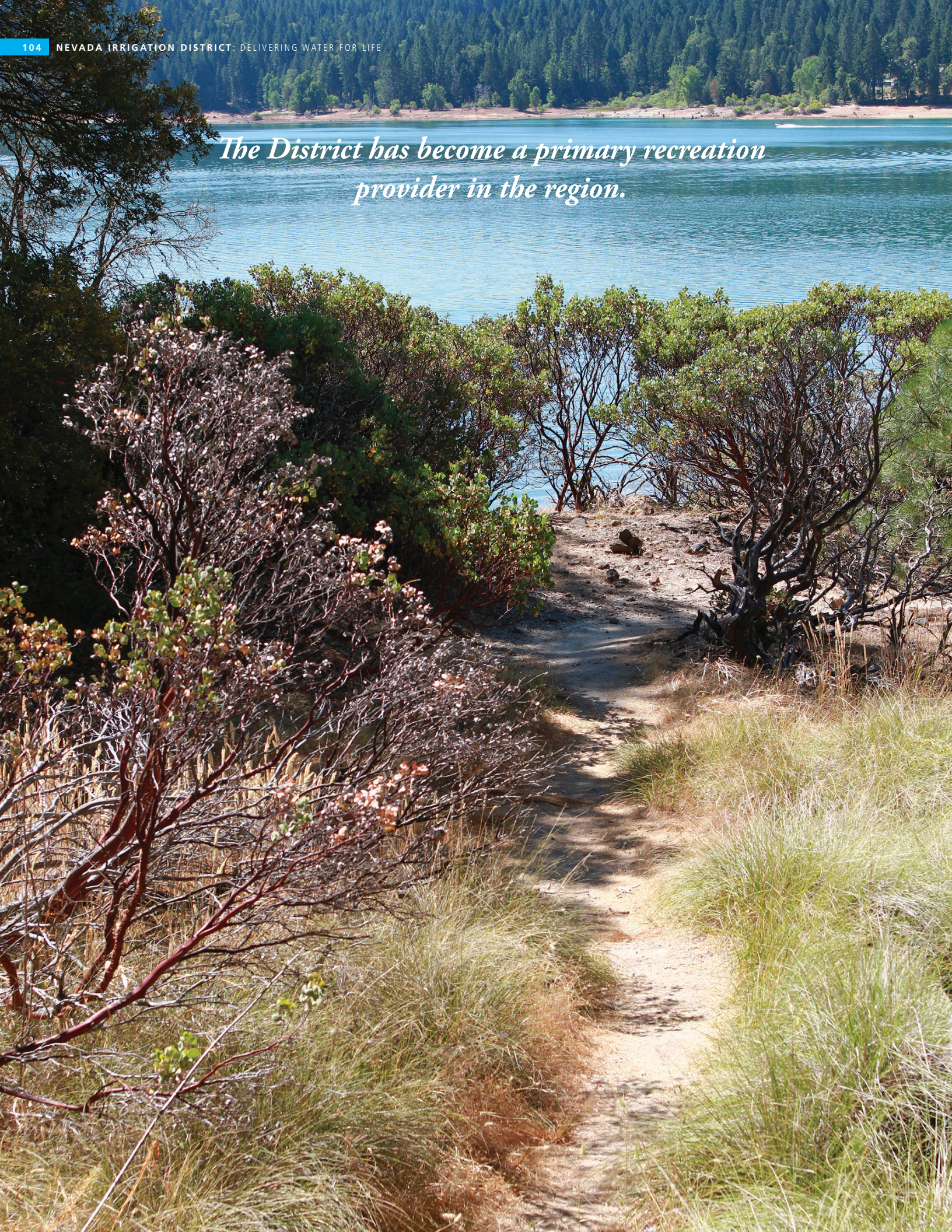


The District has become a primary recreation provider in the region.

CHAPTER 14

Water in the 21st Century: NID in the 2000s

Like organizations everywhere around the world, NID faced the unknown perils of what was known as Y2K, or the Millennium bug. It was feared that when the new century dawned on Jan. 1, 2000, computer systems would be unable to accommodate the new date and the resulting crash could create global havoc in computers and computer networks. Fortunately, the event passed rather unremarkably, and NID's computer functions moved onward without a glitch. That year, the District launched its first website at www.nid.dst.ca.us, and in 2007 a new address was obtained at www.nidwater.com. The website has been continually improved to be easy to navigate and packed with information.

By 2001, NID supplied 22,000 customers and operated on an annual budget of $38.5 million. The new millennium brought changes in customer service. By 2004, customers were requesting electronic bill payment options. The District obliged with the institution of payments via electronic transfers from customer bank accounts. In addition, the water meter retrofit program, in progress for several years, was completed, and all NID water meters could be read by radio wave from either hand-held or vehicle-mounted devices, eliminating the sometimes difficult task of locating and accessing meters on customers' properties.

NID has always prided itself on good relationships with the people it serves.

Change in leadership

In September 2002, James Chatigny retired as NID General Manager after serving in the lead role for 16 years. He was succeeded by Ron Nelson, who arrived in Grass Valley from Bend, Oregon, with a 20-year career managing the Central Oregon Irrigation District. Nelson would head the District for 10 years until his retirement in 2012.

The year also brought the retirement of Ernst "Ernie" Bierwagen, one of the longest serving (25 years) and most respected members of the NID Board of Directors. The Chicago Park orchardist stepped down in December 2002 after 25 years and six elected terms on the Board. He died February 12, 2004, at age 88.

Raw Water Master Plan and Urban Water Management Plan updates

Ron Nelson

In 2003, NID set out to update its Raw Water Master Plan (RWMP), first drafted in 1985, to provide a comprehensive plan to address the community's future water needs. In 1993, portions of the technical data for the plan were updated, but a formal plan update was not completed. The efforts consisted of two phases. Phase I provided the technical analyses necessary to verify the District's existing water supply, quantify expected future demand, evaluate the adequacy of the current water conveyance system and identify potential constraints within to accommodate current and future demand. Phase II, completed in 2005, consisted of identifying tentative plans (i.e., a range of capital improvement projects) for meeting future demands, based on the technical analysis completed in Phase I.

NID also went to work on its Urban Water Management Plan (UWMP), required by the state of California of larger water agencies, including updates every five years.

Notably, the updated UWMP informed Directors that the demand for drinking water within District boundaries would double with growth, from 18,500 customer connections to about 31,000 by the year 2030: "The good news is that you have supply in excess of your demand," observed Consultant Bob Young in his report. His colleague, Judi Garland, noted, "NID has sufficient water to meet customer needs through 2030."

Despite the favorable projections, Board President John Drew observed that NID and other water districts needed to address storage capacity in California's reservoirs as the state continued to grow.

Recreation turns 35 – works toward self-supporting business model

The year 2000 marked the 35th anniversary of NID's recreational facilities at Rollins and Scotts Flat reservoirs, as well as the reservoirs in the Mountain Division along the Bowman corridor. The District had become a primary recreation provider in the region. Still, directors maintained that water ratepayers should not cover costs of recreation. Getting creative to secure financing for projects, the District had obtained $3.4 million in grants during the past 10 years and was on its way to make recreation a self-supporting business model.

Rollins had four campgrounds with 243 campsites, and Scotts Flat had 185 sites. Camping, boating, fishing, swimming, water skiing and sailing in beautiful, forested surroundings were among the primary attractions. Meanwhile, the District worked with the U.S. Forest Service on the fourth update of the Mountain Division recreation master plan, which was originally drawn in 1969. Improvement of existing campgrounds, preservation of primitive areas and no changes to the roads were called for.

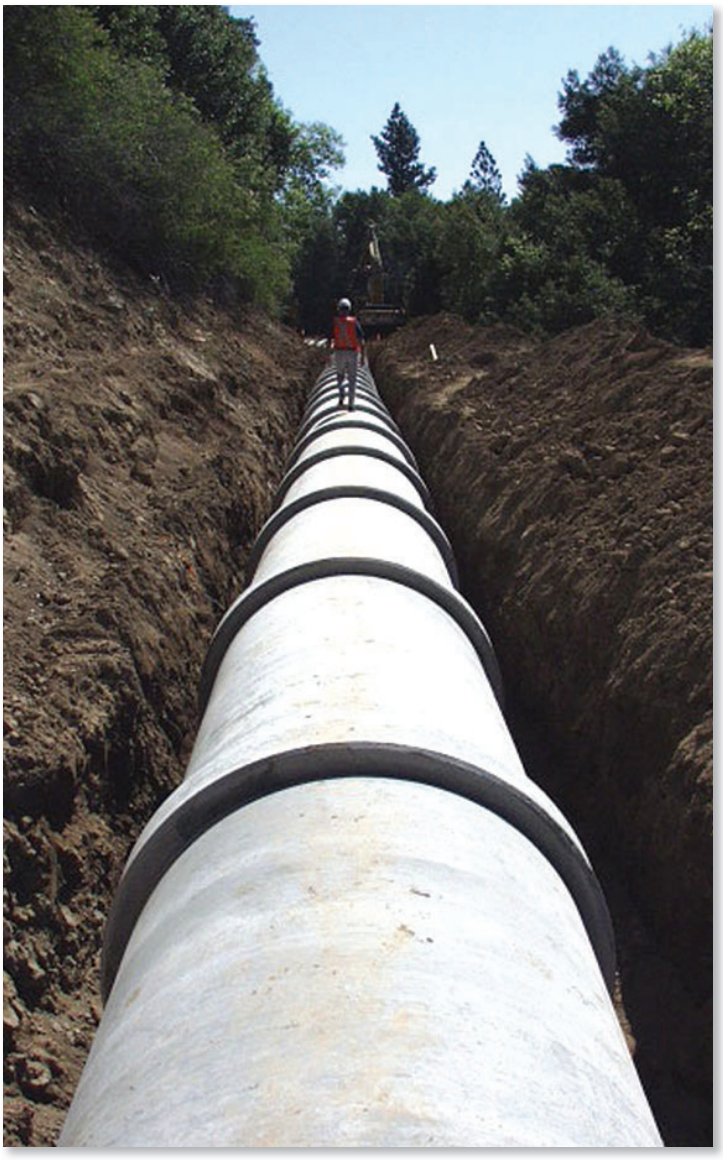
The Cascade Canal projects

At the beginning of the 21st century, NID began what would become a very controversial and lengthy project to replace six miles of the upper Cascade Bench Flume near Scotts Flat Reservoir. The job called for replacement of the old flume with seven miles of reinforced concrete pipeline. The project had been planned since 1998 and was estimated to cost between $16 million and $18 million. Construction was delayed, however, to address the concerns of neighbors and nearby property owners. Numerous hearings were held, and NID even hired an ombudsman to address the concerns raised in the community. When construction won final approval, a temporary barge was floated on Lower Scotts Flat Reservoir to pump water around the reconstruction of a main water supply line into Grass Valley and Nevada City. The project was completed in 2001 at a cost of $19 million and was recognized as 2001 Project of The Year by the Nevada County Engineers Association.

Upon completion, focus shifted to planning an upgrade of the Lower Cascade Canal, the second link in improving the overall reliability and capacity of a primary source of water to western Nevada County. This project would be directed through a much more populated area and would present NID with many challenges. Planning began in 2001 and was followed by several years of meetings, presentations and community outreach. An initial public workshop in December 2001 attracted more than 100 people. Outdoor enthusiasts wanted to preserve public access to walking trails along the canal; residents wanted to maintain the pastoral canal through their neighborhoods; and NID needed to supply more water to downstream constituents who were on a waiting list for water supplies.

An Environmental Impact Report, expected in 2004 and delayed until 2005, was issued in 2006. The 1,100-page report covered what had become known as the Lower Cascade Canal/ Banner Cascade Pipeline Project. General Manager James Chatigny said the project involved "the most complex, detailed and complete planning process we've ever conducted." He promised every voice would be heard. As planned and later completed, the project would divert some of the water from the Cascade Canal through a buried pipeline across the southern flank of Banner Mountain, supplying two of NID's main water treatment plants and wide areas of irrigation water use in southern Nevada County.

Several public hearings followed. Recreationists and canal area residents were pleased that NID would keep the canal in use, though at lower flows, but residents along the proposed pipeline alignment were not pleased at all with the prospect of major construction in their backyards. Differences were settled, and NID agreed to pipe treated water to impacted areas. The project, with 6.4 miles of large-diameter buried pipeline, five miles of treated water lines and numerous fire hydrants, was completed in 2012, more than a decade from its inception, at a cost of $41 million.



Upper Cascade pipeline is installed.

Together, planning and construction of the Upper and Lower Cascade Canal projects took 14 years to complete, with a total investment of $60 million. It was NID's largest construction effort since the Yuba-Bear Hydroelectric Project of the 1960s.

Water expansion to neighborhoods

A top priority became service expansion to unserved neighborhoods within District boundaries. In 2001, NID welcomed Deer Creek Park, a subdivision off Red Dog Road above Nevada City, into the NID water system. The 243 homes had been historically supplied through a small, private water system operated by the homeowners. Residents petitioned the District and agreed to pay $3,200 each to fund a two-mile long water main extension to bring water to their homes. A new tank followed later, along with connection possibilities for other nearby properties.

Enthused by the success of the project, in 2005 the NID Board of Directors declared its number one priority to be "expanding water service to areas of the District where it is not yet available." This led to development of a new Neighborhood Waterline Investment Program, under which the District would use revenues from its share of property taxes to help neighborhoods with the upfront costs of extending water service to their areas.

Residents of Cement Hill near Nevada City voted in 2007 to work with NID on installation of a new water system to serve their community. After a community facilities district was formed, NID obtained a $9.8 million low-interest loan to provide the up-front costs of the major construction project that brought treated drinking water to 241 parcels. The overall project was estimated at more than $10 million and included a new 1 million-gallon storage tank, a new pump station and several miles of cross country pipelines. The District planned on charging each property owner $1,385 in yearly assessments over 25 years, to be paid in either a lump sum or financed through the years. The Greater Cement Hill Neighborhood Association presented an award to NID for its work on the project. The plaque recognized the NID Board and staff for their "personal commitments to community improvement."

South Nevada County upgrades and looking to the future in Placer County

Attention turned to addressing water needs in southern Nevada County and Placer County. Projects included installing a new 3 million-gallon water storage tank next to an existing 2 million-gallon tank at the NID Shale Ridge Road tank site in North Auburn, as well as adding a new 800,000-gallon storage tank to replace and double the capacity of two old redwood tanks at Lake of the Pines.

Meanwhile, in Placer County, land uses in areas surrounding the growing city of Lincoln were changing from agricultural to residential, and as a result demands for treated drinking water were increasing. By 2003 the Lincoln city limits

North Auburn Water Treatment Plant goes solar in 2014.

had grown into NID's existing service boundaries. For comparison, in 2000 the population in Lincoln was 11,205, and by the end of the decade the census counted 42,819 people. NID's initial planning for significant expansion of treated water service in Lincoln began in earnest, and by 2006, a site was identified for a future water treatment plant to serve the growing water needs.

To become more energy efficient, solar energy became part of the District's portfolio when solar panels were assembled into three arrays at the North Auburn Water Treatment Plant off Locksley Lane in 2005. The installation cost was $538,000, half of which was paid by a matching grant from PG&E. The solar system was estimated to meet the electrical needs of 21 homes for a year.

Focus on water quality continues – no more drinking water from ditches

The trend toward domestic water service and water quality issues continued throughout the decade. In 2002, 80 NID raw water customers faced termination of service when the District received a state compliance order that required it to comply with the federal Safe Drinking Water Act, which prohibited the use of canal water for drinking, cooking and oral hygiene. Customers with no other source of water were told they must sign up for a bottled water delivery program. The number of known customers using canal water in their homes had been reduced from more than 1,000 over several years. NID worked with the affected water users, and by late 2002 there were 421 customers enrolled in the bottled water delivery program. NID was ruled in full compliance.

Mercury removal on the Bear River

NID grabbed headlines in 2006 when it proposed a novel approach to addressing a 150-year-old problem: how to remove mercury-bound particulate from sediment, a remnant of hydraulic mining practices used during the Gold Rush. During that period, miners hauled in and used elemental mercury to separate gold from ore. The elemental mercury remained in the Sierra Nevada watersheds and through erosion and sedimentation, has been carried into downstream reservoirs where under appropriate conditions, it can transform into toxic methylmercury and accumulate in the aquatic food chain. It is estimated that as much as 30 percent of the elemental mercury was lost to the environment during that time and has led to contamination of sediments throughout Sierra Nevada watersheds.

Although the mercury is not a threat to drinking water supplies, NID was anxious to address the situation. The District was successful in obtaining one of Cosumnes-American-Bear-Yuba Integrated Regional Water Management Group's (CABY's) first regional grants. The $100,000 grant, through the Sierra Nevada Conservancy, helped finance a pilot project to remove mercury from sediment while improving the water quality at the upper reaches of the Combie Reservoir. The innovative Mercury Remediation Project used centrifuge technology to separate the mercury from reservoir sediment. In 2009, NID hosted demonstrations of the mercury removal at the site, and work continued from there.

NID Assistant General Manager Tim Crough said at the time this was the first project of its kind in California and could become a model for other similar efforts. Findings from this pilot-scale project promised to provide valuable information to state regulators and help water managers address mercury in the aquatic food chain.

NID employees load the Knelson concentrator.

Elizabeth George Water Treatment Plant expands

Although the recession tabled many projects, NID moved ahead with the vital expansion of the E. George Water Treatment Plant near Nevada City. The $14.9 million upgrade included new filtration systems and expansion of the plant's capacity from 9 million to 24 million gallons per day. The project was completed in 2009.

From 2018 - 2020, the District's project to help remove mercury and restore capacity in the reservoir by removing nearly 50,000 cubic yards of sediment from Combie Reservoir was a success. NID teamed up with a number of partners: The Sierra Fund, the U.S. Geological Survey, the California Department of Water Resources (DWR), NV5 Global, Inc., Great Lakes Environmental and Teichert Aggregates. Financing was secured through a $5.5 million grant from DWR while the District provided $2 million to the effort.

The project was recognized by the American Society of Civil Engineers Sacramento Section as its "Small Project of The Year for 2018." The benefits and scientific findings from this project are valuable to state regulators and water managers, and the project can be replicated in other affected reservoirs in the future.

FERC relicensing of the Yuba-Bear Hydroelectric Project

District leaders in 2002 began preliminary planning for the Federal Energy Regulation Commission (FERC) relicensing of the Yuba-Bear Hydroelectric Project. The project's original 50-year license was issued in 1963, and scheduled to be renewed by 2013, still a decade in the future. The formal planning process was launched in 2005. The work involved hundreds of meetings with local, state and federal agencies, nongovernmental organizations, and other stakeholders as well as completion of multiple studies on resource management, stream flows, habitat protection, public recreation and more. These studies went beyond the original limited hydroelectric focus and included detailed discussions about the intertwined water systems of NID and PG&E's Drum-Spaulding Project, which is vital to the District's upper division water conveyance system.

Community connections – in the classroom and in the field

Throughout the decade, NID continued to incorporate new ways of doing business to connect with the community. For example, in 2005, the District formed the NID Ambassador Team, a group of 16 employee volunteers who trained and prepared to spread the District's story in the community. Those participating would visit schools and civic organizations to provide information about NID, its history, operations and role in the community.

Before speaking in public, the Ambassadors participated in various training sessions, including topics about District history, its annual budget, the Lower Cascade Canal/Banner Cascade Pipeline Project and Integrated Regional Water Management Planning, as well as tours at the hydroelectric operations at the Rollins Powerhouse and the Scotts Flat Powerhouse. In August of 2005, the team took the spotlight at NID's booth at the Nevada County Fair. They readily provided information to the public during the popular week-long festival. Following the debut at the fair, members of the team regularly were booked into service organizations and schools to give presentations.

In a different type of community support, NID's Vegetation Management Department began working with local and state organizations to find environmentally friendly alternatives to weed control along its canals. NID was operating and maintaining more than 425 miles of irrigation canals in Nevada, Placer and Yuba counties. The goal of the District's vegetation management program was to control algae and vegetation that posed challenges to reliable and successful water delivery. The presence of this growth in and near irrigation canals can easily challenge flows, consume canal system capacity, clog water intakes and serve as habitat for other pests. From the onset of the program, NID took the lead from federal, state and local regulations.

The program was broad reaching: Practices encompassed education and prevention and control methods that included physical, mechanical, herbicidal and biological controls.

In the 2000s, the District began new studies with the Nevada Placer Weed Management Agency and University of California, Davis, consultants to identify environmentally friendly methods of weed control. By 2008, the District had purchased a tractor-mounted thermal weed control unit. It proved to be useful in controlling growth of weed seedlings by using steam at 132 degrees or more. The use of approved herbicides continued to be the most successful method. Other methods being used were grazing goats and sheep, vinegar spray, barley straw, mowing and manual removal.

Recession hits – NID cuts spending and delays projects

The 2008 financial crisis and the ensuing Great Recession affected NID as they did across the nation and around the world. Consumer spending dropped, real estate markets collapsed, and the economy slowed. NID General Manager Ron Nelson, who led the District through the recession, later said that looking back on his 10-year career, that period was the most difficult time. Nelson said the District cut spending and delayed projects. He expressed pride that despite the financial challenges, NID made it through the recession without a single layoff.

Water rates restructured

NID water rates needed to be significantly restructured in 2008 after studies showed that treated water rates covered less than 60 percent of the District's costs in providing the service, and raw water rates were covering just 44 percent. NID had used hydroelectric, property tax and other revenues to subsidize the shortfall. The restructuring did not have a large impact on customers; it came to less than $1.50 per month for the average treated water customer.

In 2009, California continued to search for new ways to make the state's water supply go farther. Gov. Arnold Schwarzenegger called for a statewide water use reduction of 20 percent by 2020. "Conservation is one of the key ways to provide water for Californians and protect and improve the Delta ecosystem," Schwarzenegger said at the time. NID, other water suppliers and the Association of California Water Agencies (ACWA) questioned the fairness of such a measure.

"It's a worthy goal," Nelson said, "but it must be implemented fairly. There are different needs in different parts of the state." ■

Mercury settled in the bottom of a bottle.

49 Fire causes extensive damage

On August 30, 2009, the 49 Fire swept through North Auburn, burning more than 343 acres and destroying 63 homes. In the middle of the fire area, NID's North Auburn Water Treatment Plant was spared, but a historic 1865 Gold Rush stamp mill near the plant's entry was charred. Electrical power was cut; NID crews rushed in a generator, opened two interties with the neighboring Placer County Water Agency, and kept water flowing to District service areas. Nineteen District employees responded to the wind-driven fire that broke out on a Sunday afternoon.