



2019 CCA H2O Award  
Best Dam Project

OWL ROCK DAM  
Virginia Dale, CO

#### WHY THIS PROJECT IS RELEVANT

- CM/GC Delivery
- Cost savings through VE
- High mountain elevation
- Creative construction phasing
- Spans seasons
- Integrated project team
- On time and within budget

#### PROJECT SIZE

12,000 LF of Transfer Piping  
25' Excavated Foundation  
13,000 Tons of Sand

#### INITIAL/FINAL COST

\$6,425,080/\$5,602,163

#### CHANGE ORDERS

None

#### COST SAVINGS

>\$800,000

#### SCHEDULE

June 2018 - May 2019

#### PROJECT TEAM

Dan Sewczak  
Jesse Sewczak  
Mike Sewczak

Built for the founder of ReMax, Owl Rock Dam was designed to be a retreat for the outdoor enthusiast. To ensure the owner's goal of having the reservoir filled in May of the following year, Zak Dirt was selected to partner with the engineering firms to expedite the process due to our unrivaled dam construction experience in Colorado's climate and high elevations. Zak Dirt was selected as the project's CM/GC and used this role to offer many cost saving and value engineering ideas to the project team.

Features of the project included a trout rearing pond, which also doubled as a sediment catch, to keep the stream clear, a flyfishing trout stream, complete with natural fish habitat, a waterfall/beach area and a boulder lined shoreline/fish habitat/vehicle bridge across the spillway. Zak Dirt self performed all work items excluding seeding and planting.

**Located in Virginia Dale, Colorado at an elevation of over 7,000 feet, the main dam for the reservoir was a 35' tall earth embankment.** The project also consisted of 12,000 linear feet of transfer piping, a pump station, and a secondary pond with an HDPE liner. The secondary pond was used to draw water from the stream below the ranch to pump the water up to the main reservoir. Additionally, the work entailed a sand filter drain on the downstream slope and riprap on the upstream slope and the entire reservoir was lined with a sand filter to assist in a "clear water look." The spillway channel was comprised of a rock cut channel, concrete training walls, grade control wall and the outlet works consisted of a cast in place intake structure, 30" concrete encased pipe and a cast in place outlet structure.



OWL ROCK DAM (Continued)  
Virginia Dale, CO

## REFERENCES

### OWNER

Jack Byers  
The Byers Group  
303-928-0327  
jbyers@byersgroupllc.com

### ENGINEER

Tara Schutter  
Tessara Water  
tara@tessarawater.com  
303-710-9108

### SELF PERFORM

96%

All scopes of work except  
seeding and planting

## CREATIVE VALUE ENGINEERING AND CONSTRUCTABILITY

Selected for our unparalleled dam construction experience and our ability to partner seamlessly with the engineering team to expedite the project, Zak Dirt was able to thoughtfully reduce costs on certain, more functional, items of the project to allow the owner to use more of the budget to create the mountain paradise he was looking for.

To address the owner's goal of having the reservoir filled by May of the following year despite the need for the project to span two seasons, Zak sequenced the job including separating out the foundation package to allow for approval of an early start while design and final approval for construction was approved. This approach allowed us to start foundation excavation and cleaning as well as preliminary fill of the foundation to ground level which in turn allowed the outlet works to be built. Once the foundation was excavated and the fill was completed, we had received full approval of the dam and outlet works design.

**This phased approach to receiving partial preliminary approval was crucial due to the impending winter months and the high mountain elevation.**

In addition to the phased start, Zak Dirt employed various other strategies to address the subzero temperatures, snowstorms and constant winds, including ground heaters; stockpiling excavated fill material to allow for moisture treatment and reducing the amount of water required and 24/7 operations with overlapping crews so equipment was never shutdown for more than 30 minutes.