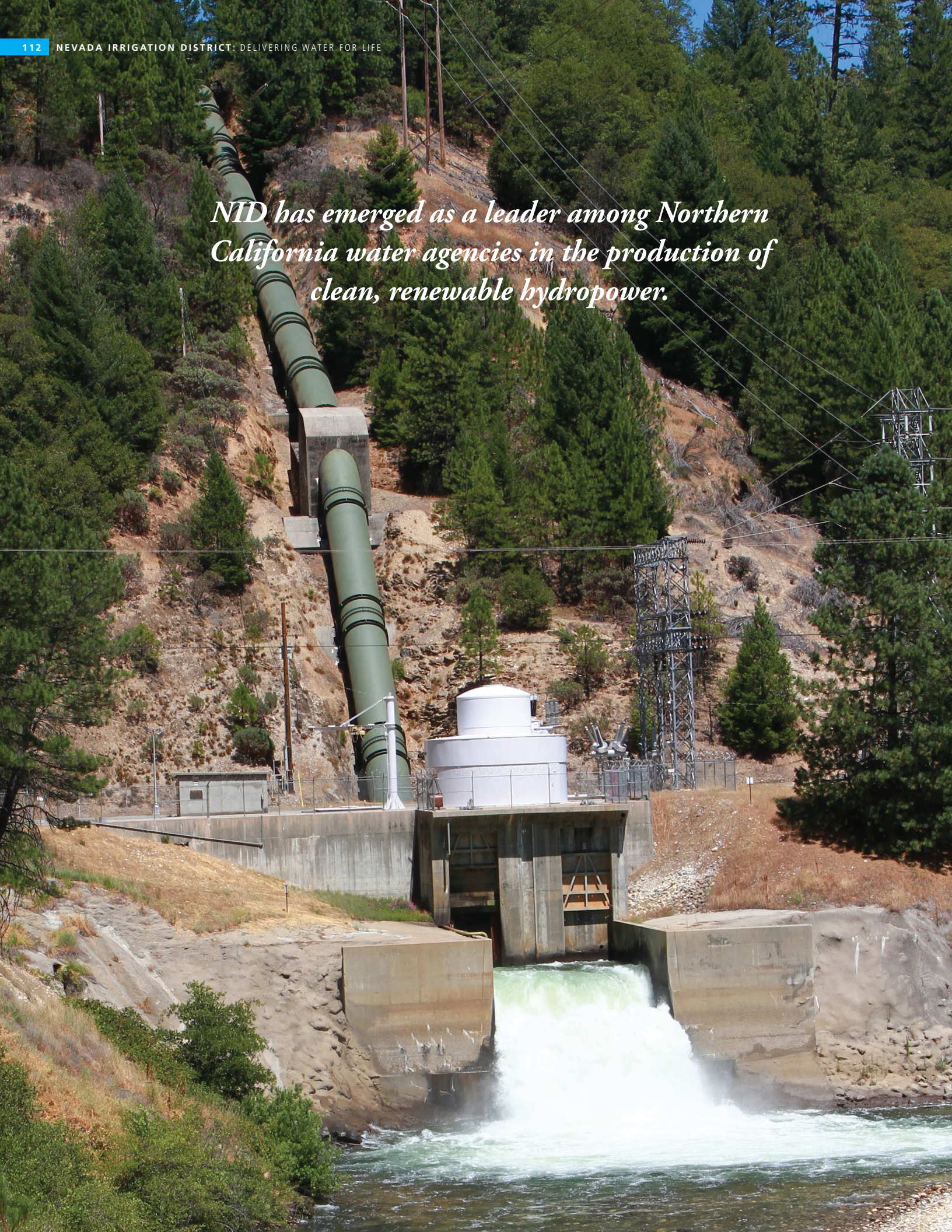
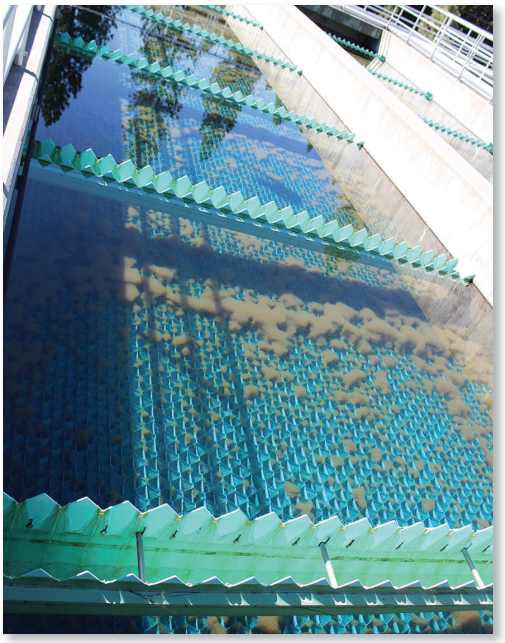


NID has emerged as a leader among Northern California water agencies in the production of clean, renewable hydropower.

CHAPTER 15

NID Focuses on Modernization: the 2010s



An NID water treatment facility.

Watershed stewardship, modernization of an aging water system, conservation efforts, the growing demand for treated drinking water and four years of the worst drought would be guiding issues as NID moved through the 2010s.

By 2010, the District's budget had reached $60.7 million, and water users faced a modest 2.6 percent increase in water rates. The District pressed forward with long-planned and critical upgrades of the D-S and Cascade canals, which were two main water sources in the Grass Valley and Nevada City area. Both projects had been delayed out of concerns raised by some property owners and local nongovernmental organizations, which feared the impacts the project might bring.

In southern Nevada County, after several years of planning, the District and residents of Rodeo Flat near Lake of the Pines began work on the Rodeo Flat Assessment District. The $1.8 million treated water improvement project brought water to 31 parcels to the southwest of Lake of The Pines.

The Auburn Ravine fish ladder helps salmon and steelhead trout progress upstream to spawn.

Property owners, plagued by weak wells and water shortages, had voted 29-2 to assess themselves $28,000 each for the water supply, which could be paid up front or financed by NID. The work included 8,000 feet of new main lines to connect the area to the Lake of The Pines water system, a new pump station, seven fire hydrants and a parcel of land for a future water storage tank. Rodeo Flat, following Cement Hill near Nevada City, became a second successful example of the District's growing Community Investment Program.

Wooden flumes replaced

In February 2010, the NID Board of Directors awarded a $4.9 million construction contract to T&S Construction Co., Inc. of Sacramento to replace the first eight of 32 old, metal and wood flumes on the D-S Canal near Nevada City. The flumes dated to 1926-28 and were leaking and showing signs of age. They created bottlenecks in the system and limited flows to downstream customers, who were on a waiting list for water. This project was a significant step in improved water reliability to Grass Valley and Nevada City. The overall project would be completed for $6.5 million.

Hydroelectric moves forward – New power plant comes online, FERC relicensing proceeds

Also in 2010, the District completed and began operations of a new 500-kilowatt hydroelectric power plant at Combie Reservoir. The new Combie North Powerhouse replaced an aging generator that had been installed in 1983 under an agreement with a private developer. Revenue

The Hemphill Canal diversion

from the hydropower would allow the District to recoup its $3 million investment in eight to nine years.

NID's continuing efforts to finalize a new federal license for operation of the Yuba-Bear Hydroelectric Project moved forward. In June 2010, as a necessary step in the process, Directors authorized staff to negotiate a new power sales agreement with PG&E. On May 12, 2012, the NID Board approved the agreement, saying power sales were estimated at $20 million per year and expected to grow to $30 million over the 20-year life of the contract. NID assumed responsibility for operation and maintenance of the power system, which had been under PG&E management. Since 2011, the District has been working on completing a multiyear effort to relicense the Project, working with regulatory agencies, regional nongovernmental organizations and other stakeholders. Once complete, the new FERC license will continue to bring many benefits to customers, the community and the environment for years to come.

NID has emerged as a leader among Northern California water agencies in the production of clean, renewable hydropower. Operating seven hydropower plants with a total of 82.2 megawatts of capacity, it generates enough electricity to supply the District's own energy needs plus that of about 60,000 homes per year. NID's hydropower facilities include 13 reservoirs, 20.75 miles of pipes, 9 miles of transmission line, and various levels of flumes, tunnels and open ditch canals. NID's hydroelectric system is one of California's most complex water conveyance systems.

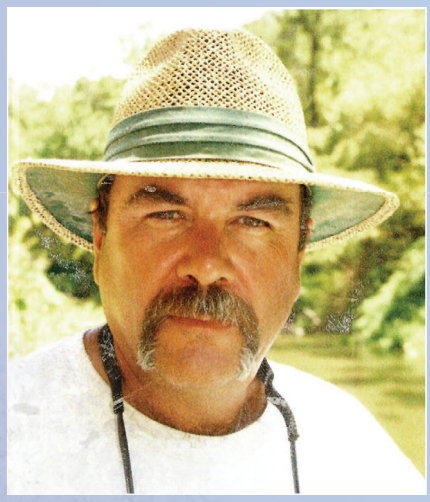
Fish passage – new ladder in Auburn Ravine increases the number of salmon

Fish passage became a familiar term in 2011 as NID began a watershed improvement project on Auburn Ravine in Lincoln. An Auburn-based community group, Save Auburn Ravine Salmon and Steelhead (SARSAS), encouraged the District to improve its water measurement station on the creek just downstream of Highway 65, which was limiting the upstream migration of fall-run chinook salmon and steelhead trout.

The Auburn Ravine fish passage provides migrating salmon and steelhead with support to pass around a gauging station and continue their journey to upstream spawning areas.

Crews replaced old wood and metal flumes dating to the 1920s with pipelines to improve the reliability of water delivery.

Dedicated employee delivers 500 billion gallons of water before retirement



After 33 years as a Water Distribution Operator, Fallon Murch retired in June 2011. At the time Water Superintendent Larry Markey estimated that through his career the dedicated employee "wheeled and delivered" – helped supply – 500 billion gallons of water to District customers, more water than any employee before him. That equated to five and a half times of every drop of water the District can store.

What made Murch a stellar employee was his acquaintance with his customers, his dedication to them, and his knowledge of water and the importance of water to agriculture, as well as a relentless work ethic. Not too many employees have a facility named after them – Murch's slough, between the Auburn Ravine II and the Doty South Canal. He devised a method of defying gravity in the slough, where water could be flowed in either direction, allowing reliable supplies to his customers.

One of Murch's trademarks was always "telling it like it is," a carry-over from his father, who also retired from the District with 30 plus years of service.

Upon retirement, the younger Murch noted that he loved his job because of his customers and colleagues. His said his father "had a good run" at NID, and he wanted to make his father as proud of him as he was of his father.

In cooperation with SARSAS and other community stakeholders, NID replaced the measuring station dam with a series of transitional pools, gentle drops and tapered banks to create what was described as a "nature-like fishway." The $1.2 million project was completed on a very short schedule, which was dictated by the weather as well as the agricultural water needs of downstream customers. In fall 2013, more than 200 fall-run chinook salmon were counted in Auburn Ravine above the new fish ladder.

The creative project earned accolades in Placer County and the California water industry. It became one of six statewide finalists in the Association of California Water Agencies (ACWA) environmental awards program for the Clair A. Hill Water Agency Award of Excellence.

NID next turned to finding ways to support fish migration further upstream. By 2016, studies were underway on the Hemphill Canal diversion, a three-foot-tall seasonal dam installed each irrigation season to supply NID customers in the Lincoln area. In ongoing cooperation and coordination among local nongovernmental organizations, community groups, stakeholders, federal and state agencies, environmental review and planning continue in order to determine the future of Auburn Ravine at the Hemphill diversion.

Old reservoirs replaced with new storage tanks on Banner Mountain

The Banner-Taylor Reservoir site is located along Banner Lava Cap Road, adjacent to and downhill from the Elizabeth L. George Water Treatment Plant. It had been an old raw water reservoir until 1992 when it was divided, lined and covered to protect and store treated water from the nearby plant.

With rising costs to maintain the reservoirs and evolving state water quality regulations, the NID Board of Directors in August 2011 approved the construction of two modern water storage tanks to replace the covered reservoirs. It was determined that 10 million gallons of water storage would be adequate to serve the community for the next 20 years. The project was budgeted at $7.9 million.

With many homes surrounding the 4.7-acre bermed reservoir site, concerns were expressed about views of towering water tanks. The reservoirs were drained and then deepened so that the large tanks could be partially buried and would not be visible from surrounding neighborhoods. Work on the first 5.9-million-gallon tank began in 2012. Once it was in operation, construction began on the adjacent 4.6-million-gallon tank. A site was set aside for a future third tank. When work was completed in 2014, the two circular concrete tanks would store 10.5 million gallons of treated drinking water to serve the greater Grass Valley-Nevada City area.

A new inlet under construction for the D-S Flume.

In 2015, the Banner-Taylor Reservoir makeover was recognized by the American Public Works Association (APWA), Sacramento Chapter. The project was cited for Environmental Achievement in Water Projects and named as the chapter's 2015 Project of The Year. ■

One of many NID irrigation canals.