



# GM Newsletter

March 2023

From The Desk of Jennifer Hanson, General Manager

## Water For Life

### IN THIS EDITION

Public safety alert: avoid canals (page 2)

Irrigation season to begin (page 3)

Snow survey - 173% of average (page 4)

... much more

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## Message from the General Manager

I hope you all have weathered the storms well and are looking forward to a sunny, abundant spring. While the recent storms have brought badly needed water to quench years of drought, it hasn't been without a price.

The number of fallen trees, mudslides, and debris flows is evident wherever you go around the District. And, the widespread damage to NID's infrastructure will take time and effort to repair.

Our maintenance crews are working overtime to clear the canals and berms. While this work is going on, we request that everyone stay away from the NID canals. It's a matter of public safety.

The work is being fast-tracked to ensure the canals can deliver water with minimal delay — if any delay — at the start of irrigation season, which traditionally begins on April 15.

The number and power of this winter's storms is nothing like we've seen. At Bowman Lake, the "water year" to date — since Oct. 1, 2022 — has recorded 81.89 inches of rain, or 154 percent of average, as of March 15.

The NID March snow survey found the water content in snowpack was 173 percent of average.

NID reservoirs are at 88 percent of capacity and the amount in storage is 111 percent of a nine-year average.

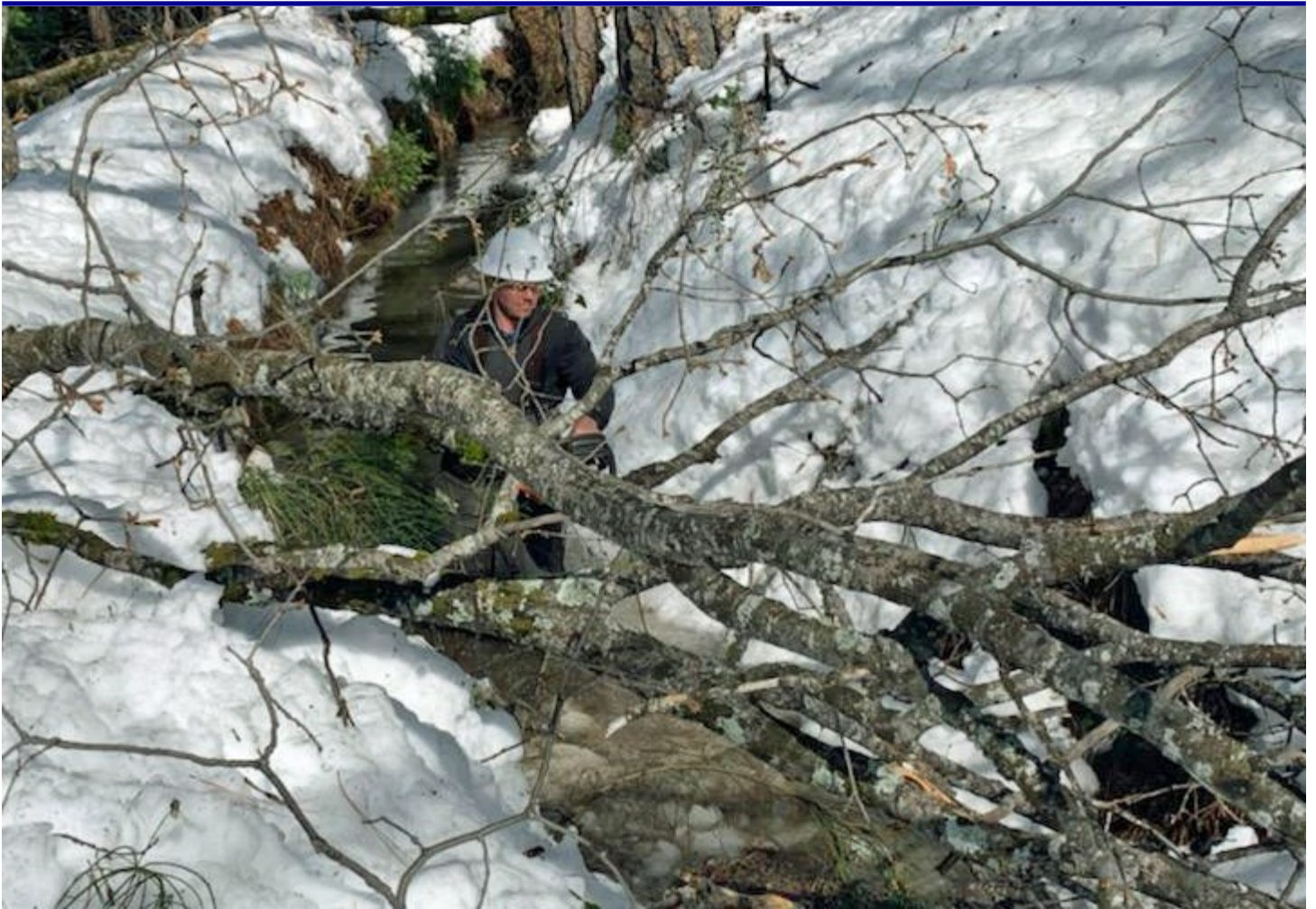
Read more about the precipitation and water storage levels in this newsletter.

Thank you for being understanding as NID works through these repairs and prepare for irrigation season to begin.

As always, we are grateful for your support and trust in the District.







For public safety, NID is requesting people keep off its canal berms and associated water system infrastructure as District crews work to repair damage caused by the recent storms.

Current hazards include a substantial number of fallen trees, unseen obstacles, erosion and sedimentation, and fast flowing water.

NID's open ditch canals traverse about 475 miles on both District property and on many acres of private properties. Crews are working their way mile by mile to inspect damage and make necessary repairs.

"The recent storms have created a dangerous situation for the public in and along the canals," said NID Assistant General Manager Greg Jones. "NID crews are diligent about making repairs. But it will take some time, given the intensity of the storms and the damage we have assessed. We ask the public to be patient as crews continue to inspect and repair this critical infrastructure. This is a matter of safety for all."

## Extensive damage caused by storms







An NID crew makes repairs on Tarr Canal.

Tarr Canal is located on Wolf Creek about 2.5 miles southwest of Grass Valley. It carries water for customers in the Wolf Mountain and Penn Valley areas.

## Irrigation season still scheduled to begin on April 15

NID crews continue to work seven days a week to repair the heavily damaged infrastructure in an effort to get this year's irrigation season started on time or with minimal delay.

Traditionally, April 15 is the day NID turns on its seasonal irrigation water to support local agriculture. This ranges from commercial crops and pastures to family gardens.

Originating as snowmelt in the Sierra Nevada, the water is stored in NID reservoirs before flowing to the canals.

While it might seem like a simple cranking of a valve, the start of irrigation season is actually a herculean effort to get the water flowing.

Crews walk hundreds of miles of the canals and remove winter debris and tree limbs that may clog the system.

Next, workers turn on each of the nearly 5,000 customer water boxes by flipping a board and adjusting it to allow for the amount of water ordered. Only after every customer box is set, can the signal be given to open the canal head gates allowing the water to flow.

[Check updates on the NID website](#)

## What are NID customers growing with irrigation water? Top Crops

The largest crops by acreage are irrigated pasture and family gardens/orchards (61 percent and 20 percent, respectively). Many of the District's raw water customers have 10 acres or less of irrigated land.

[Click here to see the "Top Crops" fact sheet for full details.](#)



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## NID March survey measures “robust” snowpack

The snow survey for March found that the water content in snowpack on NID snow courses was 173 percent of average.

The District conducted its latest snow survey on March 2 and 3. Yet, due to the harsh winter weather and access restrictions, NID hydrographers were only able to take measurements at two- of five high-elevation courses: English Mountain and Findley Peak.

The English Mountain snow course (7,100 feet) had 152.8 inches of snow with a water content of 60.8 inches. Findley Peak (6,500 feet) had a snowpack of 129.9 inches and a 46.5-inch water content.

For comparison, the historical March 1 average water content for the five mountain courses is 27.8 inches.

“Late winter storms have continued to add to an increasingly robust snowpack,” said NID’s Water Resources Superintendent Thor Larsen. “In fact, the amount of water content at the courses measure was in the top five for all March snow surveys.”

As a note: the snow water content measures the amount of water contained in the snowpack and provides key information for NID’s water supply forecast.



NID Hydrographer Bobby Laird takes a measurement at English Mountain on March 2, 2023.

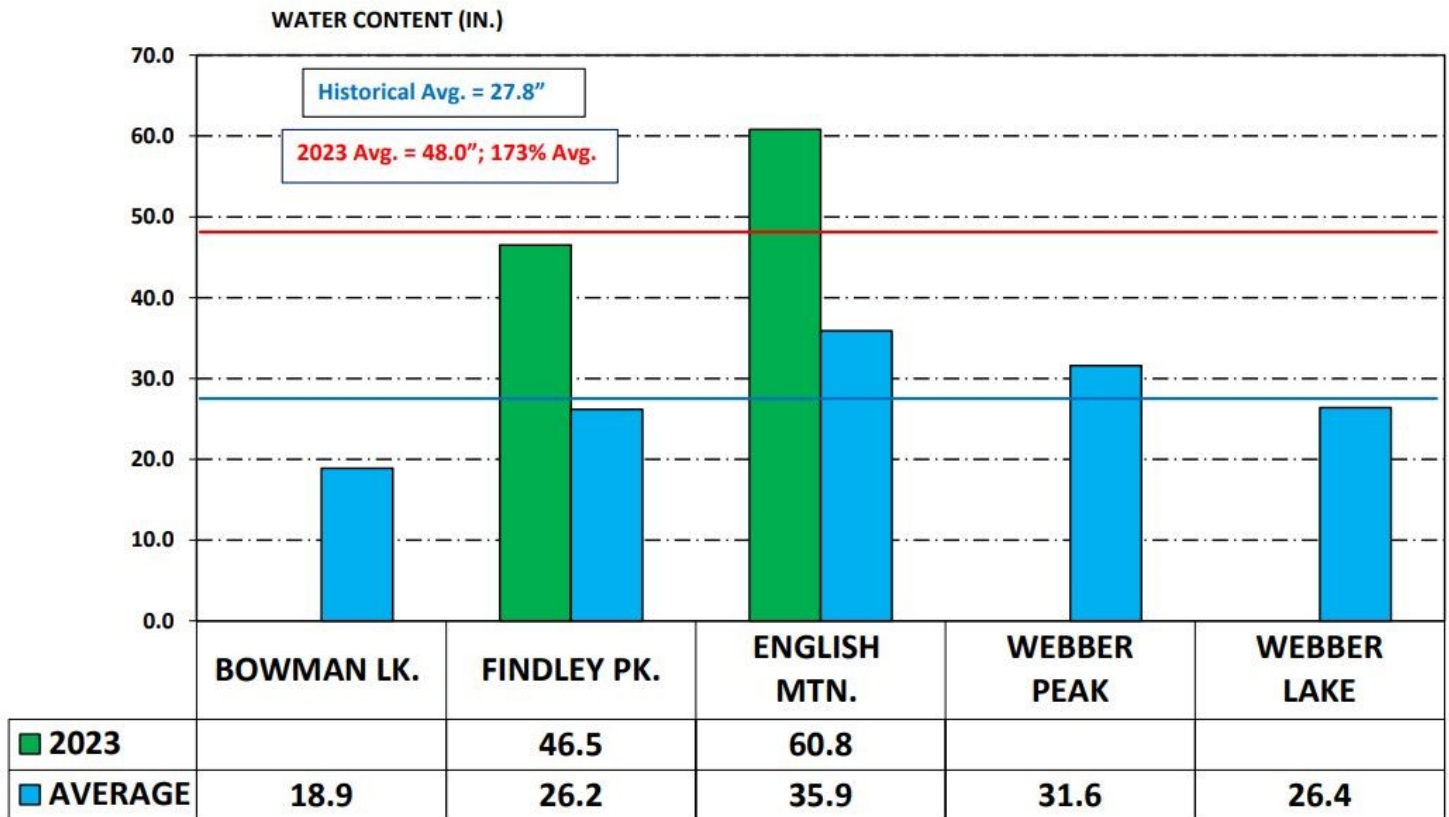


See the specific data for the snow courses, next page

Bowman Lake, March 7

# NID SNOW SURVEY

## March 1, 2023 WATER CONTENT



Here are the specifics of the recent snow survey:

- English Mountain snow course (7,100 ft.) had 110.6 inches of snow with a water content of 47.1 inches
- Findley Peak (6,500 ft.) had a snowpack of 93.2 inches and a 33.1-inch water content

NID hydrographers were only able to take measurements at these two courses due to extreme winter weather.

NID is a member of the California Cooperative Snow Survey. Results of the District's snow surveys are used to predict water availability locally and statewide.



French Lake, March 7, 2023





## Crews braved ice and snow to keep NID's water system performing during winter storms

In the aftermath of the recent winter storm, NID crews worked in the ice and snow to clear debris and snow from canals that deliver water to customers.

The goal was to ensure water the District's delivery system and hydropower facilities were functioning.





Join us on April 11

The Feb. 21 Plan for Water workshop featured a HEC-ResSim model, which simulates reservoir operations at reservoirs based on operational goals and constraints. Operations include flood management, low flow augmentation and water supply for planning studies.

The area included in the model is Jackson Meadows Reservoir, Bowman Lake, Lake Spaulding, Scotts Flat Reservoir, Rollins Reservoir and Lake Combie. In addition to the reservoirs, the ResSim model includes streams and creeks, and canals.

The Plan for Water is a public collaboration process to determine the best ways to meet the community's demand for water over the coming decades.

The process includes a review of NID's available water supply and the long-term impacts on varying water demands. When complete, the Plan will show how future supply and demand scenarios may be integrated into the District's water management practices to ensure the community enjoys the same high-quality water and reliable water system it has now and for the past 100 years.

Workshops are held in person at the NID main office at 1036 W. Main Street in Grass Valley and via Zoom.

## Models simulate reservoir operations

Workshops to come will continue with modeling and a focus on demand. These include:

- ◇ HMS model - simulation of the complete hydrologic processes of watershed systems
- ◇ Hydrology and Climate Change discussion

Sign up to get emails from NID with Plan for Water information and meeting reminders

**Visit [nidwater.com](http://nidwater.com) for more information**





## Leaks Can Run, but They Can't Hide

### Checking for Leaks

The average household's leaks can account for nearly 10,000 gallons of water wasted every year and 10 percent of homes have leaks that waste 90 gallons or more per day.

Common types of leaks found in the home are worn toilet flappers, dripping faucets, and other leaking valves. These types of leaks are often easy to fix, requiring only a few tools and hardware that can pay for themselves in water savings. Fixing easily corrected household water leaks can save homeowners about 10 percent on their water bills.

To check for leaks in your home, you first need to determine whether you're wasting water and then identify the source of the leak. Here are some tips for finding leaks:

- Take a look at your water usage during a colder month. If a family of four exceeds 12,000 gallons per month, there are serious leaks.
- Check your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.
- Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl after 10 minutes, you have a leak. (Be sure to flush immediately after the experiment to avoid staining the tank.)
- Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.

Use the EPA's checklist to keep track of your search for leaks: [Detect and Chase Down Leaks at Home Checklist](#)

See [nidwater.com](http://nidwater.com) for more tips and hints to conserve water





## Bowman Lake

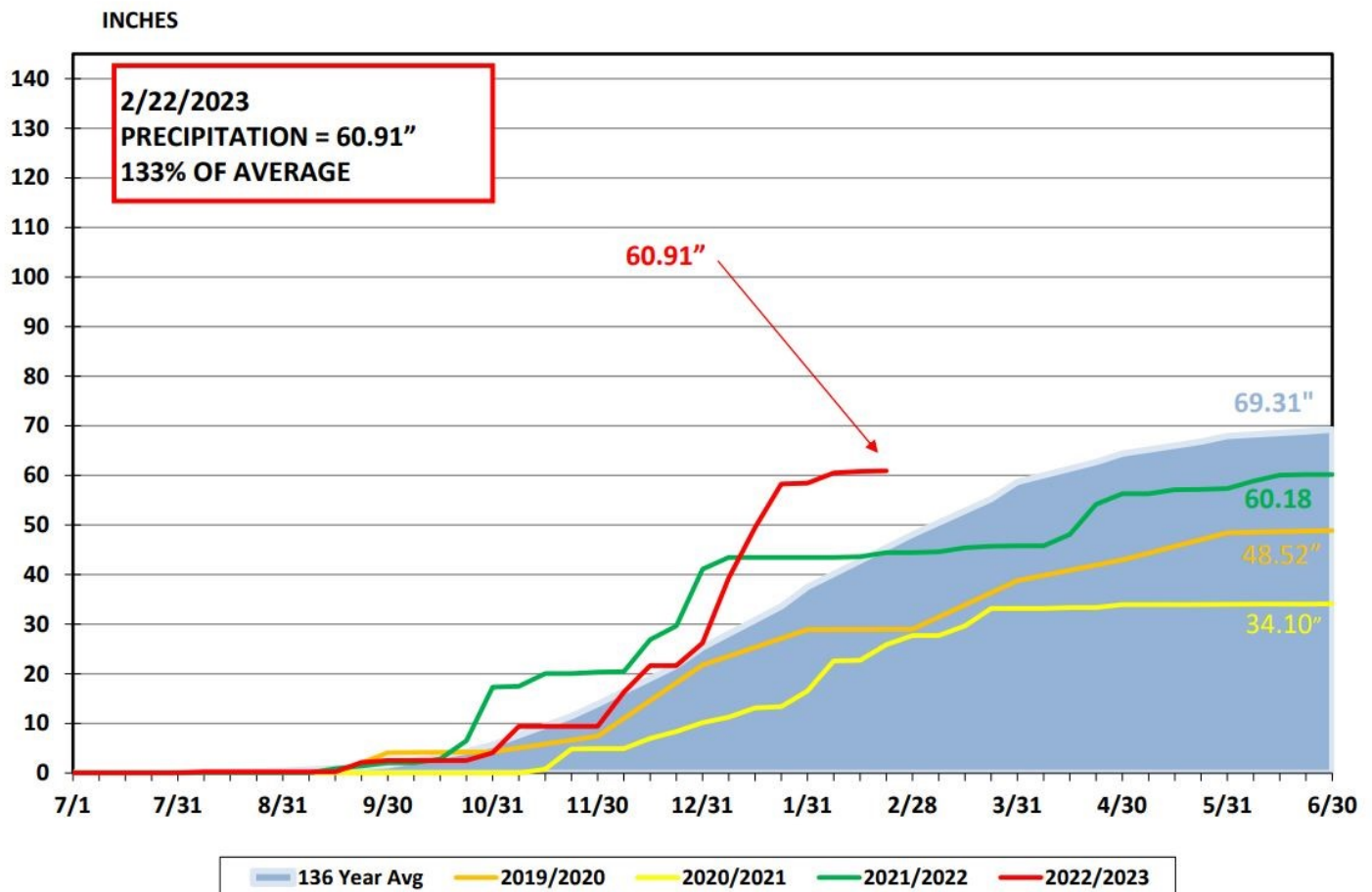
NID has been keeping weather records for Bowman Reservoir (elevation 5,650 ft.) since 1929.

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 Feb. 22, nearly 61 inches of precipitation have fallen. That is 133 percent of average.**

## BOWMAN LAKE PRECIPITATION



## Reservoir storage is 113% of average

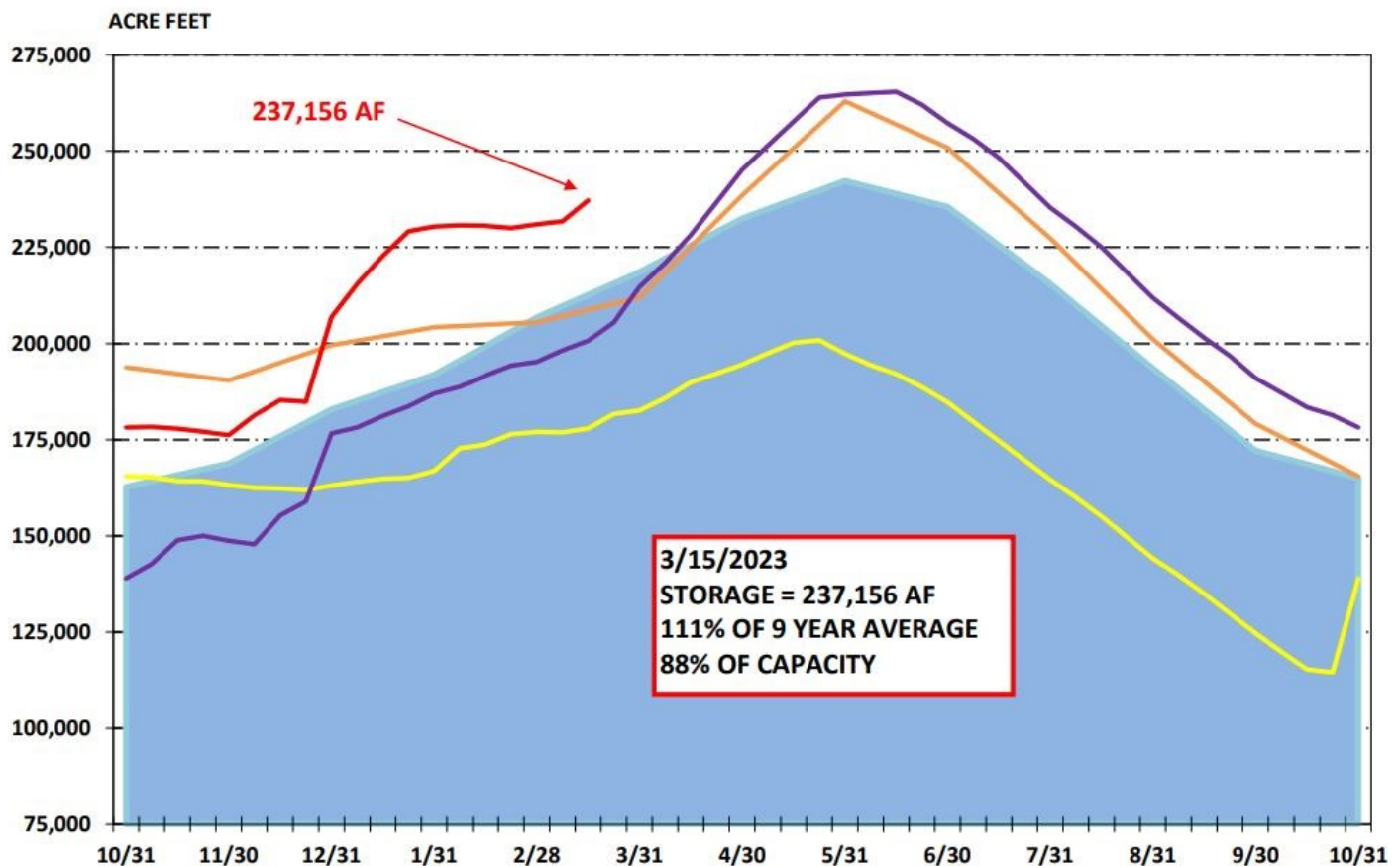
Reservoir storage is 237,156 acre-feet as of March 15. That is 111 percent of average and 88 percent of capacity.

NID's water managers regularly post 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](#).



## NID RESERVOIR STORAGE





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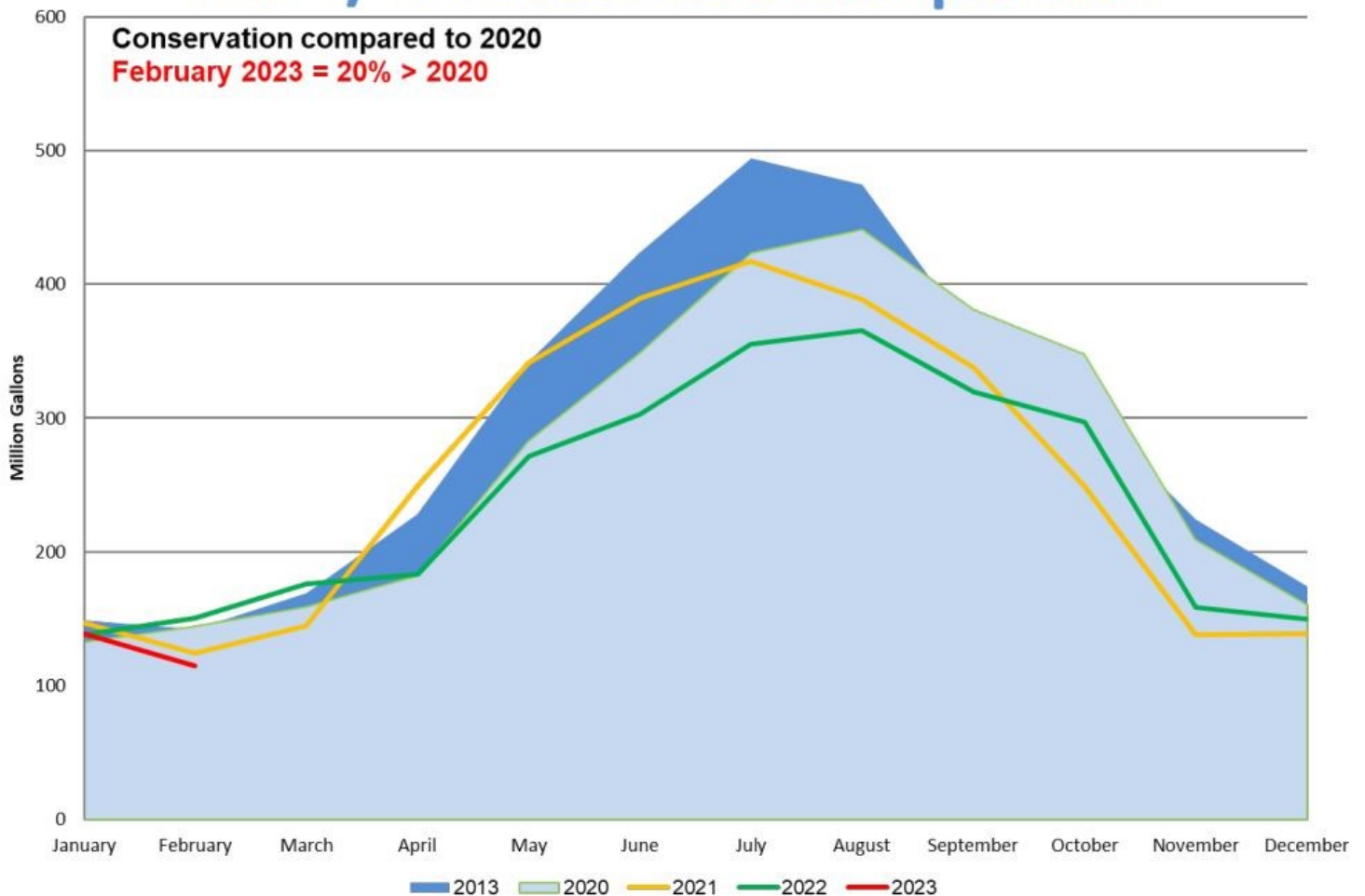
## Water conservation — treated water use down 20%

In February, treated water usage was down 20 percent, compared to February 2020. For 2022, total treated water usage was 11 percent less than in 2020.

Let's continue the good efforts. How much water do you use?

[Measure Your Water Use Calculator](#)

### NID T/W Water Use Comparison



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

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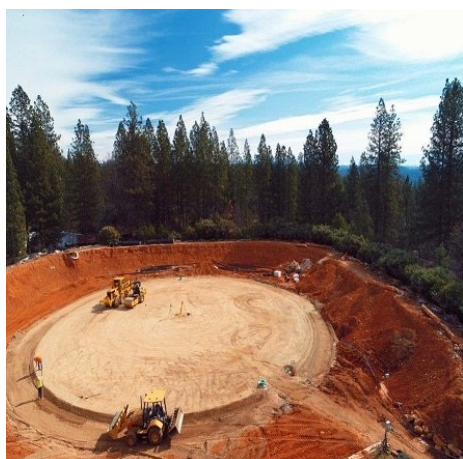
# Project Updates—Engineering and Hydropower

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.

## [Engineering Department Project Status Report](#)

### [Hydroelectric Project Status Report](#)



### [Alta Sierra Reservoir Replacement Project](#)

The project involves removing the existing liner, grading the interior of the reservoir to raise the bottom elevation 6 feet, and constructing a 3 MG concrete tank that is centered in the existing reservoir. Learn more, click on the [Project Description](#).



### [Hemphill Diversion Fish Passage Project](#)

The project will remove the existing diversion structure and construct a roughen-rock ramp fish passage in its place. Improvements to the Hemphill Canal will include a fish screen to prevent fish entrapment while maintaining water deliveries to NID raw water customers. Learn more, click on the [Project Description](#).



### [David Way Pump Station](#)

The project entails replacing the pump station and generator with a pre-manufactured pump station that includes two standard flow pumps and a separate fire flow pump. The new pump station and generator will provide system redundancy and better system reliability. [Project Description](#).



# Community Rancher and NID Champion – Kate Church

In honor of Women's History Month, we recognize the contributions to NID by the woman who helped form NID: Rancher Kate Church.

In 1917, Kate Church and her husband Munson "Bert" drove their cattle up to the green mountain meadows of the Sierra Nevada after their foothill pastures dried and turned brown during the summer.

On this cattle drive, Kate, called "Ma," envisioned a water system where the tumbling and abundant waters of the high mountains could be carried to ranches in the foothills.



**Kate's ranch**

water gushed forth the bed of Canyon Creek on its way to Lake Spaulding," reported the Union Newspaper.

Kate addressed an enthusiastic audience: "To the completion of the work of our pioneers...the use of cities that are yet to be... to the tireless wheels of industry... to a richer rural life... to a greater measure of prosperity... to a higher standard of living... to a fuller realization of happiness... and to the maximum service of humanity.

The great works and the life-giving waters of Nevada Irrigation District are here irrevocably dedicated...

Here and now, I dedicate these waters to the service and constructive purposes of man in his pursuit of the useful arts of peace in this generation and in the generations to come."

The Churches were among a group of local residents who started a campaign to form an irrigation district. Thanks to their efforts, the Nevada Irrigation District was formed in 1921 by popular vote of the people.

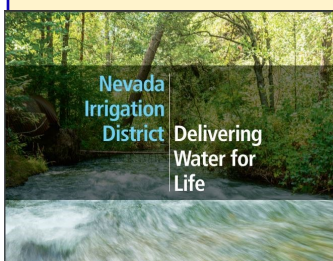
Ten years later, Kate was the keynote speaker to dedicate the rebuilt and enlarged Bowman Dam. Standing back in the Sierra on June 29, 1927, Kate broke a bottle of clear mountain water against a plaque on the crest of Bowman Dam. Valves opened below and "a great column of silvery



**Kate Church**



Kate Church broke a bottle of clear mountain water against a plaque on the crest of Bowman Dam. Valves opened below and a great column of silvery water gushed forth ...



## Learn more about NID's history

"Delivering Water for Life" chronicles the District's history

Read and/or download the entire digital book. [Click here](#) **It's FREE!**



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## Meetings & Events

### **NID Special Board of Directors Meeting (Plan for Water workshop)**

Wednesday, April 11

NID Office, Grass Valley

4 PM

### **NID Regular Board of Directors Meeting**

Wednesday, April 12

NID Office, Grass Valley

9 AM

**Meetings  
& Events**

[Nidwater.com](http://Nidwater.com)  
for more  
information



Thanks to all the NID workers who are making the extra effort to keep the water flowing during the winter storms.