GM Newsletter

November 2022

From The Desk of Jennifer Hanson, General Manager

Water For Life

IN THIS EDITION

First flows: Hemphill Fish Passage (p.2)

Plan for Water update (p.3)

Annual flushing to begin (p.4)

Hydro powerhouse outages a success (p.5)

Reservoir storage (p.9)

CONSERVATION UPDATE

Treated water usage (p.10)

HYDROPOWER

Generation report (p.12)
Availability report (p.12)

Message from the General Manager

As Thanksgiving approaches, NID wants to share our appreciation for your support throughout the year.

We are grateful to our customers who are giving water such a high priority in these times of drought and a changing climate. This year, together we were able to improve treated water efficiency by 10 percent. And in October, treated water customers used 16 percent less water than in October 2020.

The Plan for Water process has brought the community together to discuss how to meet our local demand for water over the coming decades. We appreciate so many people coming to the monthly workshops to provide input. Please join us — the next workshop is scheduled for Dec. 13. That meeting will merge a discussion about the “Basis for Plan for Water” with the first session of Stage 7, which is “Hydrology and Hydrography.”

On another exciting note, the first rain and snow of the season have brought the first flows into the new Hemphill Fish Passage on the Auburn Ravine. The passage will open up about six miles of habitat to migrating and resident fish. The next few months are the historical salmon and steelhead run period, and perhaps we will see migrating fish this year.

Have a Happy Thanksgiving!

First flows of the season: Hemphill Fish Passage in the Auburn Ravine

First flows of water in Hemphill Fish Passage

Ready for salmon and steelhead

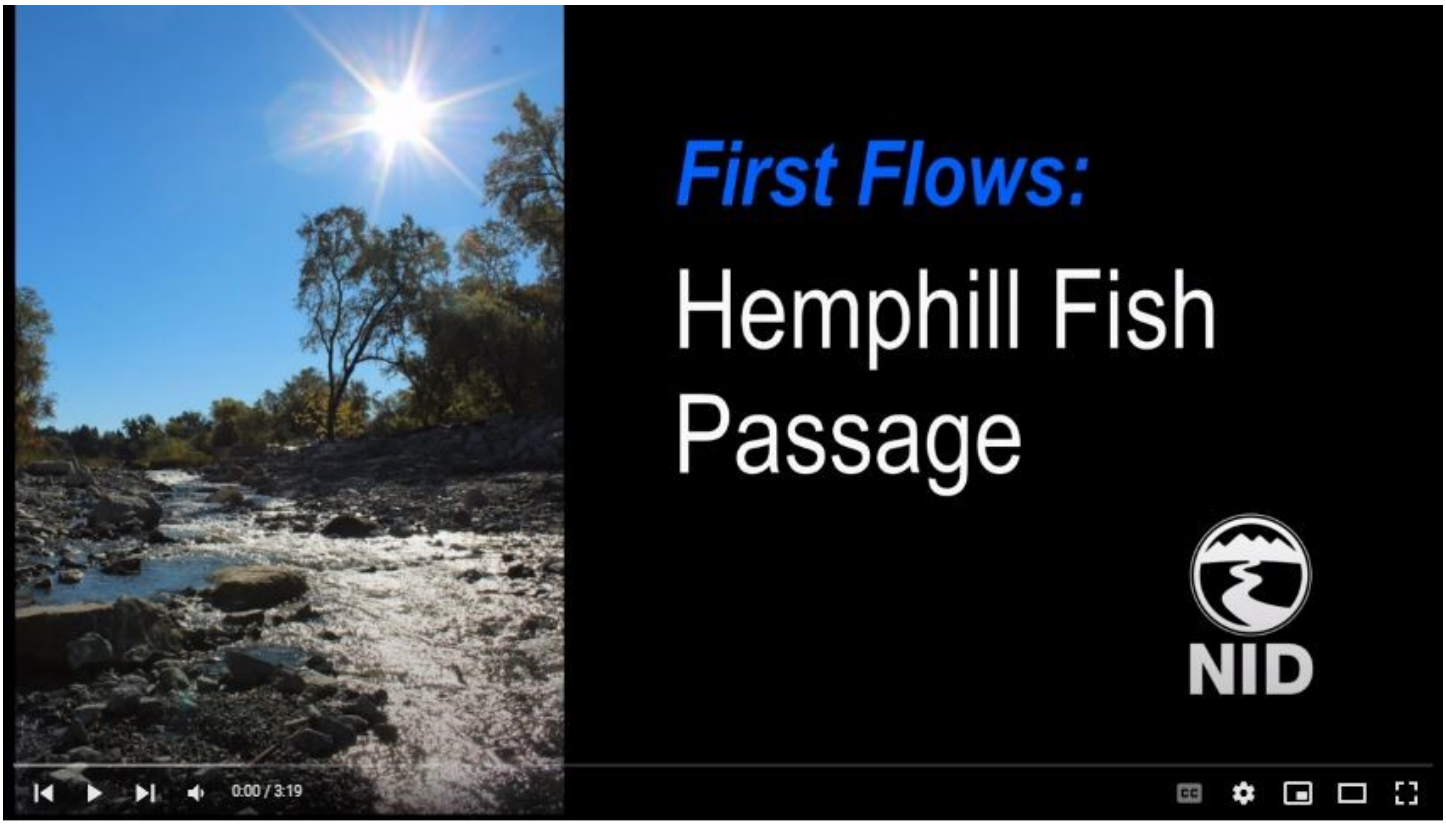
The recent rains have brought the Auburn Ravine to life, and NID's new Hemphill fish passage is now flowing water.

The District's passage construction will open up about six miles of habitat to migrating and resident fish on the Auburn Ravine, northeast of Lincoln.

Salmon and steelhead swim up the ravine every fall and winter. After the recent rains, the flows are 150 cubic feet per second (cfs) through the new passage. That is enough for fish to navigate upstream.

Read about the new fish passage, click here.

Watch a short video, click here or below.



Plan for Water

Invitation to get involved

The upcoming Dec. 13 workshop will combine the topics of Stage 6 (Basis for Plan for Water) -- with the first session of Stage 7 (Hydrology and Hydrography).

Stage 6 - Basis for Plan for Water

In this stage we seek to develop consensus on a number of considerations, including the Plan for Water planning horizon, frequency of updates, how staff and the Board will utilize the Plan for Water, and to define a clear set of assumptions to be utilized in the modeling of data.

Stage 7 – Hydrology and Hydrography (estimated three months)

This stage will seek to determine design assumptions, principles and standards of data-driven modeling as it relates to the hydrology and hydrography of NID's water systems while reconfirming previous efforts of FERC re-licensing models and determining appropriate climate and drought scenario analysis.

Stakeholder involvement: stakeholders will provide input on the hydrology and hydrography model design assumptions, principles and standards. Stakeholders will also provide input regarding the adequacy and accuracy of previous FERC modeling efforts as well as climate change and drought related scenario development.

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

Visit nidwater.com for more information.

Hy·drol·o·gy /hī-'drä-lə-jē/

The branch of science concerned with the properties of the earth's water, and especially its movement in relation to land.

Hy·drog·ra·phy /hī-'drä-grə-fē/

The science of surveying and charting bodies of water, such as seas, lakes, and rivers.

Treated Water: NID's annual flushing program begins on Nov. 28

NID will begin its annual flushing program to clean the District's treated water distribution system on Nov. 28, 2022.

During the process, the District's crew will tap fire hydrants, allowing water to flow through main lines at a higher velocity to wash away any residue that may have collected through the year. Water will be dechlorinated and flushed from the hydrants up to 400 gallons a minute.

The work will continue through March 2023, starting in Cascade Shores and ending in North Auburn.

NID's flushing program is conducted annually to ensure water pipelines function properly to deliver high-quality drinking water.

Flushing does not usually affect water service in the area. Customers may experience momentary pressure changes when nearby hydrants are tapped. They also may experience some turbid or dis-colored water, which can be cleared quickly by opening a faucet and letting the water run.

If you have any questions about the flushing program, please call the NID operations desk at (530) 271-6885.

Hydro powerhouse outage is a success

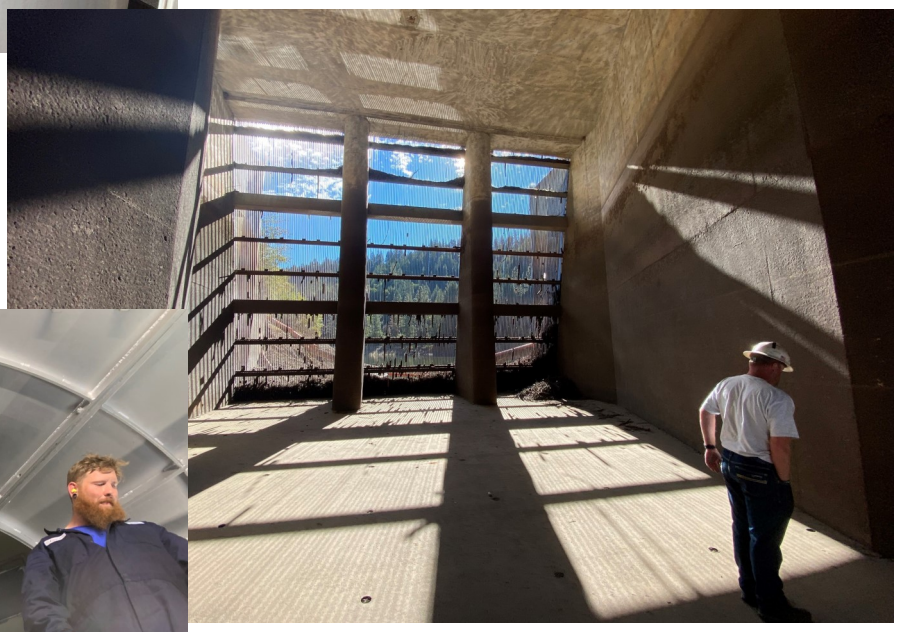
NID's hydropower team has been busy upgrading and repairing equipment during the annual fall powerhouse outage.

An outage is the shutdown of a generating unit, transmission line, or other facility for inspection and maintenance.

Each outage is scheduled well in advance, and is important to ensure the efficiency and safety of the District's powerhouses.

Above Right: Maintaining the generator step up transformer at the Chicago Park Powerhouse

Above: Reassembling covers on main bus bars



Above Top: Inspecting the Chicago Park Flume intake

Left: Cleaning the generator at the Chicago Park Powerhouse

Going the extra mile ... Literally ... For dam safety

On November 2, NID surveyors braved inclement conditions and drove to Bowman to survey the dams.

Driving the road is tricky enough during the summer, but the fresh snow made conditions more difficult.

Once there, the surveyors needed to cut tracks in the snow to get in position to conduct the measurements.

The monitoring spots any dam movement, and provides information about the performance of the dam. It can give an early warning in case of issues that may arise.

All was good at Bowman.

Above: An NID surveyor takes measurements at the South Arch Dam.

Right: The surveyor checks the Bowman North Dam.

Sixth-graders tour E. George Water Treatment Plant

Students get a first-hand experience in water treatment

About 50 sixth-grade students from the Grass Valley Charter School recently toured the Elizabeth George Treatment Plant as part of their science lesson to learn about water.

On Oct. 5, they learned where water comes from, how it is treated, where it is stored and how they can conserve it.

Each step and process was explained to the students so they could see and understand where the water starts and how it travels through different basins and filters to ultimately be put into storage tanks ready to go into our distribution facility.

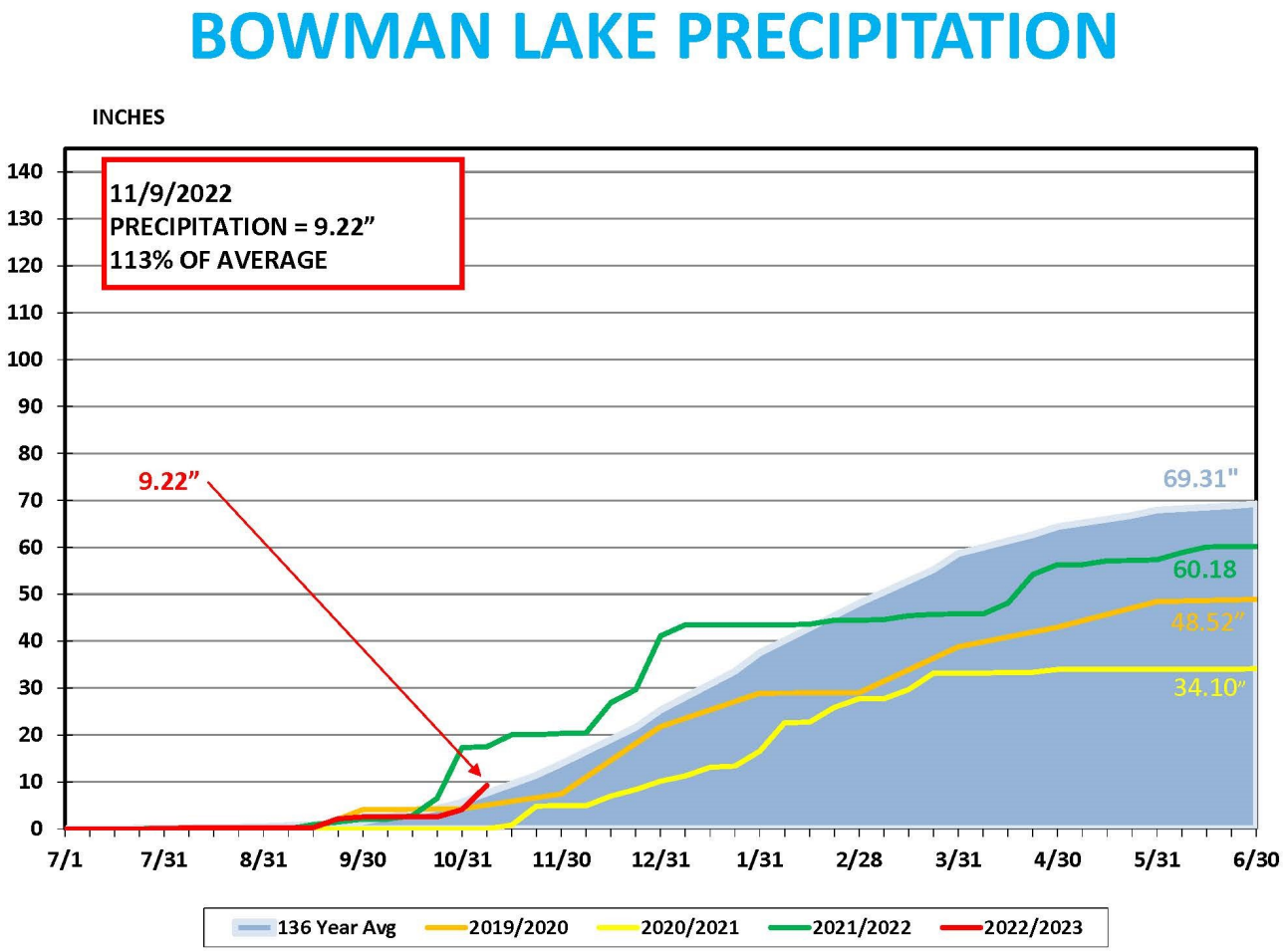
Bowman Lake

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.

Since the new water year began, a little more than nine inches of precipitation has fallen. That is 113 percent of average.

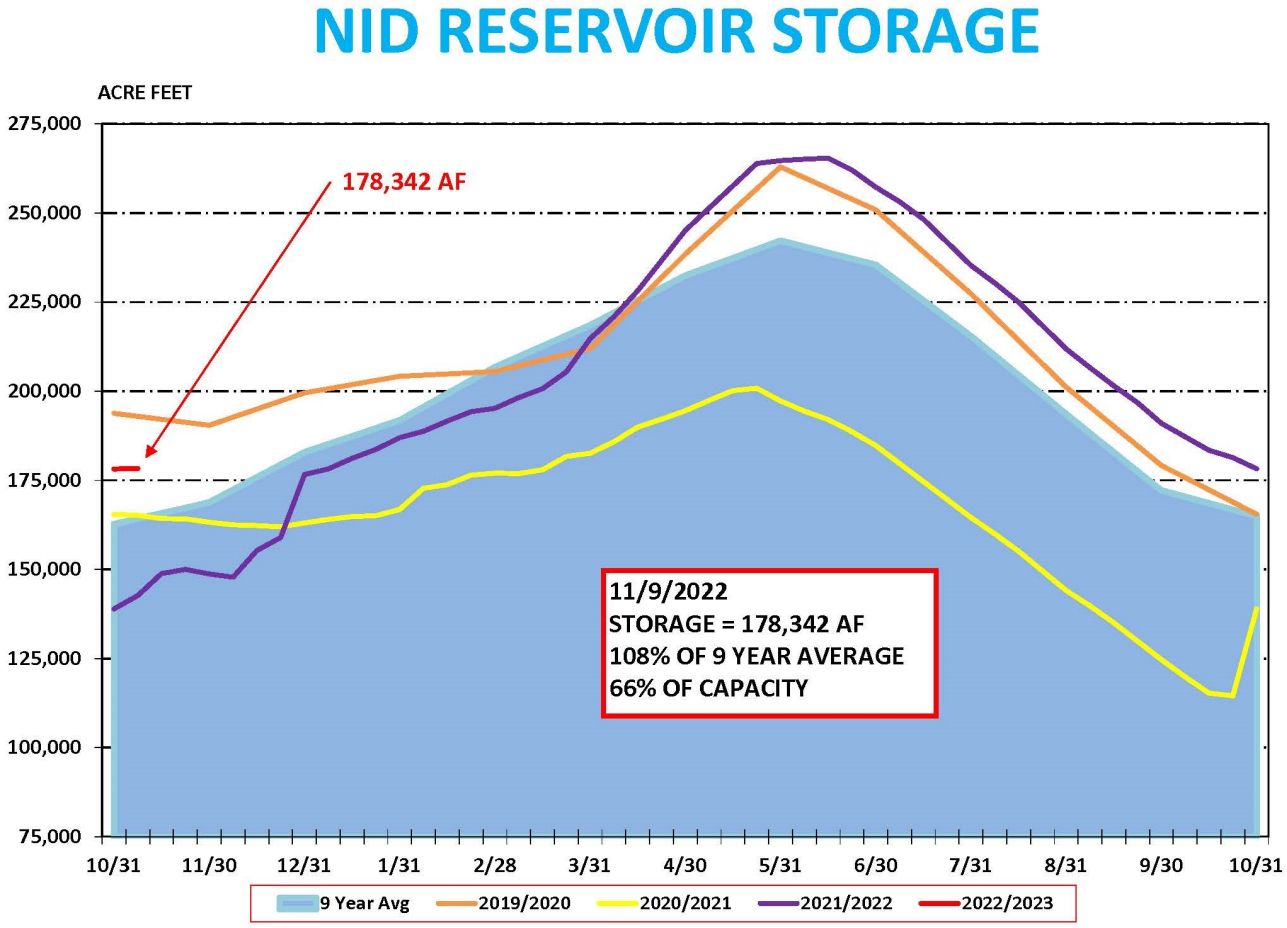


Reservoir storage is above average

Reservoir storage is 178,342 acre-feet as of Nov. 9. That is 108 percent of average and 66 percent of capacity.

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.]



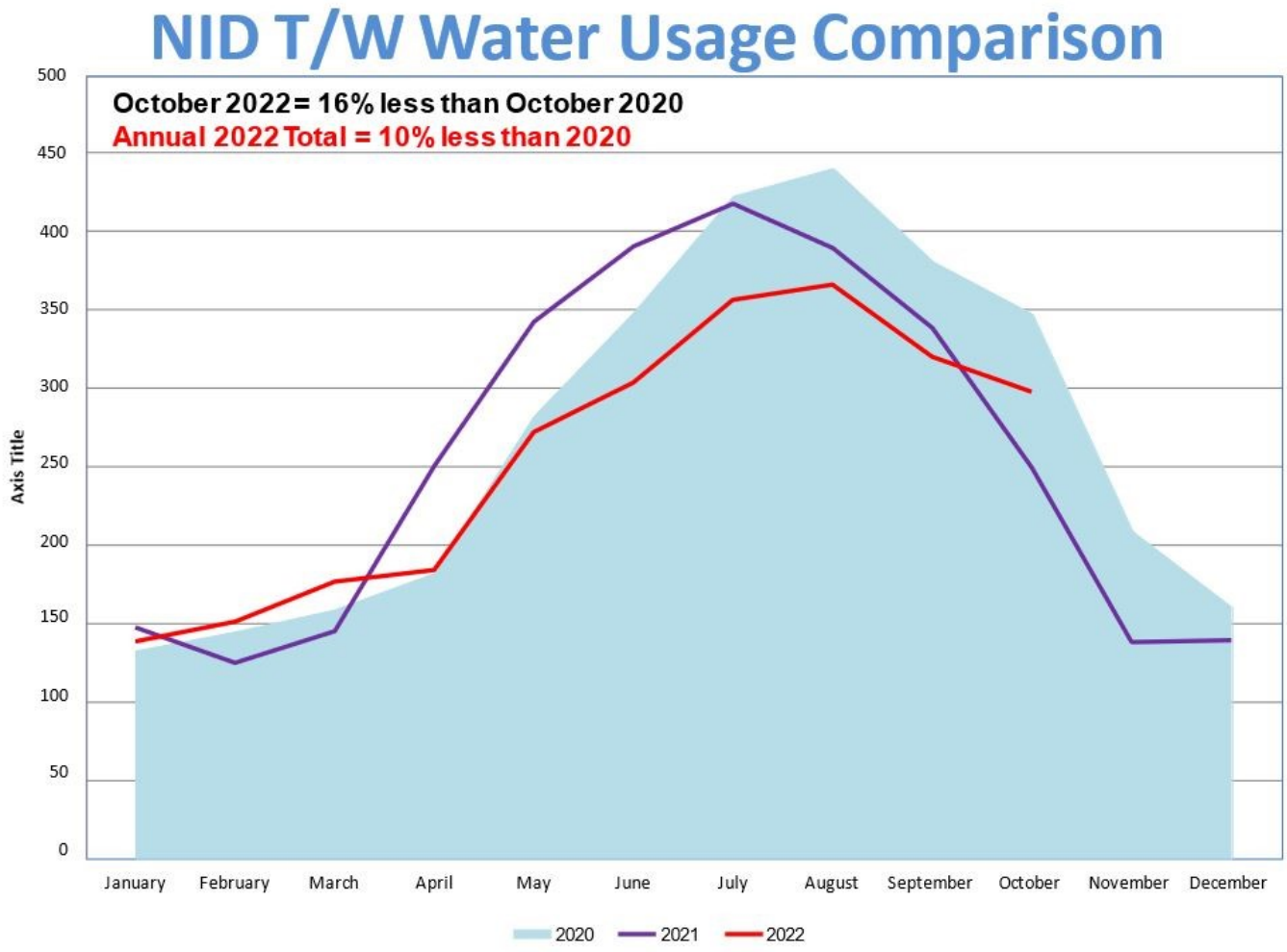
Water conservation — treated water use down 16%

In October, treated water usage was down 16 percent, compared to October 2020. For 2022, total treated water usage is 10 percent less than in 2020.

The challenge for us all is to continue to use water efficiently and boost our conservation numbers. A reduction of 20% is our goal.

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

Measure Your Water Use Calculator



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

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 Department 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.

English Meadow Floodplain Restoration & Enhancement Project

The project includes floodplain restoration and forest management activities on 380 acres within the headwaters of the Middle Fork of the Yuba River (Middle Yuba River) in Nevada and Sierra Counties, California. The activities will take place about 1 mile upstream of Jackson Meadows Learn more, click on the Project Description.

Hydropower Generation Report

The total megawatt-hours (MWh) generated per powerhouse for July

Generation at most powerhouses was near average for the month of September.

Powerhouse	Average Generation	Current Generation
Chicago Park	10,971	10,852
Dutch Flat #	5,122	1,862
Rollins	5,022	4,833
Bowman	1,647	1,841
Combie North	185	185
Combie South	108	0
Scotts Flat	515	605
Total	**23,570**	**20,178**

Hydropower Availability Report

The total percentage of time a powerhouse is available to generate during the given month.

All powerhouses were above budgeted availability.

Powerhouse	Budgeted Availability	Actual Availability
Chicago Park	95.0%	100%
Dutch Flat #2	95.0%	100%
Rollins	95.0%	100%
Bowman	92.4%	100%

Hydropower Outage Report

A list of each time a powerhouse has an outage caused by something other than a lack of water or a planned extended outage

There were no unplanned outages at any of the powerhouses in September. The Chicago Park and Dutch Flat #2 Powerhouses were taken out of service for two weeks for planned annual maintenance.

[Click here: Hydroelectric Project Status Report]

Bowman South Arch Dam

Meetings & Events

Plan for Water Workshop
Tuesday Dec. 13, 2022
NID Office, Grass Valley
4 PM

NID Regular Board of Directors Meeting
Wednesday, Dec. 14, 2022
NID Office, Grass Valley
9 AM

nidwater.com for more information