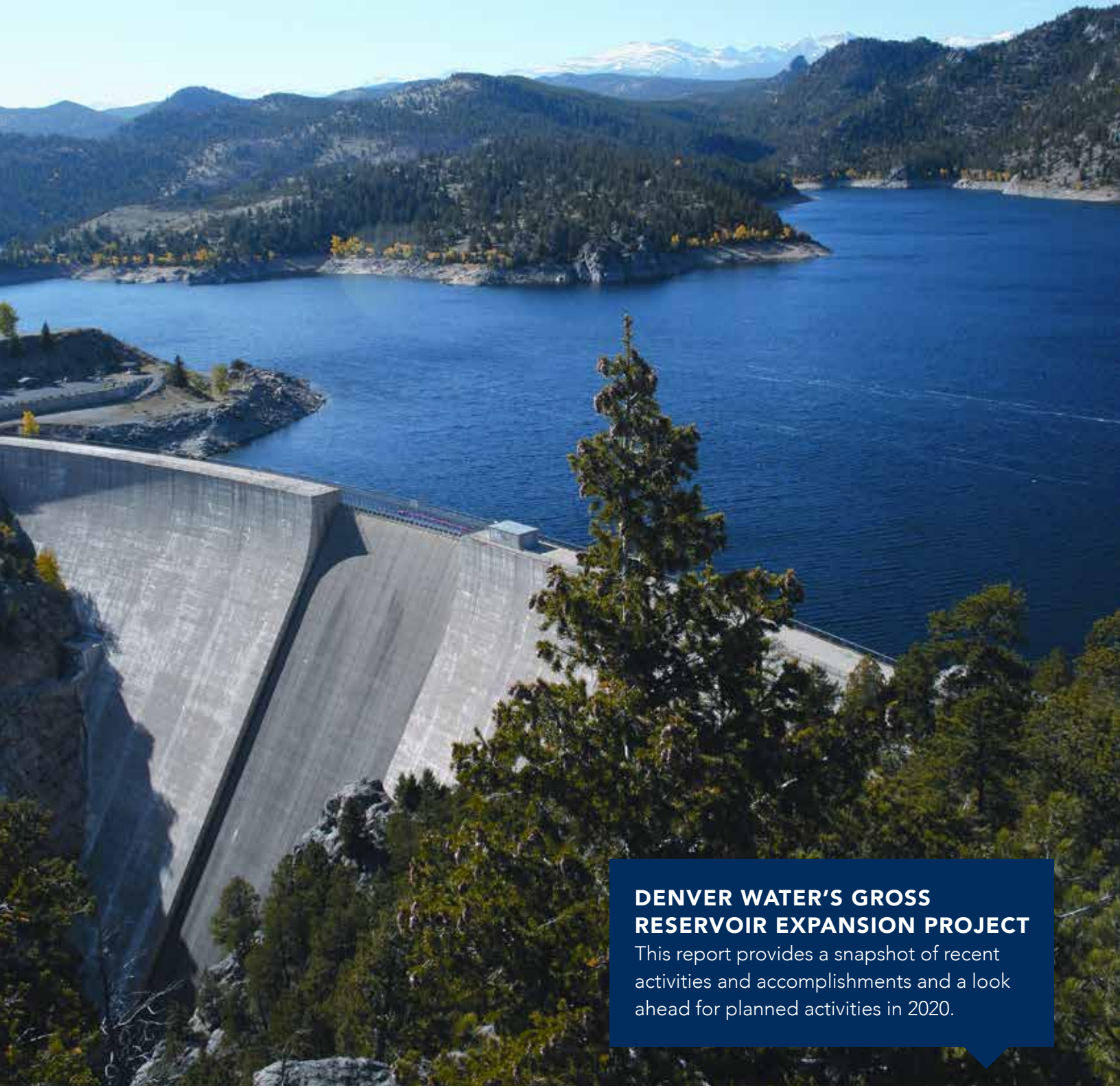


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# 2019 YEAR-END REPORT

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## **DENVER WATER'S GROSS RESERVOIR EXPANSION PROJECT**

This report provides a snapshot of recent activities and accomplishments and a look ahead for planned activities in 2020.

# EXECUTIVE SUMMARY

“In the end, we won’t be judged by whether this project was completed, but how it exemplified Denver Water’s commitment to stakeholder collaboration, environmental stewardship, minimized inconvenience to our neighbors and safety.”

- Jeff Martin,  
Gross Reservoir Expansion,  
program manager

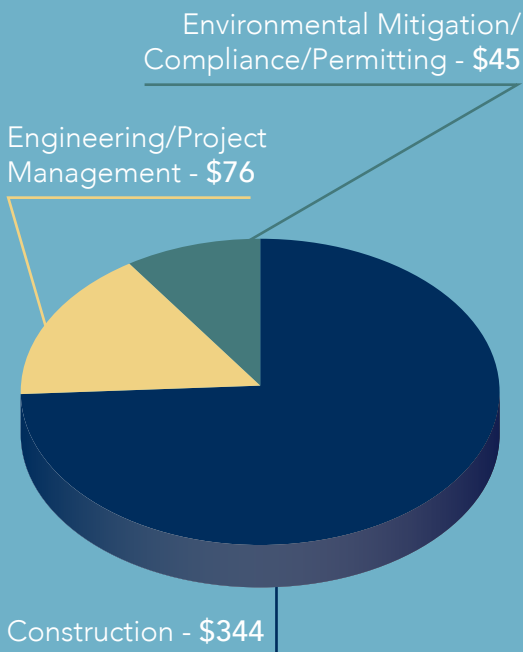
## 2019 IN REVIEW

The Project Management Team has been hard at work in 2019 to:

- Continue to progress dam design
- Complete compensatory mitigation projects
- Foster relationships with local stakeholders

Details of this work are included within this report and we look forward to continuing this work through 2020.

## PROJECT FORECAST (IN MILLIONS - 2025)



## ANTICIPATED PROJECT SCHEDULE

With a project of this size, there are many activities to plan for, from design and on-site preparation to foundation prep and concrete placement. We aim to shorten the project timeline as much as possible to limit the impact to the local community and complete construction in 2025.

## PROJECT COST

The Gross Reservoir Expansion Project is fully funded through Denver Water’s rates, new tap fees and the sale of hydropower. No tax dollars will be directed to Denver Water or the Gross Reservoir Expansion Project. The chart to the left represents the forecasted costs with more than \$24 million spent on environmental permitting and compliance projects since 2003.

# ENVIRONMENTAL COMPLIANCE

## CREATING AQUATIC ORGANISM PASSAGE

In 2019, Denver Water completed its first “toad tunnel” under Vasquez Creek Road just outside Winter Park. The work was done as part of an agreement with the Arapaho and Roosevelt National Forests.

The passage replaced an old, undersized culvert and allows aquatic organisms — including an at-risk species of toad — to more easily pass from one side of the road to the other.



*A nearly completed amphibian passage includes a more natural streambed along the bottom of the passage making movement easier for aquatic species. Photo credit: Denver Water.*

“It’s a whole different river now, with far more good quality fish habitat. The angling public would not have enjoyed these benefits without strong partnerships between CPW, Denver Water, Grand County and other entities.”

- Jon Ewert, Colorado Parks and Wildlife aquatic biologist based in Hot Sulphur Springs.

## WILLIAMS FORK RIVER RESTORATION

Denver Water performed two phases of stream restoration on the Williams Fork River, both above and below Williams Fork Reservoir. The project provided valuable improvements to the aquatic habitat and fisheries by improving low flow conditions, in-stream habitat diversity, channel stability and stream-side vegetation.



*Williams Fork River before stream restoration. Photo credit: Denver Water.*



*Williams Fork River after stream restoration. Photo credit: Denver Water.*

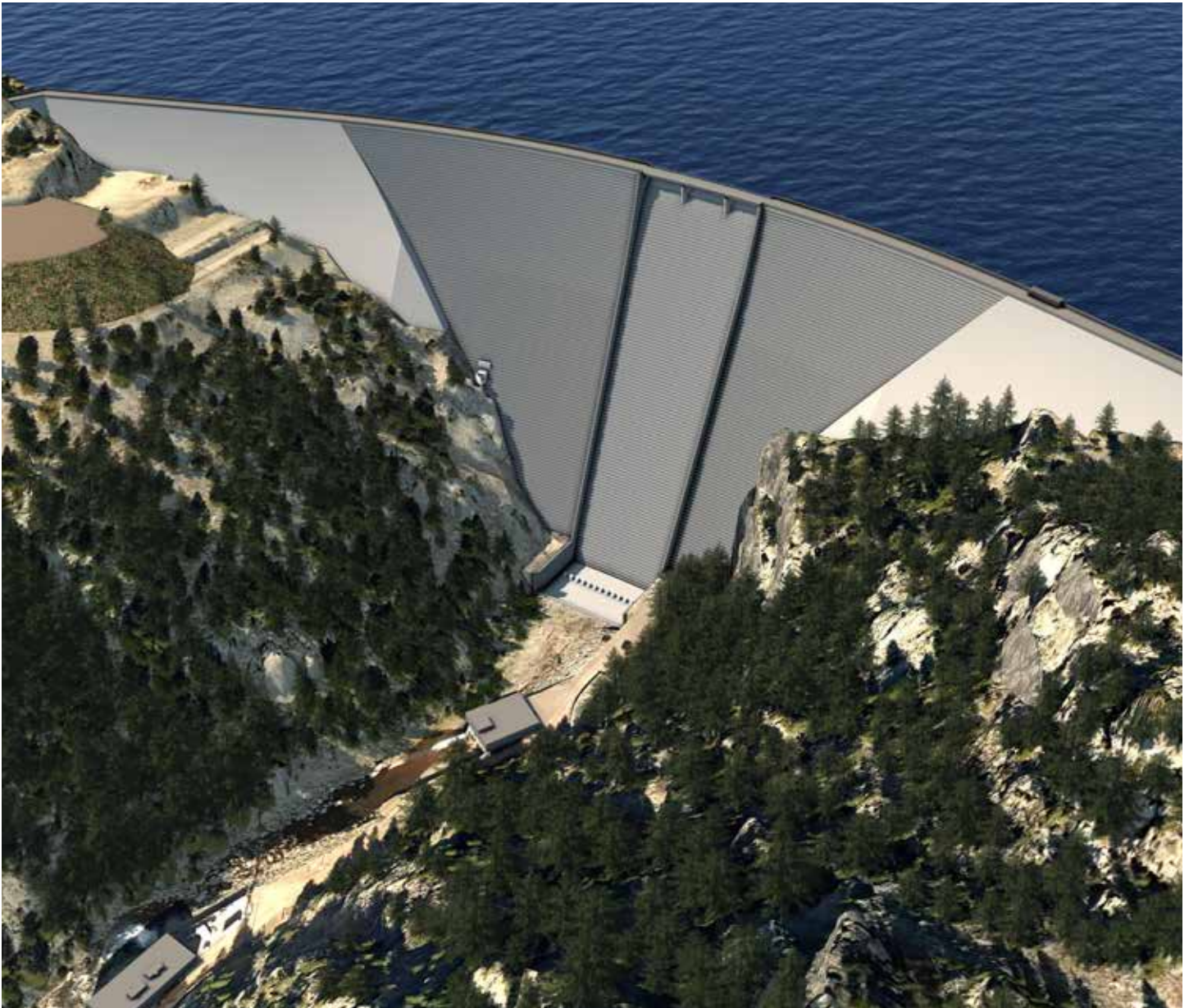
Denver Water stands behind its commitments outlined in its environmental mitigation and enhancement program for the Gross Reservoir Expansion Project. These commitments include, for example, enacting restoration projects and collaborating with partners on environmental enhancement efforts that are required in permits and in agreements with its GRE project stakeholders and partners.

For more information about how the project will have a net environmental benefit on state water quality, visit [grossreservoir.org](http://grossreservoir.org).

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# ENGINEERING

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*Current rendering of enlarged Gross Dam. Photo credit: Denver Water.*

## DAM DESIGN

In 2019, the Design Engineer, Stantec/AECOM, advanced dam design to 60%. Throughout 2019, the Design Engineer and Denver Water continued to share design elements with the Board of Consultants, an independent group of five professional engineers with a combined 173 years experience, and federal and state regulators. Final dam design will continue through 2020.

## SPILLWAY MODEL

In partnership with Colorado State University Hydraulics Laboratory, Denver Water constructed a scaled model of the envisioned Gross Dam spillway. Through this process, the team was able to verify the spillway design and make modifications to the stilling basin configuration.



The stilling basin, shown above, is located at the bottom of the dam and slows water that flows down the spillway. Photo credit: Denver Water.



The Gross Dam spillway directs overflow water through the center of the dam. Photo credit: Denver Water.

## PROJECT DELIVERY

In 2019, the Denver Board of Water Commissioners and Project Management Team elected to deliver the project through the Construction Manager/General Contractor method. This will bring the CMGC into the Project Team earlier than is customary, before design reaches completion. The CMGC contributes valuable constructability reviews and input on design elements with the goal of managing risk, reducing costs and increasing efficiencies.

Following a rigorous bidding, review and interview process, Denver Water selected and received Board approval for hiring Kiewit-Barnard (joint venture) for pre-construction services in July of 2019. Since joining the Project Team in mid-July, the Kiewit-Barnard (joint venture) team has reviewed the 30% dam design and provided alternative ideas and innovations that are currently under review with the Project Team.

## SAFETY



**HOURS WORKED**

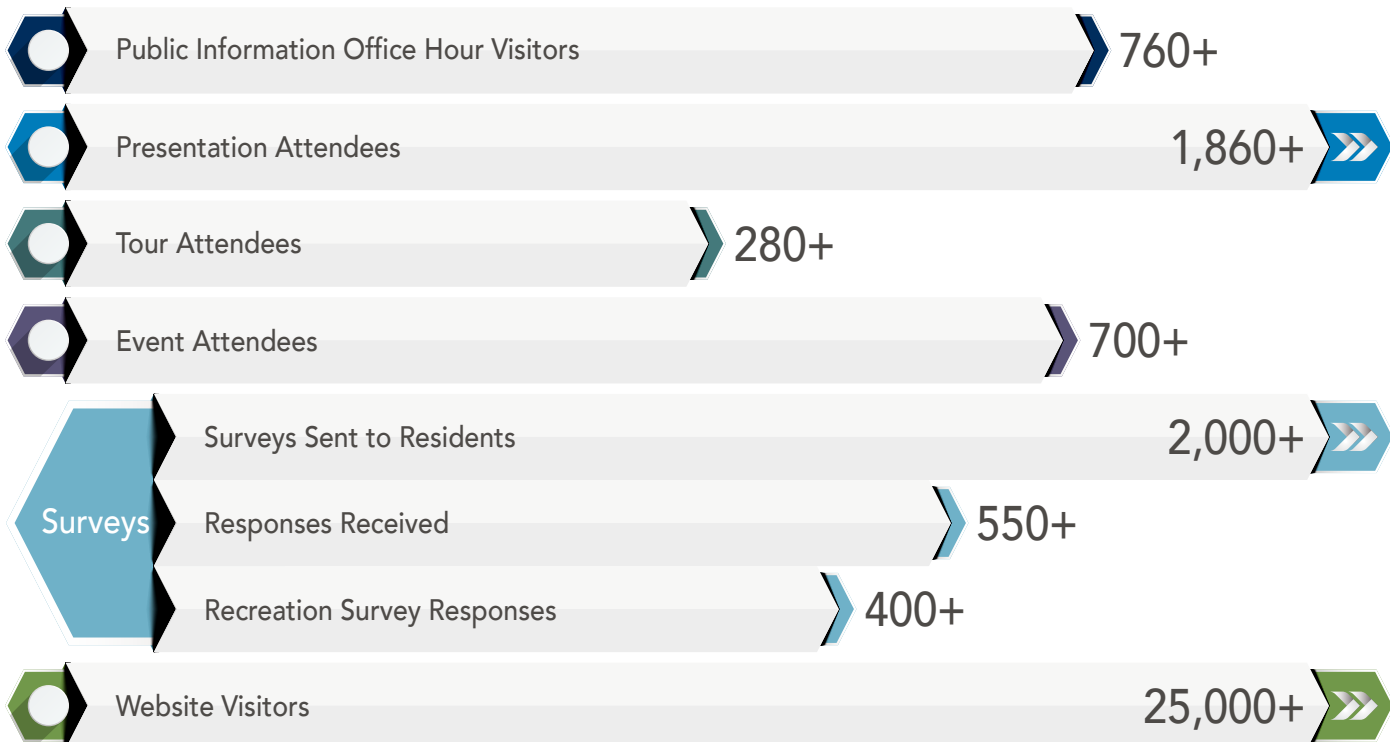


**NO INCIDENTS**

Denver Water continues a strong safety culture by performing “safety shares” before meetings and tours. These moments help share potential risks and tips to ensure safe work practices, both in the office and on-site.

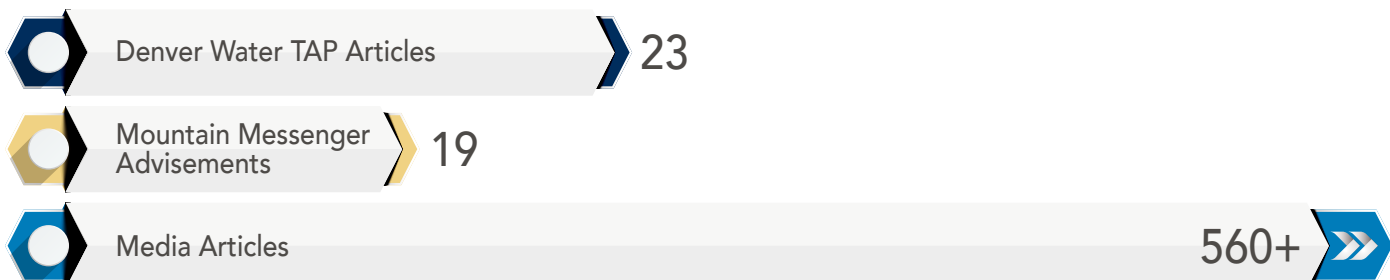
# STAKEHOLDER OUTREACH

2017 - 2019



# NOTABLE MEDIA

2017 - 2019



# LOOK AHEAD

## ON THE GROUND

Crews will continue to work on communications, utilities, safety and on-site operations improvements. This work will keep Denver Water operations up-to-date to ensure a reliable source of water.

## COME OUT AND PLAY!

Recreation opportunities at Gross Reservoir are unchanged for the 2020 boating season. Water access will be available from the Osprey Point boat ramp from Memorial Day through Sept. 30.

## PLANNING FOR SUCCESS

Design will continue with input from the Board of Consultants, regulators and the CMGC.

## ENVIRONMENTAL BENEFITS

Denver Water will work on various environmental mitigation projects and continuing stakeholder coordination of the tree removal plan.

## LET'S CHAT!

If you were not able to visit us at the yurt in 2019, we hope you will stop in next time you are at Gross Reservoir. During the summer months, the public information yurt is open three to five days per week, and year round, we host weekly office hours at Coal Creek Coffee.

