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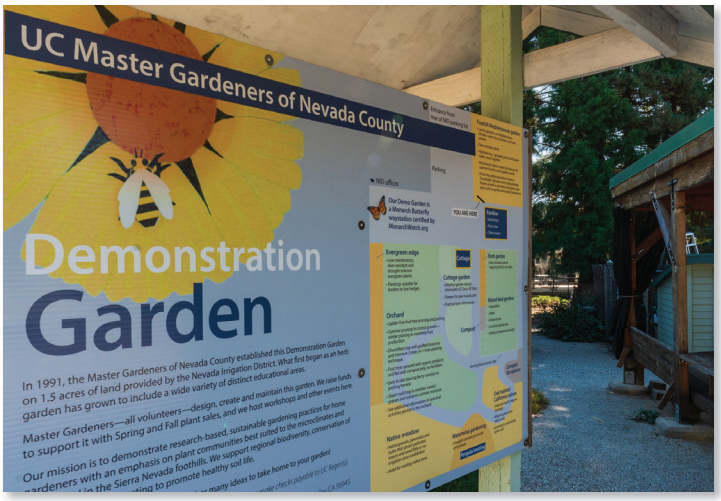
CHAPTER 13

Thinking about Water in a Different, Better Way



By the early 1990s NID was supplying treated and raw water to nearly 19,000 customers on an annual budget of $18.6 million. Through its earliest decades, NID focused on larger water projects that would extend supplies into areas that lacked public water. The District also worked to improve and expand service to existing areas that needed more water. As the 1990s dawned, the focus had shifted to water conservation, both locally and across California. People and government agencies were adopting the ideas of better water planning and management to make supplies go further. Climate and weather changes, new regulations and a new way of looking at water issues brought on fresh ways of doing business throughout the District.

This was driven home when NID reservoir levels dropped in consecutive years of below-average precipitation. By fall 1992, following a five-year period of below-average precipitation, the carry-over storage for the following season sunk to a 20-year low. And yet, with extended periods of shortage of rain and snow, there were anomalies. For example, a record snowstorm of February 15-17, 1990, proved to be challenging for NID. About three feet of snow fell in the Nevada City-Grass Valley area, slowing commerce for several days, freezing canals, threatening water supplies and prompting the District to call for customers to cut water use by 50 percent. NID crews worked

around the clock, picking and shoveling ice from snowbound facilities. A serious problem arose in the hills above Nevada City where frozen conditions cut the flow of water to local treatment plants. A large industrial pump was placed on a sled and towed from Nevada City up Boulder Street and Red Dog Road where it was used to supply the D-S and Cascade canal systems. Employee response during the emergency was termed "a Herculean effort" by General Manager Chatigny. The Board of Directors issued a special commendation to the District's workforce.

Throughout this period of extreme weather fluctuations, the District acknowledged it needed to look to long-term adjustments and turned to support agricultural endeavors through better use of water. Nevada County crop reports from 1991 showed increasing interest in grape growing, with vineyards planted on 245 acres. Irrigated pasture continued to be the leading crop at 17,500 acres, followed by family gardens at 2,773 acres and golf courses and parks at 675 acres. NID began offering local farmers and ranchers a computerized irrigation efficiency program that charted soil and climate data for determining watering needs.

Boulder Street in Nevada City was buried in snow during the February 1990 snowstorm.

The efforts did not go unnoticed. A Nevada County grand jury study of the District brought a result that thrilled the staff and a large segment of the community. The report offered a few suggestions, and concluded that "Overall, NID appears to be a well-managed and professionally operated organization."

Climate change acknowledged

As the foothill region was experiencing extreme weather, the concept of climate change emerged with the First Assessment Report (FAR) of the Intergovernmental Panel on Climate Change (IPCC) in 1990. The report noted, "We are certain of the following: there is a natural greenhouse effect...; emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases: CO2, methane, CFCs and nitrous oxide. These increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface. The main greenhouse gas, water vapour (sic), will increase in response to global warming and further enhance it."

Among the most profound impacts of climate change have been documented:

- *Rising average temperatures*
- *Thriving populations of tree-killing pests*
- *Tree mortality from disease*
- *Intensifying wildfires*
- *Rising sea levels of about 6 centimeters per decade*

Impacts from climate change stand to limit the availability of water, dependability of water system infrastructure, and the quality and health of the local watersheds. Increasing watershed resiliency, water conservation efforts and upgrading water system infrastructure are among some of NID's best strategies to mitigate the effects of climate change in order to continue to provide dependable and sustainable water to the communities it serves.

Facing challenges with short-term weather extremes and the increasing effects of climate change, Directors took bold steps to boost the effectiveness of the District's water delivery systems, which would ultimately save money in the long term. NID allocated $9 million to fund planned construction projects. Then-Chief

Union Reservoir is located near Smartsville.

Engineer Bob Singleton called it the most funding in at least 20 years, if not a record amount.

For example, in 1991, NID drained its small Union Reservoir near Smartsville to repair the outlet valve, in place since 1942. Besides improving the infrastructure, the project led to a dramatic fish rescue. Working with the California Department of Fish and Game, District employees netted more than 1,500 pounds of live fish and loaded them into a tanker truck that took them to other nearby reservoirs. They counted 25 largemouth bass, each weighing more than 8 pounds, along with numerous bluegill, catfish and crappie. The day's biggest catch? An 11-pound black bass. The operation was seen as unique at the time and was the subject of a seven-minute video by the Nevada County Historical Society.

Another example of a large-scale improvement was the award-winning effort started in summer 1993 to renovate the 67-year-old Milton Diversion Dam. Working with PG&E, the U.S. Forest Service and California Department of Fish and Game, NID dewatered the facility and transferred fish to other nearby reservoirs. The work included a renovation of the dam, and new control gates were added before the lake was refilled and restocked. The project earned an award from the Association of State Dam Safety Officials.

In addition, the District helped the community organize to bring NID water to their homes. From 1990 to 1992, NID and local residents formed seven local improvement districts to extend treated drinking water supplies to 250 homes.

New regulations require more testing, increase in water rates

State and federal mandates were having more impact on the finances of NID and its customers. Increasing water quality regulations brought on the need for costly testing programs. In 1992, NID Directors approved a 4 percent water rate increase and then added a line item for state-mandated costs of 2.84 percent for treated water customers and 2.04 percent for raw water customers. Part of this was a new lead and copper testing program mandated in 1991 by the Environmental Protection Agency (EPA). NID had been testing for lead and copper at its treatment plant outflows for years – finding none – but the new program would require random sampling at homes around the District. The District worked through customer privacy issues and reported good customer cooperation. Once implemented, the new testing revealed no lead and copper dangers.

Focus on enhanced water treatment and maintaining the quality of drinking water

The Board of Directors adopted a new policy calling for the expansion of the District's larger water treatment plants, with extension of their service areas, and the phasing out of the smaller, outdated treatment facilities. For example, the aging Penn Valley Water Treatment Plant was closed and its service area was connected to the Lake Wildwood system. NID had already closed many of its smaller plants and was operating 10 plants throughout the District. The grandest project was a major expansion and filtration project at the E. George Water Treatment Plant, funded through a $4.1 million low-interest loan obtained through the California Safe Drinking Water Bond Act of 1986.

On the communication front, NID also began publishing water quality reports for treated water customers. Under a new state law, the District tested its water for more than 50 potential contaminants and found, as it has every year since, that NID treated drinking water met and exceeded all state public health standards. Officials said advancing treatment practices, along with the District's water source high on Sierra watersheds away from many sources of potential contamination, helped to provide superior water quality. NID's water quality reports became known as Consumer Confidence Reports and still continue to be issued each year. When the total number of customers surpassed the 20,000 mark in 1993, the District also began publishing the detailed water quality reports each year in its quarterly customer newsletter, *NID WaterWays*.

On a side note, protecting water quality became an issue with continued vandalism at the Banner-Taylor Reservoir on Banner Mountain. The lined and covered earthen reservoir stored treated drinking water from the nearby E. George Water Treatment Plant. What was once an open reservoir was lined and covered with a heavy-duty material called Hypalon, which gave it a waterbed feel and appearance. Despite security and fencing, it became an attractive nuisance. District officials worried about water quality after vandals sliced through the floating cover in 1995. Repairs were made, security was increased and the District would eventually go on the replace the reservoir with two large water storage tanks.

By 1996, over a 10-year period, NID had obtained $10.8 million in funding through the California Safe Drinking Water Bond Act, advancing the formation of 15 water quality improvement districts and better water supplies for 579 parcels.

NID teams up with the community – Master Gardeners create a demonstration garden

In efforts to partner with community groups, NID reached out to provide land on its main campus in Grass Valley for a demonstration garden to be overseen by the Nevada County Master Gardeners. The garden would be a showcase where the public would learn more about gardening, irrigation and conservation. In March 1991 the District and the University of California signed an agreement to establish the garden. NID installed water lines and electricity for irrigation timers, while the Master Gardeners designed and planted an herb garden that fall. Vegetable beds and fruit trees were added the following year. The guiding principles were to support regional biodiversity, conserve resources and minimize pollution and waste with a focus on climate and soil-adapted plants for the Sierra foothills.

NID hydroelectric generation celebrates a milestone

NID celebrated its 25th anniversary of the Yuba-Bear Hydroelectric Project in 1990. The District used the occasion to reflect on the project's history and success, as well as to promote the value of water and power to the region. To acquaint customers with the benefits and attractions of Scotts Flat and Rollins facilities, NID published a free coupon in its customer newsletter NID WaterWays offering a free admission to customers and their guests. The commemoration included some history on Scotts Flat and Rollins reservoirs. Scotts Flat, according to local legend, took its name from a group of Scottish miners who settled there in the 1850s and 1860s. NID purchased land holdings there in 1925 from Excelsior Water and Power Company. The reservoir at Scotts Flat was originally built in

1947 and was nearly doubled in size from 26,500 to 48,547 acre-feet in the 1960s. Rollins Reservoir was built from the ground up as part of the Yuba-Bear Project in 1963 to 1965. Today, it holds 66,500 acre-feet of water. Rollins was named after the late J.L. Rollins, manager of the Bear River Water and Power Co., another private firm whose holdings became part of NID during the District's early years.

Recreation expands activities and establishes rules

At Scotts Flat and Rollins reservoirs newly built campgrounds, day-use areas and boat launches were drawing thousands of outdoor enthusiasts each summer.

NID teamed up with the California Department of Fish and Wildlife for seasonal plants of fish to support recreational fishing. The catch at both reservoirs included German brown trout, Massachusetts brown trout, rainbow trout, kokanee, largemouth bass, smallmouth bass, spotted bass, bullhead catfish and channel catfish.

In 1992, James Hughes of Grass Valley reeled in what is believed to be the largest fish ever caught at Scotts Flat Reservoir. His 31-inch, 13.5-pound German brown trout eclipsed the record held since 1980 by Bob Atkins, also of Grass Valley, who hooked a 31-inch, 11.5-pound German brown.

To emphasize and prioritize fishing and other boating activities, NID worked with the Nevada County Board of Supervisors in 1990 to ban personal watercraft at Scotts Flat Reservoir after hearing complaints about noise and speeding. The ban remains in effect today.

Environmental issues emerge in the 1990s

A campaign mounted in the early 1990s to include 13 miles of the South Yuba River in the state's Wild and Scenic Rivers program. The designation was introduced by the South Yuba River Citizens League (SYRCL), which opposed any development of dams and hydroelectric power development on the river. The Wild and Scenic proposal was a 20-mile-long stretch of river from Lang Crossing to its confluence with

NID headquarters

Kentucky Creek below Bridgeport. According to state law, the designation would prohibit construction of dams or diversion facilities. As background, California's Legislature passed the Wild and Scenic Rivers Act in 1972, following the passage of the federal Wild and Scenic Rivers Act by Congress in 1968. Under the state law, "Certain rivers which possess extraordinary scenic, recreational, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state."

When SYRCL began advocating for the state designation, NID Directors were pressed to take a stand. On April 14, 1993, the Board went on record in opposition. The vote followed a lengthy community involvement, and although NID was not using water from the South Yuba River, Directors expressed concern that the designation could impact future water supply needs. When the state accepted the designation in 1999, the District eased its opposition.

Headquarters expanded to accommodate growth. By 1998, the number of employees had increased to keep up with the demands of keeping the water flowing to homes, farms and fields, and Directors acknowledged the need to expand the District's headquarters. The main building – housing administrative, operations, engineering and customer service functions – was remodeled with a two-story, 7,200-square-foot expansion of the east end of the building at a cost of $900,000. The NID budget was $29.2 million at the time.

Bottled water reboot

NID made a brief entry into the bottled drinking water world in 1998. In a public outreach effort to promote the District's water quality, local water supplies were shipped to a Modesto plant where they were bottled and labeled with NID's logo and information. The bottled water was handed out at the county fair, community events and elsewhere for five years. The effort was suspended over growing concerns about plastic waste in the environment. In more recent years, NID distributed reusable drinking bottles.

Discussion about the Bay-Delta water supply and the control of headwaters becomes heated

NID remained active in issues surrounding the San Francisco Bay and Sacramento-San Joaquin Delta. Beginning in 1994 under the CALFED Bay-Delta Program, also known as CALFED, state and federal planners were looking for additional water supplies for the Delta, which forms at the western edge of the Central Valley by the confluence of the Sacramento and San Joaquin rivers. The Delta is vital to California as the largest freshwater tidal estuary of its kind on the West Coast of the Americas that provides important habitat for fish and birds on the Pacific Flyway. It's also the hub of California's two largest surface water delivery projects: the State Water Project and the federal Central Valley Project. The projects provide drinking water for 29 million Californians and irrigation water for large portions of the state's $50 billion agricultural industry.

NID and many other upstream water agencies had a keen interest in the program in order to protect their water supplies, the headwaters of the Sierra. Even today, the solution to protect the Delta and secure a reliable water supply for customers in the southern portion of the state remains unresolved.

Service expansion is explored

In 1998, NID began studies of treated water service to the growing Lincoln area in Placer County. Also, by the end of the decade, 10 golf courses were among NID's agricultural water users: the Orchard and Hills courses at Del Webb Lincoln Hills, Darkhorse, Nevada County Country Club, Alta Sierra, Quail Valley (now closed), Lake Wildwood, Lake of the Pines, Auburn Valley and Turkey Creek.

NID Trails – public vs. private use debated

The debate over public versus private use of the berms along NID canals emerged as a contentious community issue in Nevada County during the mid-1990s. More members of the public had discovered the canal system as an outdoor treasure of walking and jogging trails. The canals and ditches, NID's primary waterways that were the distribution system from higher up in the Sierra, had berms and semblances of trails so NID personnel could access any point to maintain. Most of the "trails" were legal easements on private property that included the ditches and canals. An attractive destination for walks and treks, the pathways along the waterways had become a public attraction through the decades. However, landowners along the canals faced loss of privacy and worried about trespassing, littering and safety.

NID was caught in the middle. Through the years, the District stressed to the public that it did not own much of the land and depended on easements for access to maintain its canals and water system operations. By the early 1980s, NID had been getting more frequent inquiries about walking or jogging along the canals. Here is how the District framed the issue in the Summer 1982 issue of the NID WaterWays customer newsletter: "We cannot give you permission because we don't own the property along most of our canals and ditches. We have been granted easements from the property owners for operation, repair and maintenance purposes. If you want to walk, run or ride along one of our canals, you must get permission from the private landowner. If it's okay with him, have fun, but please respect his private property and our facilities."

For several years, the District maintained this rather neutral posture, encouraging outdoor enthusiasts to get landowner permission if they wanted to cross private property. Yet as the public clamored for more local outdoor opportunities, there were conflicts with property owners and more fences being constructed to keep trespassers off private land. In September 1997, the Nevada County community group Friends of the Trails filed suit against a property owner on the Rattlesnake Canal off Brunswick Road, and NID was named as a co-defendant. The landowner had placed a gate on the canal in 1996, preventing longtime public access.

It was a hot topic for the local media. In October 1997, The Union newspaper conducted and published a reader survey that reported 387 people in favor of recreational use of NID ditches and 135 opposed. The issue was the subject of a broadcast debate on KVMR-FM in Nevada City, as well as letters and editorials in The Union.

The court case was heard in July 1998; the Nevada County Superior Court ruled in December that public access must be restored. The ruling, citing a California precedent, said that public use had existed for more than five years prior to 1972.

Friends of the Trails President Andy Wright called the trails "a unique community resource," and attorney Alan Haley said he hoped the ruling would discourage other property owners from blocking trails. NID chose not to provide evidence to show that public use would affect its water operations.

It was a time of changing land use in the Sierra foothills. Issues involving public trail use or the underground piping of existing canals also flared in Amador, Tuolumne and Placer counties.

Another case arose in 1999 when NID studied encasing a portion of the Grass Valley Canal in pipe. A business park was under construction on Litton Hill, just uphill from the canal and NID, and there was concern over potential runoff. NID wanted to preserve water quality in the canal, the source for the Grass Valley Water Treatment Plant. The canal, located between Hughes Road and Sierra College Drive and above the Nevada County Country Club, paralleled the Litton Trail, at the time a signature accomplishment of the new Nevada County Land Trust. NID eventually agreed to maintain the open canal after being urged to do so by community members, the Bear Yuba Land Trust and the City of Grass Valley.

Another community group, Save Our Historic Canals, lobbied successfully to preserve public use along Banner Mountain's Cascade Canal, which had become one of NID's most popular trails.

While access issues have appeared from time to time, the trails issue has been calm in recent years. Much of this is due to the partnership between NID and the Bear Yuba Land Trust, which is focused on pairing willing parties together in the public interest. ■