



MEADOW LAKE DAM
Lyons, CO

WHY THIS PROJECT IS RELEVANT

- Cost savings through VE
- Integrated project team
- Collaboration with engineer
- Colorado project
- Mountain reservoir
- On time and within budget

PROJECT SIZE

30' Tall Earth Dam
Downstream Sand Filter
2' Riprap Zone
200' x 5-14' Spillway Training Wall

INITIAL/FINAL COST

\$1,362,214/\$1,157,894

CHANGE ORDERS

None

COST SAVINGS

>\$200,000

SCHEDULE

October 2018 - July 2019

PROJECT TEAM

Dan Sewczak
Jesse Sewczak
Mike Sewczak

Zak Dirt was contracted by Big Elk Meadows Association on two separate occasions to construct two dams destroyed in the 2013 Flood. Both dams were partly funded by FEMA with the association matched the remaining funds.

The project consisted of a 30 foot tall earthen dam with a downstream sand filter and a 2 foot riprap zone upstream. Additionally, the project entailed the construction of a 30 foot tall intake tower, concrete encased pipe and a cast-in-place outlet baffle structure.

Zak Dirt also constructed a 200 foot long and 5-14 foot tall spillway training wall as well as a spillway cutoff and riprap channel.

Originally a hard bid project that came in over budget, a call to all bidders was put out to submit value engineering proposals and Zak Dirt was ultimately selected for the job due to our creative ideas and the recommendations that Association board members received from our past clients, local property owners and engineering firms and designers.

Once the project was awarded, Zak Dirt worked closely with the designer to collaborate on the redesign based on our value engineering proposal and develop the new plan.

Despite the delays and the redesign, we were able to deliver the project on schedule, and bring much needed relief to the Big Elk Meadows community after their devastating losses.



MEADOW LAKE DAM (Continued)
Lyons, CO

REFERENCES

OWNER

Glenn Christensen
Big Elk Meadows Association
303-823-5328
glenn.christensen@att.net

ENGINEER

Nick Miller
GEI Consultants
303-264-1046
nmiller@geiconsultants.com

SELF PERFORM

98%

All scopes of work except
seeding and planting

CREATIVE VALUE ENGINEERING AND CONSTRUCTABILITY

Zak Dirt recognized that the main reason for the project being over budget was the fact that while there was plenty of fill on site, the fill did not meet the homogeneous fill requirement. This meant that all fill materials would have to be imported from offsite sources along the Front Range.

To address this issue, Zak Dirt proposed to change the homogeneous fill to a zoned embankment. This approach meant that only a clay core would be imported, and the shell material, which had less stringent specifications, could be mined on site.

This approach led to a significant reduction of the import material of over half the amount originally thought to be needed and, thus, a savings to the Big Elk Meadow Association of over \$200,000.