

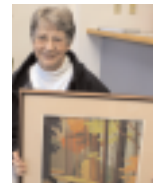


What's a Hydrographer?



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NID WaterWays

A Newsletter to the Customers of the Nevada Irrigation District

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Green Power

Using Energy From the Sun

NID is known for using its water to produce clean hydroelectric energy. It's not so widely known that NID also produces power from the sun.

A solar energy system at the North Auburn Water Treatment Plant is producing about 18 percent of the plant's total energy needs. Since June 2005, the system has allowed NID to avoid nearly \$45,000 in energy costs.

NID installed the \$560,000 solar system in 2005, using a \$268,000 matching grant provided by the Pacific Gas & Electric Company. The district contributed \$292,000 to the project.

The solar array at the plant includes 536 individual panels, each with a 165-watt capacity. The system operates at a maximum output of 70 kilowatts per hour and produces an average 140,000 kilowatts of energy per year.

Power produced at the site goes into the PG&E grid and is used to offset NID's energy costs.

Local PG&E representative Chuck Heisleman says that by PG&E's calculations the solar system produces enough energy to power about 21 homes for a year or to take about 11 cars off the road.



The solar array at NID's North Auburn Water Treatment Plant

NID Water Operations Manager Don Wight, whose department maintains the solar site, said output will vary depending on weather but that it is expected to take 18 years for NID to recoup its investment in the solar site.

He said a commitment to clean energy and better environment, more than financial incentive, led the district to take advantage of the PG&E funding and begin the solar program.

Except for several small and remote solar-powered stream gauging stations in the mountains, the North Auburn site is NID's only solar site at this time.

"We don't have current plans for any of our other facilities, but we are always looking forward to future opportunities," said Wight.

Focus on Water Treatment

NID: NOW Intended to Drink

Back in the early days, old-timers used to joke that NID stood for *Not Intended to Drink*.

They were right, of course. NID was formed in 1921 as an irrigation district.

Times have changed. Since the 1960s, local lifestyles and land uses have been changing and the district has seen increasing demand for high quality treated drinking water.



Loma Rica Water Treatment Plant near Grass Valley

NID has responded to this need. Today, high quality drinking water is supplied through a network of modern water treatment plants to 18,800 homes and businesses in Nevada, Placer and Yuba counties.

Tastes Great

Local water users will often say that the taste and quality of NID water is tops. Our proximity to Sierra mountain watershed is a factor in taste and freshness.

(While meeting evolving needs, NID remains steadfast to its original mission, the supply of irrigation water to some 5400 raw water customers who continue to use about 90 percent of the water supplied by the district.)

Treated water service areas are located in the more populated areas, around Grass Valley and Nevada City, Banner Mountain, Glenbrook Basin, Loma Rica,

Alta Sierra, Lake of the Pines, Penn Valley, Lake Wildwood, Smartville and North Auburn. A future water treatment plant is under study for the growing Lincoln area (see sidebar).

NID presently operates seven water treatment plants that supply some 3.5 billion gallons, or approximately 11,000 acre-feet of water per year. The system also includes 42 storage tanks with a capacity of 46.1 million gallons.

The plants are operated by a water quality staff composed of state-licensed technicians. Eight of NID's nine operators hold Grade 3 or 4 licenses, while the newest member of the team has completed his studies and awaits his Grade 1 license. Some members of the staff also hold Water Quality Analyst certificates.

Customers with questions about water quality are invited to contact NID Treated Water Supt. Chip Close at (530) 273-6185 or (800) 222-4102.

NID Water Treatment Plants

<u>Plant</u>	<u>Capacity</u> (Million Gallons Per Day)
Loma Rica	8.0
Elizabeth George	10.0
Lake Wildwood	4.0
North Auburn	6.0
Lake of the Pines	5.0
Cascade Shores	0.34
Smartville	0.085

Water Quality Q&A

Does NID use chloramine?

No. Chloramine is a combination of chlorine and ammonia that is frequently used as a disinfectant in water treatment. Instead, NID has found that simple chlorine provides adequate disinfection for local water supplies.

Lincoln Area Moving From Raw Water to Treated Water

The greater Lincoln area in Placer County is going through a rural to urban transition, bringing more demand for piped drinking water to an area that has used NID canal water since 1926.

Much of the area within Lincoln's growing sphere of influence lies within NID's existing boundaries. Under State Water Code guidelines, NID is working with the City of Lincoln on plans for a future water treatment plant.

Studies have identified the existing NID Valley View reservoir site as a potential treatment plant site and the two agencies have hired ECO: LOGIC Engineering of Rocklin to complete the planning and predesign phase for the regional water project.

As envisioned, the project would include a 5-10 million-gallon-per-day water treatment plant with onsite storage, upgrades to the Camp Far West Canal, an emergency raw water pump station and four miles of treated water main lines. The plant would be owned and operated by NID and financed largely by Lincoln.

The changing water needs of Lincoln are much like those of the 1970s when NID constructed the North Auburn Water Treatment Plant.

What's a Hydrographer?

Science, Expertise, Experience in NID Canal Operations

According to Webster, a hydrographer is one who studies, describes and maps oceans, lakes, and rivers, especially with reference to their navigational and commercial uses.

NID employs two hydrographers; Operations Supervisor Sue Sindt, who is based at the district's Business Center in Grass Valley; and Hydrographer II Jessica Erickson, who works with NID's Hydroelectric Division off I-80 east of Colfax.

The hydrographers watch over, manage, measure and document flows in waterways throughout the district and importantly, across its mountain watershed areas.

With assistance from staff members Mike Curry, Thor Larsen and Theresa Borlik, Sindt and Erickson are primarily responsible for canal and stream measurements through a network of 250 gauging stations, recording and charting levels at all 10 district reservoirs, maintaining a mountain weather station and performing snow surveys to measure water content.

"What we do centers around the collection of accurate, good quality data," said Sindt. "The data is used to regulate flows, track runoff, manage reservoir releases, report use for our water right permits and licenses, for planning, recreation and many other uses."

Good flow data allows NID to deliver proper amounts of water to water treatment plants and to ensure proper deliveries to irrigation water customers without wasting water at the end of canals.



Hydrographer Jessica Erickson shows the velocity meter she uses to track flows. She is pictured along the Bowman-SpaULDing Canal near Fuller Lake.

Erickson, who came to NID with five years experience as a U.S. Geological Survey hydrographer, works primarily in the mountain division, where accurate, real time flow information is critical for NID and PG&E power production needs as well as water deliveries.

Working for NID

With 175 employees, NID is a leading area employer. The district offers career opportunities in a range of fields from entry level clerical and labor positions to highly-skilled technical, professional and management positions. Job descriptions and current NID employment opportunities may be found at the district's Web site, www.nidwater.com.

Board Adopts 2008 Budget, Ponders Water Rate Increases

The NID Board of Directors on Dec. 12 adopted an overall 2008 district budget of \$64 million. The package includes a Water Division budget of \$33.4 million, Hydroelectric Division budget of \$8.2 million and Recreation Division budget of \$1.8 million.

As adopted, the Water Division budget includes no 2008 water rate increases but directors indicated increases could be implemented in March.

In the absence of increases, the budget shows substantial withdrawal of reserve funds to meet expenses. Directors say, however, that ample reserves must be maintained in order to fund needed maintenance projects. The balance between rate increases in reserve withdrawals is now under discussion.

NID Water Storage Near Average Levels

By Dec. 17, as the season's first major storm settled over Northern California, NID water storage was near normal.

Total storage was measured at 149,800 acre-feet, or 98 percent of average for this time of year. Seasonal precipitation at Bowman Reservoir (elev. 5650 ft.) was 14.52 inches, or 75 percent of average.

Cement Hill Voters Support Assessment for Water Project

Planning and design work have begun on a major water improvement project to bring treated water supplies to Cement Hill near Nevada City.

Residents and NID worked together through the district's Community Investment Program to plan the project and conduct an election among residents. When the ballots were counted Dec. 11, 82 percent of the voters were in support of a special tax to fund the water work. There were 179 "yes" votes and 38 "no" votes in the Cement Hill Community Facilities District (CFD) election.

Voters agreed to incur indebtedness to repay a \$9.8 million low-interest state loan that NID has secured for the project. Each parcel in the CFD will be assessed no more than \$1385 per year for 25 years, unless owners choose to pay their shares in advance.

Immediately following certification of the election, the NID

Board of Directors approved a \$2.3 million contract with Hydrosience Engineers Inc. of Sacramento to provide engineering, right-of-way, surveying and construction management services for the water project.

The project includes a booster pump station at NID's Snow Mountain tank site near Highway 20, a new 1-million-gallon storage tank on Harmony Ridge, and cross country pipelines from the booster pump to the tank and through the service area, which extends to the end of Cement Hill Road at Bodie Ridge Road.

Completion of the overall \$10-\$12 million project is anticipated by November, 2010.

In recent years, many Cement Hill residents have relied on well water while others use irrigation water from the NID canal system. At least 24 properties that had used canal water for domestic purposes will be eligible for piped, treated water.

NID Canals a Delight for Local Artist



The NID canal system has provided inspiration for Grass Valley artist Esther Escott who has included three NID scenes in her "Sierra Trails" series.

Escott is displaying eight of her framed pastel paintings through February in the NID Business Center lobby. Two scenes of the Cascade Canal (pictured) and one of the Litton Trail on the Grass Valley Canal are among other local scenes including Buttermilk Bend on the South Yuba River and Long and Feeley lakes in the Grouse Ridge area.

Escott and her husband, Chuck, a jeweler and metal-smith, are former art teachers who are active hikers and hike leaders. Escott's paintings have originated from scenes discovered on the hiking trails.

Visitors may view the art during normal business hours, 8-5 Mondays through Fridays. Escott's work may also be seen at www.escottartgalleries.com.

Brrr.... It's Cold Outside!

Are Your Water Pipes Insulated?

Freezing temperatures are normal in most NID service areas. When the thermometer drops, pipes can freeze and break, causing damage and water loss. Repairs can be expensive. It's easy to insulate exposed pipes and faucets against winter's chill. Inexpensive pipe wrap is available from local hardware and building supply outlets.



How to Contact Your Elected Directors

DIVISION I - Nevada City Area
Nancy Weber, (530) 265-0424

DIVISION II - Grass Valley-Chicago Park
John Drew, (530) 272-5257

DIVISION III - Lake of the Pines-Alta Sierra
Scott Miller, M.D., (530) 268-8778

DIVISION IV - Lincoln-North Auburn
R. Paul Williams, (916) 645-8507

DIVISION V - Penn Valley-Lake Wildwood
(2008 BOARD PRESIDENT) George Leipzig, (530) 432-2492