



GM Newsletter

May 2022

From The Desk of Jennifer Hanson, General Manager

Water For Life

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Message from the General Manager

This spring we are fortunate to have more water in our reservoirs than others around the state. NID's reservoirs are at 92 percent of capacity, or 107 percent of an eight-year average.

Compare that to Shasta Reservoir, California's largest, which has dropped to critically low levels. Shasta is at less than half of where it usually should be in early May. It's the driest for this time of year since record-keeping first began in 1976.

While our reservoir levels are up, the District's latest snow survey found snowpack, the source water for NID customers, was just 64 percent of average for this time of year. Even though we've had May showers, moving into summer we must take care to preserve every drop of water to safeguard our supply.

As the temperatures rise, there are several simple ways for us all to save water:

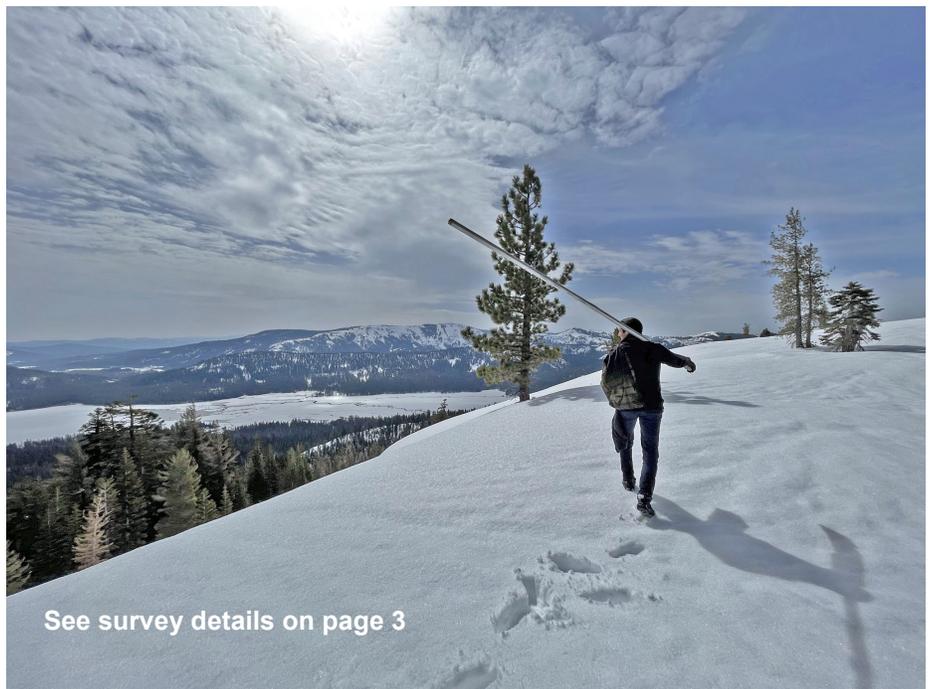
- * Water early morning or late evening
- * Use mulch
- * Reimagine your ornamental landscaping and yard with water-wise plants
- * Adjust sprinkler heads and fix leaks
- * Install drip irrigation and add a smart controller

Water efficiency and water conservation play an important role getting us through these times. Let's all do our part to protect our water.



May Snow Survey

The recent rain and snow flurries have boosted local water conditions, although the snowpack remains below average for this time of year.



See survey details on page 3



Plan for Water

Invitation to get involved

The May 10 PFW workshop featured a presentation on watershed management. NID applies best practices on District-owned forests and wildlands to improve the resiliency and sustainability of source watersheds.

One important focus is on how to improve our watersheds in the light of drought, climate change, wildfires and years of neglect.

The process is intended to be a comprehensive analysis of the District's water needs for the next 50 years.

NID looks forward to hearing from the public and working together to develop strategic options that reflect a balanced mix of community perspectives to guide the District's water management into the future.

[View the NID watershed presentation](#)
[Plan for Water webpage](#)

Next public workshop: "Risk" will be discussed on June 7

The June 7 workshop will include risk analysis and mitigation efforts.

The goal of the presentation and discussion will cover a common understanding of NID's controlled and uncontrolled risk factors and mitigation efforts as it relates to operational, regulatory and environmental considerations.

Water Comes from Watersheds

Watershed stewardship by NID

Forest Management

- * Hazard Tree Removal
- * Timber and vegetation management and disposal
- * River Fire Remediation

Meadow Restoration

Grazing for fuels management; future opportunities to potentially return prescribed fire as a fuels management tool

Watershed education and outreach, water conservation.

Planning and coordination

[Learn more. Click here](#)



May Snow Survey: water conditions improve with recent storms

Water content 64% of average

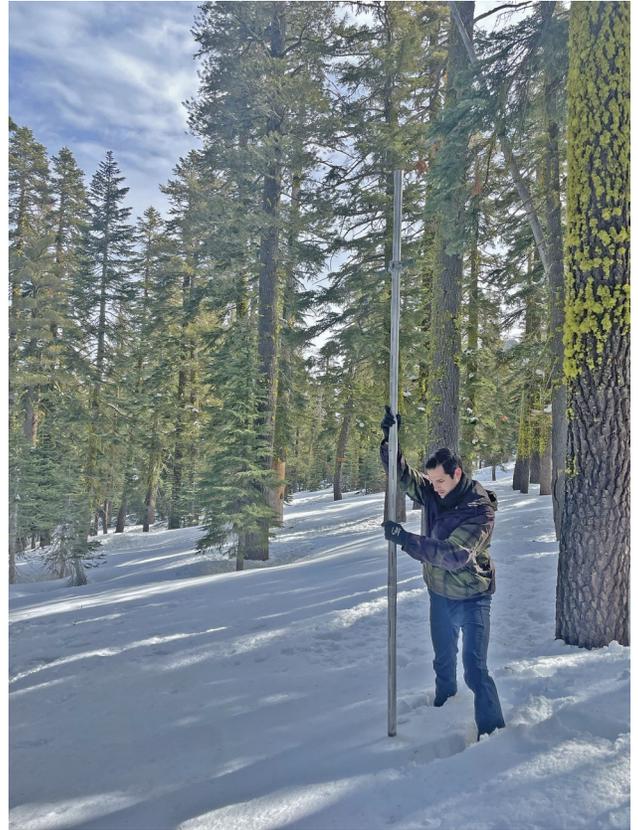
The recent rain and snow flurries have boosted local water conditions, although the snowpack remains below average for this time of year.

During the latest snow survey, Nevada Irrigation District (NID) hydrographers found the average water content in the snowpack was 17.5 inches, which is 64 percent of a 27.5-inch average for the District's five high-elevation snow courses. By comparison, last month's snow survey found water content to be 55 percent of average.

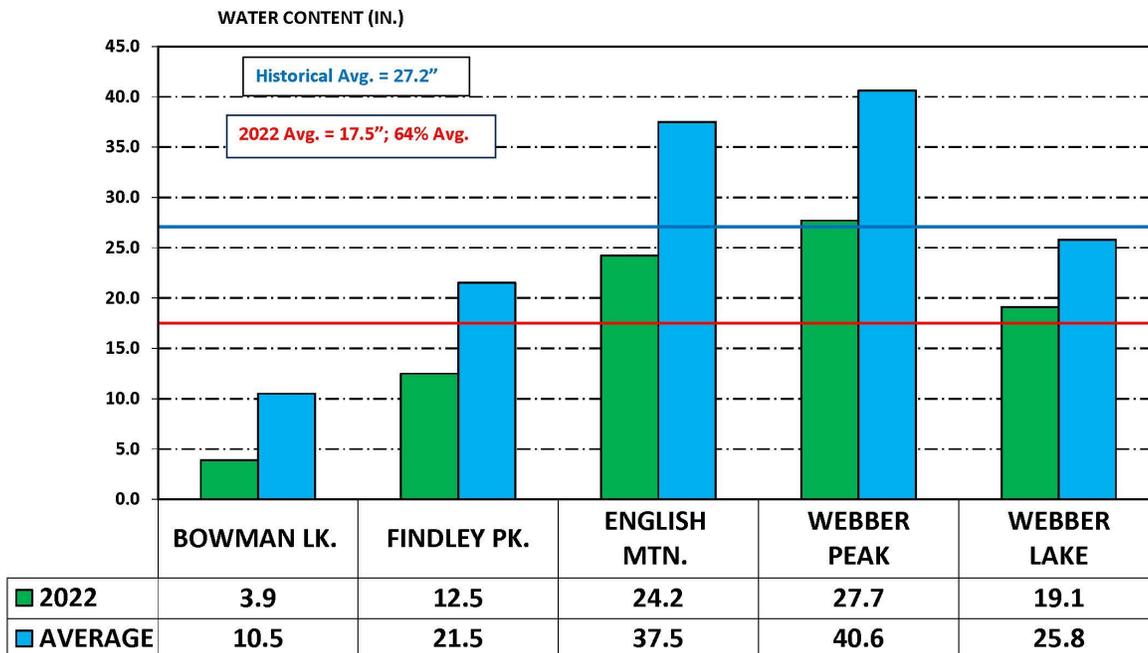
The good news is snow flurries in April increased reservoir storage levels while adding to the snowpack. With the irrigation season beginning on April 15, the timing of the precipitation was ideal. Wet and cool conditions suppressed irrigation demands, which allowed more water to be preserved in storage.

Read details about the snow survey, [click here](#).

Read more about river and reservoir levels, [click here](#).



NID SNOW SURVEY MAY 1, 2022 WATER CONTENT



Read the May Snow Survey and see the statistics for each of NID's five snow courses.

[Click here](#)



Bowman Lake statistics

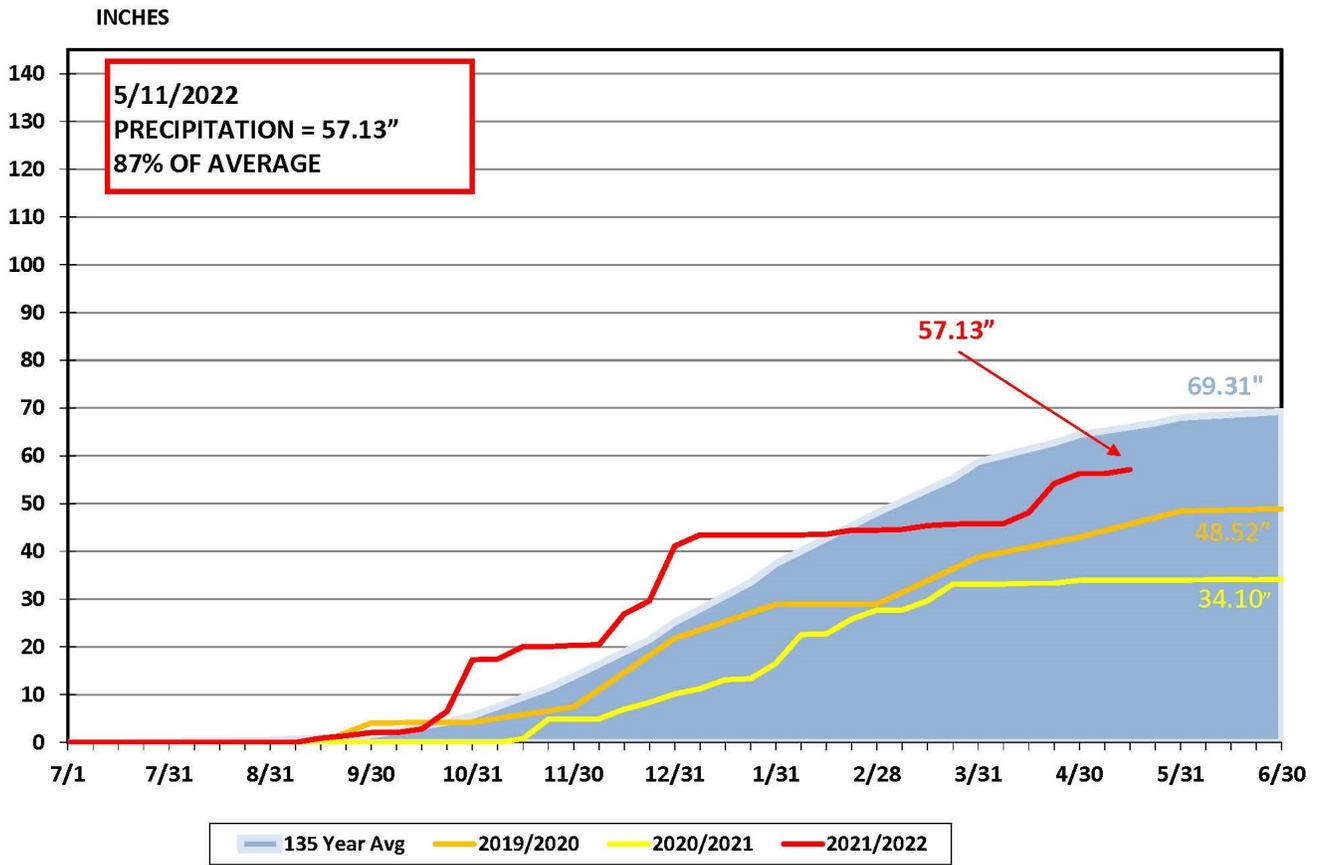
NID has been keeping weather records for Bowman Reservoir (elevation 5,650 ft.) since 1929.

The 69.2-inch annual average precipitation at Bowman compares to an annual average of 56 inches at 2,700 feet near Nevada City and 52 inches at 2,400 feet in Grass Valley.

Precipitation is measured for the 12-month period beginning July 1 and ending June 30.

As of May 11, 57.13 inches had fallen, which is 87 percent of average.

BOWMAN LAKE PRECIPITATION



Spring precip fills reservoirs

The recent rain and snow have filled NID reservoirs and dampened demand of the irrigation season that began on April 15. NID has not had to pull water from storage, thanks to the amount of natural flows .

Storage is 256,324 acre-feet as of May 11. That is 109 percent of average and 95 percent of capacity.

By comparison, this time last year, the District was already dropping reservoirs down to meet the community's water needs.

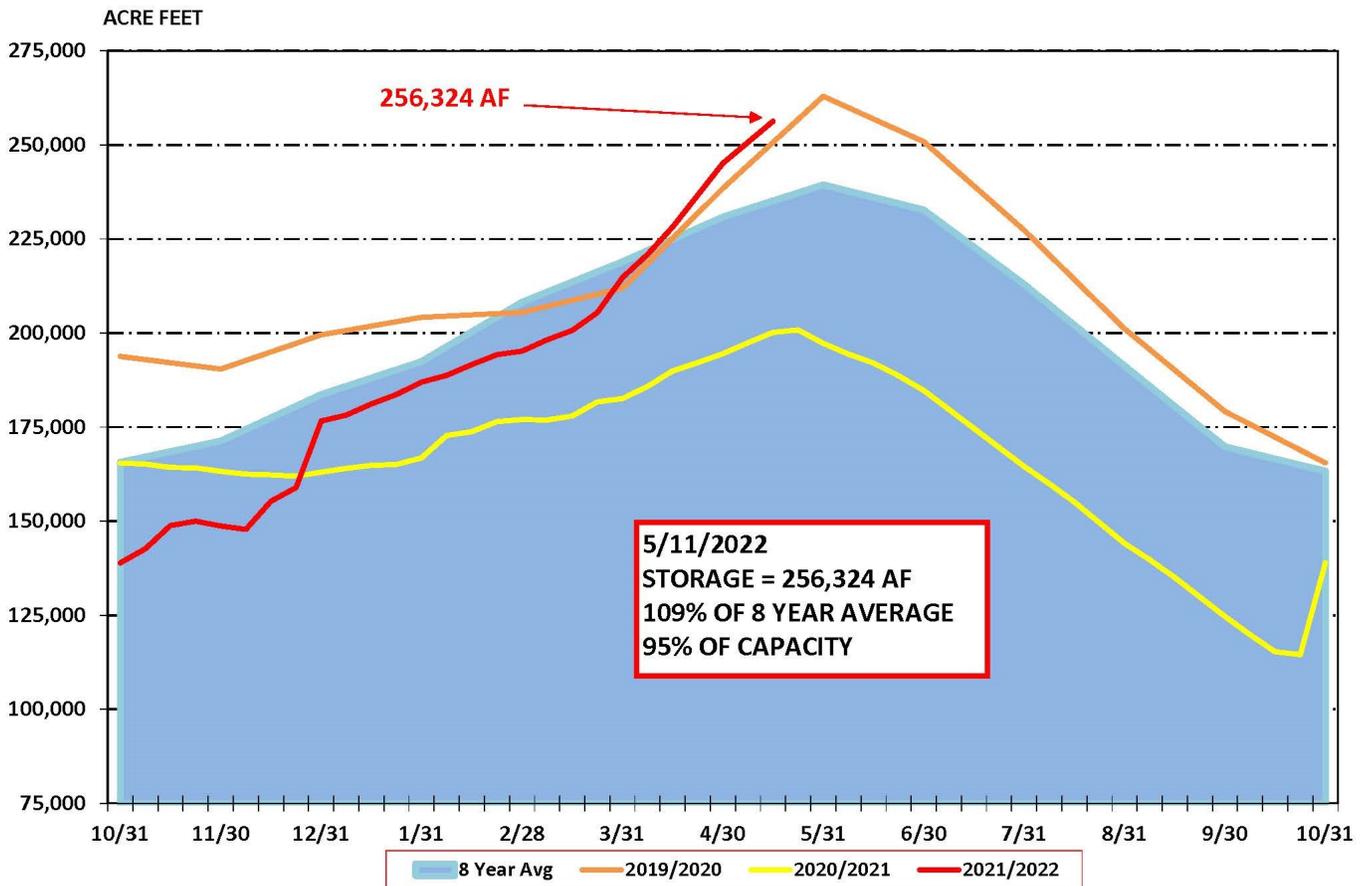
NID's watermaster regularly posts updates of local reservoir levels. You can see how water levels fluctuate in easy-to-read charts.

It's all just a click away on the NID website under [River & Reservoir Data](#).



Faucherie Lake

NID RESERVOIR STORAGE



Water conservation gets a boost—water usage down 27%

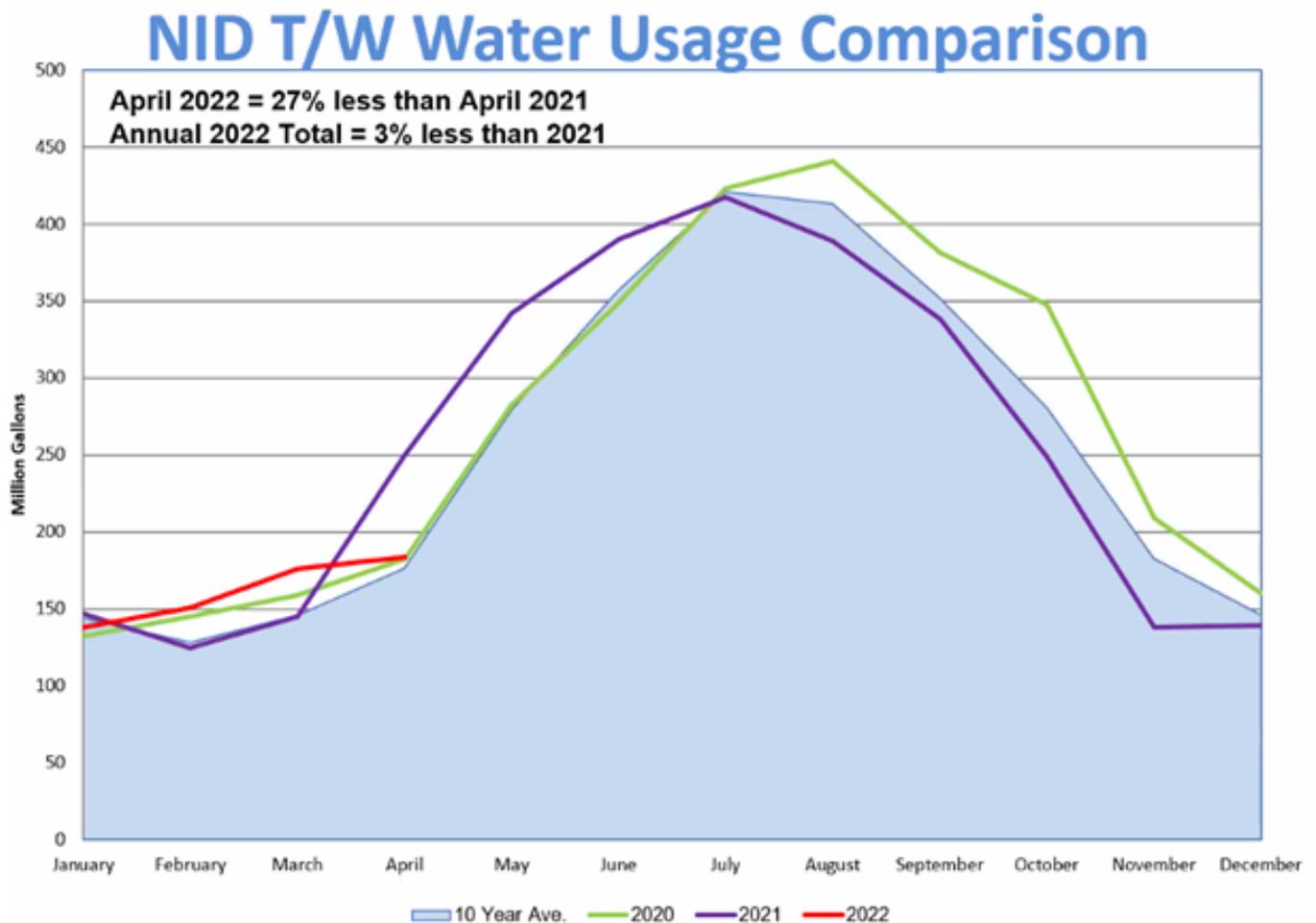
Four inches of rain in April diminished the need to turn on the spigots. As a result, for the month water usage was down 27 percent, compared to April 2021.

For 2022, total treated water usage is down 3 percent, compared to 2021.

The challenge for us all is to continue to use water efficiently and boost our conservation numbers. With a hot summer around the corner, we can't afford to waste water.

Let's continue the good efforts. Do you how much water what you use?

[Measure Your Water Use Calculator](#)



The above graph shows the overall treated water usage and effectiveness of conservation within the District's treated water customer base.

Irrigation Water



Nevada Irrigation District was formed in 1921 to provide water to ranches, fields and orchards in Nevada and Placer counties.



The District encompasses 287,000 acres, and stretches from the headwaters of the Yuba River, Bear River and Deer Creek down to the Sierra foothills.



Within the service area, diverse crops flourish due to the differences in topographical, geological, climatic, and soil conditions.

NID provides irrigation for more than 32,000 acres, with 12,306 miner's inches of water sold in 2020.



The largest crops by acreage are irrigated pasture and family gardens/orchards (61% and 20%, respectively).

Many of the District's raw water customers have 10 acres or less of irrigated land.

NID's Crop Report

Every year, NID surveys its agriculture customers to inventory the type and approximate acreage of cultivated crops. This information is used in the District's annual Crop Report data. The Crop Report can be found in the [NID Agricultural Water Management Plan](#).

What is a miner's inch?

The majority of NID's irrigation customers purchase seasonal water, April 15 through October 14, based on a miner's inch, a water measurement that dates back to the California Gold Rush.

A miner's inch equals 11.22 gallons per minute, on a 24-hour per day basis. On average, irrigated pasture requires about one-half miners-inch of water per acre, but this can vary.



Top Crops

Irrigated pasture

19,727 acres ... 7,043.42 miner's inches

Family gardens/orchards

6,409 acres ... 3,073.60 miner's inches

Golf courses

986 acres ... 674.50 miner's inches

Hay

826 acres ... 227.92 miner's inches

Grapes (non-table)

661 acres ... 162.6 miner's inches

Nursery

384 acres... 206.46 miner's inches

Apples

248 acres ... 90.15 miner's inches

Parks

224 acres ... 47.42 miner's inches

Nuts

203 acres ... 34.53 miner's inches

Citrus

182 acres ... 52.46 miner's inches

Plums

160 acres ... 49.79 miner's inches

Alfalfa hay

155 acres ... 43.37 miner's inches

Berries

136 acres ... 41.26 miner's inches

Pears

34 acres ... 39.39 miner's inches

Peaches

118 acres ... 39.47 miner's inches

* Source: 2020 Crop Report, NID Agricultural Water Management Plan

Invitation to participate in a UC agricultural survey

The University of California Cooperative Extension – Placer-Nevada is conducting a survey of commercial agricultural operations in Placer and Nevada Counties to better understand how agricultural irrigation water is used, the types of crops it supports, and the economic and ecological impact of irrigated agriculture. This survey will help provide an objective evaluation of agricultural water use in our counties.

This survey is being sent to raw water customers of the Nevada Irrigation District, the Placer County Water Agency, South Sutter Water District, and other producers in the two-county region.



All responses will remain confidential and anonymous. Please complete the survey only if you are a commercial farming or ranching operation. Answer each question as accurately and completely as possible. The results of this survey will help inform future educational programs, local decision-making, and policy development.

The survey can be completed online by going to the following link: https://ucdavis.co1.qualtrics.com/jfe/form/SV_9trXJaybVw4kvGe

If you have any questions about the project, please contact:

Dan Macon, Livestock & Natural Resources
UCCE-Placer/Nevada
dmacon@ucanr.edu

Cindy Fake, Horticulture & Small Farms
UCCE-Placer/Nevada
cefake@ucanr.edu

If you would prefer a paper survey, please contact dmacon@ucanr.edu or (530) 889-7385.

Please note: if you lease your property to another individual or business, please work with your tenant to complete this survey.



Engineering Projects

The NID Engineering Department has a number of projects in various phases of construction. Read about the projects on our website, and sign up for email alerts for news about a specific project.

Updated Project Status Reports are now available on the [District's Projects webpage](#). This report provides project information, planner information, and a brief project description.

[2022 Engineering Department Project Status Report \(as of May15\)](#)

[2021 Year in Review, Department Updates, Plans for 2022](#)



[Alta Sierra Reservoir Replacement Project](#)

To learn about the Alta Sierra Reservoir Replacement Project and see photos and project documents, click on the [Project Description](#)



[Hemphill Diversion Fish Passage Project](#)

To learn about the Hemphill Diversion Fish Passage Project, read the Projects documents, participate in the Design phase, and other information click on the [Project Description](#)



[English Meadow Floodplain Restoration & Enhancement Project](#)

To learn about the English Meadow Floodplain Restoration & Enhancement Project, review environmental documents, and get updates on the progress, click on the [Project Description](#)

[Centennial Water Supply Project](#)

The Board of Directors has directed staff to focus on the Plan for Water, the District's long-range planning process. As such, the District does not anticipate any significant activity related to the Centennial Water Supply Project until the Plan for Water process has been completed.

[Project Description](#)

If you would like to receive notifications when updates to the [NID Projects Underway](#) page are made, go to the [webpage](#) and click on the Join Our Mailing List tab at the bottom of the page and select the notifications you would like to receive.

Hydropower Generation Report

This report presents the total megawatt-hours (MWh) generated per powerhouse for the previous month. Average Generation is based on the monthly generation from the previous five years. Combie North, Combie South, and Scotts Flat Powerhouses create revenue based on MWh produced. Generation from Chicago Park, Dutch Flat #2, Rollins and Bowman Powerhouses is provided for informational purposes.

Powerhouse	Average Generation	Current Generation
Chicago Park	9,184	8,259
Dutch Flat #2	5,291	452
Rollins	1,610	5,545
Bowman	849	0
Combie North	93	0
Combie South	712	734
Scotts Flat	381	264
Total	22,120	15,254

Generation at most powerhouses was well below average due to extremely dry conditions. There was no generation at Combie North Powerhouse due to a mechanical failure. Supply chain issues significantly delayed the return to service timeframe of Combie North Powerhouse.

Hydropower Availability Report

This report presents the total percentage of time a powerhouse is available to generate during the given month. Powerhouses Chicago Park, Dutch Flat #2, Rollins, and Bowman produce revenue based on the percentage (%) of time the unit is available to generate.

Budgeted availability shown was used to develop revenue forecasts. Actual availability shown is based on the hours the powerhouse ran minus any outages that are not excused by the terms of the Power Purchase Agreement (PPA) and is the basis of payment calculation.

Powerhouse	Budgeted Availability	Actual Availability
Chicago Park	92.4%	99.5%
Dutch Flat #2	92.9%	100%
Rollins	92.2%	100%
Bowman	92.0%	100%

All powerhouses were above budgeted availability.

Hydropower Outage Report

This report presents a list of each time a powerhouse has an outage caused by something other than a lack of water or a planned extended outage as well as basic information about the outage. Minimizing the number of outages and their length is key to maximizing revenue from the powerhouses.

Powerhouse	Date and Time Out	Duration (HH:MM)	Cause
Chicago Park	4/29/2022 08:43	7:09	Planned flume sweeping
	4/29/2022 17:00	2:14	SCADA control issue
Dutch Flat #2	4/28/2022 08:00	8:01	Planned flume sweeping
Scotts Flat	4/11/2022 13:07	2:51	12kV line trouble
		20:15	Total

Unit reliability was extremely high for the month.

Dam Safety Report Released: Inspections & Monitoring Detailed

NID has released its 2021 Dam Safety Activities Report, detailing various inspections and monitoring conducted last year.

The District owns and operates 15 dams under the jurisdiction of the California Division of Safety of Dams (DSOD). All but two are also under the jurisdiction of the Federal Energy Regulatory Commission (FERC).

Evaluations and Assessments

Combie Dam Protection against scour under probable maximum flood (PMF) - NID conducted the Alternative Analyses and Conceptual Design for protection against scour in the abutment groins during PMF flows. NID plans to start the design phase of the project in 2024.

Scotts Flat Spillway Upgrades - In 2021 the District performed a physical hydraulic modeling study to analyze the effects of the flow and to modify the spillway. The spillway upgrade alternative study report will be completed in 2022. NID will then propose the selected alternate, sloped or vertical chute walls, to DSOD and FERC.

Dam seismic stabilities - NID conducted a blanket seismic stability re-evaluation of all of the 13 major dams. In 2022, the District plans to analyze the seismic stability of Milton Diversion Main Dam and South Dam (both are arch dams) using the seismic hazards and design ground motions to be updated later in 2022.



Bowman South Arch

Sawmill Dam Spillway – the District has completed a spillway crest structure stability evaluation (for sloped slab, buttress wall, and retaining wall). The structural stability analysis, completed in 2021, concluded that the existing spillway structure has sufficient structural capacities to resist their loading.

Scotts Flat Penstock Seismic Analysis Update – The District has conducted assessment of the seismic stability of the 36-inch Scotts Flat outlet pipe in the outlet tunnel in the right abutment. The report is expected to be completed in 2022.

Jackson Meadows Spillway Crest Structure Stabilities and Radial Gates Safety – The District has completed in 2021 two assessments: seismic stabilities of the spill crest structure and the safety of the steel radial gates under various loading conditions. Both were determined to be stable and safe.



Combie Dam

[Click here to access the report for details about assessments of specific dams.](#)

Meetings & Events

The District's Board room will open to a limited number of public for Regular Board of Directors' Meetings. The public may also participate in Board and Committee meetings remotely via Zoom. Note: Plan for Water workshops (Special Board of Directors meetings) will continue to be only tele-conferenced on Zoom.

Zoom information will be provided on the meeting agenda and accessible at www.nidwater.com.

NID Regular Board of Directors Meeting

Wednesday, May 25, 2022

9:00 AM

NID Special Board of Directors Meeting

Tuesday June 7, 2022

3:00 PM

Plan for Water Workshop

Tuesday June 7, 2022

4:00 PM

NID Regular Board of Directors Meeting

Wednesday, June 8, 2022

9:00 AM

**Meetings
& Events**

