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NID WaterWays

A Newsletter to the Customers
of the Nevada Irrigation District

Volume 23 Number 4 Winter, 2002-03

Yuba-Bear Project

Forty Years of NID Power Production

It was 40 years ago, in 1963, that NID began construction of a \$65 million network of dams, power plants and waterways known as the Yuba-Bear River Project.

The massive water development project propelled the district into the hydroelectric energy business and, most importantly, doubled the amount of water storage available to meet the needs of NID water customers.

Reservoirs Built

Jackson Meadows and Rollins reservoirs, a new, higher dam at Scotts Flat, the Chicago Park and Dutch Flat powerhouses and numerous canals and tunnels were built



NID's Rollins Powerhouse, in operation since 1980, was the first U.S. power plant added to an existing dam following the 1974 Arab Oil Embargo. NID operates seven hydroelectric power plants.

in 1963-66 as part of the Yuba-Bear Project.

The project came at a time when residents of the Sierra foothills realized the importance of developing and preserving water supplies for the region. The \$65 million bond issue that funded the Yuba-Bear Project won approval in

1962 from 97 percent of NID voters.

In 1980, as a second phase to the Yuba-Bear Project, NID opened the Rollins Powerhouse, the first plant in the nation to be added to an existing dam following the 1974 Arab Oil Embargo.

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Keeping the Vision

Director Bierwagen Steps Down After 25 Years

Ernst L. "Ernie" Bierwagen stepped down in December following six elected terms and 25 years on the NID Board of Directors. He represented Division II, the Grass Valley-Chicago Park area.

Bierwagen, 87, is the second longest-serving director in NID's 82-year history. Only Theodore Schwartz Jr., who was on the board for 26 years (1921-1947) served longer.

Throughout his tenure with the district, including six terms as board president, Bierwagen, a life-long farmer, showed leadership and a commitment to strong and safe water supplies for Nevada and Placer counties.

Farming Was Tough

Born in Nevada County before NID was formed, Bierwagen recalls times when local dry land farmers, including his own family, saw fruit die on trees and vines for lack of water.

While Director Bierwagen's passion and enthusiasm for NID remain unabated, he chose to not seek reelection for reasons of age and health. He is expected to remain among the district's strongest supporters in the community.



Ernie Bierwagen is the second longest-serving director in NID's 82-year history.

The retiring director was honored at a Nov. 17 retirement dinner attended by about 100 family members, friends and NID employees.

In his remarks, he urged those in attendance to "keep the vision" of NID's founding fathers. It is a vision that has been well-preserved and carried out by Ernie Bierwagen.

New Member Joins NID Board

John Drew, an organic farmer and former president of the Nevada County Farm Bureau, was elected Nov. 5 to a four-year term on the NID Board of Directors.

The board, which sets NID policy, rules and regulations, is comprised of elected directors representing five geographic sections of the district.

Your elected directors are:

- DIVISION I. **Nancy Weber**, Nevada City
- DIVISION II. **John Drew**, Chicago Park, Nevada Co.
- DIVISION III. **Scott Miller**, So. Nevada Co. (2003 Board President)
- DIVISION IV. **R. Paul Williams**, Lincoln, Placer County
- DIVISION V. **George Leipzig**, Lake Wildwood, Nevada Co.

Strong Start for the Rainfall Year

After dry weather through most of the autumn season, conditions turned very wet in December, boosting NID water storage to above-average levels.

By Dec. 16, Bowman Reservoir (elev. 5,650 ft.) had received 23.26 inches of precipitation for the rainfall year, which began July 1. This equals 118 percent of the mid-December average.

NID water storage stood at 165,200 acre-feet as of Dec. 15, which is 110 percent of the mid-December storage average. The district's capacity is 250,280 acre-feet.

The mountain snowpack is the source of the district's water supply. By Dec. 16, the snowpack had reached a depth of 24 inches at Bowman and was deeper on surrounding peaks.

NID Operations Supv. Sue Sindt said the 2002-03 precipitation season is off to a "promising start" and the district would conduct its first official snow surveys of the season on Feb. 1.

Q&A

Why is NID's bottled drinking water bottled in Modesto?

The Modesto bottling plant is the closest state-approved bottler available to the district. NID has produced bottled drinking water since 1998, using it for community relations purposes. The bottled water is not sold. Drinking water from the E. George Water Treatment Plant on Banner Mountain is trucked to the bottling plant, where approximately 200 cases are produced with each order.

NID Power Production

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Today, NID operates seven hydroelectric power plants with a generation capacity of 90.8 megawatts, enough to supply about 80,000 homes.

The district produces an average 425 million kilowatt hours (kwh) of energy per year, more in years when water supplies are bountiful; less in dry years. For example, the district produced a record 511 million kwh following a very wet 1994-95. Its lowest output of 46 million kwh followed the 1976-77 drought year.

Power produced by NID is sold under a 50-year contract to the Pacific Gas & Electric Co. For the power, PG&E pays operation and maintenance costs for the power system and is repaying the bonds that financed the original project.



GROUNDBREAKING: A crowd gathered in 1963 when an old Nevada Co. Narrow Gauge Railroad trestle was removed to make way for Rollins Reservoir.

NID Hydroelectric Power Plants

(Capacity/megawatts)

Chicago Park	44
Dutch Flat	27
Rollins	13.5
Bowman	3.6
Combie South	1.5
Scotts Flat	0.875
Combie North	0.3
Total:	90.775

FERC Relicensing

In 2013, the Yuba-Bear Project will be paid for and the district will be in position to negotiate new power purchase agreements. At that time, the district must also renew its original 50-year license with the Federal Energy Regulatory Commission (FERC).

NID Hydroelectric Manager Les Nicholson says the district must

apply for the renewal at least five years early and has already begun making plans for the relicensing project.

"The power system is a tremendous investment for the Nevada Irrigation District," he said. "We would expect that in the future substantial benefits will accrue to the district through its power generation."

Water Rates Increase for 2003

The NID Board of Directors on Dec. 11 approved a 2003 water rate schedule that includes a 3 percent increase in the base rate for treated water service and similar adjustments for irrigation water service.

As approved, the treated water base rate, which includes the first 200 cubic feet of water, is up by 3 percent. Customers using higher amounts will see increases of 6-9 percent in the usage block rate.

Cost of Service

An independent study of NID water rates completed last year showed that current rates are not covering the district's costs to provide service. This year's rate adjustments are one step in a five-year program to balance rates with costs.

NID Finance Manager Tess Andrews, who notes that NID

rates are structured to encourage conservation, offers examples of how the adjustments will affect ratepayers:

Typical Use. A typical customer on a 5/8-inch meter, using 2000 cubic feet (20 hcf) of water, will see an overall increase (base and usage) of about 4.08 percent, an increase of \$1.77 for the two-month billing period.

High Use. A high-use customer, using a 3/4-inch meter and five times as much water (100 hcf), will see a 5.7 percent increase, or \$7.02 more for the two-month period.

Canal Water. Irrigation water customers will also see rate increases in 2003. Those using one miners-inch or less will pay 6 percent more while usage levels over the first miners-inch will increase by 4 percent.

Budget Steady in 2003

NID's combined operating budget for 2003, which includes water supply, power production and recreation, is relatively unchanged from 2002. The new budget is \$33.4 million, down slightly from \$33.5 million.

The combined budget is comprised of the Water Division budget of \$28.8 million; Hydroelectric budget of \$4.1 million; and Recreation budget of \$564,000.

NID supplies treated drinking water and irrigation water to more than 23,000 customers in Nevada, Placer and Yuba counties.

In addition, NID's seven power plants produce enough clean, hydroelectric energy to supply 80,000 homes. The district provides public recreation at Rollins, Scotts Flat and Mountain Division reservoirs.

Continued Use Seen for Lower Cascade Canal

NID would continue to operate the Lower Cascade Canal, under a recommendation made in December to the NID Board of Directors Engineering Committee.

As this newsletter went to press, the recommendation was scheduled for presentation to the full NID board in early January.

NID engineers and consultants for the Lower Cascade Modernization Project determined the canal should be kept in use as a service lateral, with reduced flows of water. The canal is now a main supply line. As a service lateral, the canal would carry an estimated 2 cubic feet of water per second (cfs) in winter and 8 cfs in summer. Flows are now about 15 cfs in the winter and up to 40 cfs in summer. At times, the canal runs at capacity.

Canal and Pipeline

To bolster supplies for two water treatment plants and numerous customers ranging from Banner Mountain to south Nevada County, NID is planning to transfer its main supply from the canal to a buried 42-inch and 48-inch pipeline across the southern flank of Banner Mountain. The gravity-flow pipeline system being studied goes along Wings of Morning Drive, Banner Lava Cap Road and Lava Cap Mine Road to NID's Loma Rica Water



Treatment Plant. A second section would extend from the Nevada County Air Park along a short section of Madrone Forest Drive and Red Gate Road to the E. George Water Treatment Plant.

Public Outreach Continues

As part of a continuing public outreach program, the district has met with property owners and has conducted walking tours in neighborhoods where the water project is planned.

Under a tentative schedule, a draft environmental impact report would be ready for review in late spring and the final report considered by the Board of Directors in the fall. Construction could begin in the summer of 2004 or later.

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Upgrade at LOP

A major upgrade is under way at the Lake of the Pines Water Treatment Plant. New gravity feed filters, chemical feed system, sludge drying beds and a 640,000-gallon clearwell storage tank are being added. A new 1 million gallon storage tank was added last year.

Work on the Rattlesnake

A rehabilitation of a section of the Rattlesnake Canal south of Grass Valley is scheduled for completion before the 2003 irrigation season. The work will allow the district to supply more water to south Nevada County and the South Nevada County Mutual Water Co.

Wrap Those Pipes

NID reminds customers that all exposed pipes and faucets should be insulated against freezing temperatures. Water pipes can freeze, rupture and cause damage. Inexpensive pipe insulation is available from local building supply outlets.



Canal Lining in Placer County

NID's Placer Crew recently added shotcrete to the Combie Ophir II Canal. The material helps reduce leakage. Pictured are foreman Bob MacDonald with Barry Scicluna spraying shotcrete.

System Flushing Program

NID periodically flushes water lines in its treated water systems to wash away any residue and preserve water quality. Flushing is usually conducted in winter when demand for water is lower. The 2002-03 flushing program is now in progress.