

GOOSE PASTURE TARN DAM REHABILITATION PROJECT

PUBLIC OUTREACH FACT SHEET

Dear Interested Citizen,

You are invited to attend upcoming Public Meetings to learn about the planned rehabilitation of Goose Pasture Tarn Dam, and to provide questions and comments. The rehabilitation, which primarily includes replacement of two existing spillways with a single larger spillway, is intended to improve the safety and long-term operation of the dam.

Public Meetings

Surrounding Residents Meeting

Date and Time: November 7, 2019 - 6:00 pm – 8:00 pm
Place of Meeting: Blue River Town Hall, Whispering Pines Circle, Blue River, CO
General Subject: Discuss reasons for rehabilitation, planned construction and construction schedule, operation of the reservoir during construction

Breckenridge Public Meeting

Date and Time: November 14, 2019 - 6:00 pm – 8:00 pm
Place of Meeting: Breckenridge Recreation Center, 880 Airport Road, Breckenridge, CO
General Subject: Goose Pasture Tarn Dam Rehabilitation – discussion similar to the November 7 Public Meeting in addition to questions regarding downstream safety concerns regarding the existing dam, during the rehabilitation construction, following rehabilitation construction.

Public comments and questions before or following the meeting are encouraged and can be submitted online at the informational website for the Project:

www.TownOfBreckenridgeGPTD.com

Facts About Goose Tarn Dam and Reservoir

- 57-foot high zoned earthen dam located on the Blue River, 2 miles south of Breckenridge.
- Constructed in 1965 and owned and operated by the Town of Breckenridge since 1970.
- An emergency spillway constructed in 1990 to provide additional spillway capacity above that provided by the concrete service spillway included as part of the original dam.
- Provides water to the Gary Roberts Water Treatment Plant serving residents of Breckenridge.
- One of 429 Colorado dams classified as “High Hazard” based on estimated consequences if the dam were to fail; not on the condition of the dam (2018 National Inventory of Dams, US Army Corps of Engineers).



Reasons for Rehabilitation

- In 2016, safety issues with the use of the concrete service spillway during high flows were identified.
- Colorado Dam Safety imposed a reservoir storage restriction, lowering the water level that could be stored in the reservoir by 4 feet to a safer level, and restricted flows down the service spillway.
- Previously unused emergency spillway has been lowered 4 feet below the service spillway and can handle up to 100-year flows without spilling into the restricted service spillway.
- Investigations into the causes for deterioration of the service spillway identified dam safety concerns regarding the spillway and dam requiring rehabilitation.

Planned Rehabilitation

- Replacement of the existing service spillway and emergency spillway with a single overtopping concrete spillway.
- Construction of a 2.6-foot raise of the dam crest for flood protection only (the raise will not result in additional reservoir storage capacity).
- Construction of a new drainage system designed to safety control seepage through the dam.
- Lining of the 54-year old outlet conduit to protect against outlet leaks that could impact dam safety.

Preliminary Construction Schedule and Reservoir Operations

Construction originally planned to begin May 2020, but pushed back a year due to COVID-19.

Revised construction timeline from May 2021 to September 2023 (three construction seasons):

- Season 1 – May 2021 to October 2021: Initial demolition of spillway structures, and construction of measures to divert reservoir flows during construction. Anticipate completely draining reservoir for about one month in August/September.
- Season 2 – May 2022 to October 2022: Spillway, dam embankment, and outlet works construction. Anticipate lowering reservoir about 7.5 feet below the current restricted reservoir level from May to September, completely draining the reservoir from September to mid-October, and allowing reservoir to operate at the original level (4 feet higher than the currently imposed restricted level) thereafter.
- Season 3 – June 2023 to September 2023: Dam rehabilitation completed. Reservoir will then operate at the original level, 4 feet above the current restricted level.

Reservoir lowering is anticipated to impact residential wells in proximity to the reservoir. The Town is currently performing assessments and developing possible measures to reduce those impacts and will be contacting residents around the reservoir for those efforts.



Dam Safety

- The Town Public Works staff regularly monitors dam conditions through visual observation, and a series of monitoring wells (aka piezometers) and drains.
- Colorado Dam Safety personnel and engineers working for the Town inspect the dam on a yearly basis.
- The reservoir will be kept at the restricted level imposed by Colorado Dam Safety until a new spillway has been constructed.
- A plan to safely divert river flows around the dam during construction will be implemented.
- A recently updated emergency action plan for quickly addressing any unanticipated dam safety issues, developed jointly by the Town, Colorado Dam Safety, and Summit County Emergency Management, will be implemented to address any unanticipated dam safety issues if needed.

Environmental Considerations

Environmental studies are underway to assess wetlands, endangered species, and cultural resources impacts. Engineers for the Town are working with the Federal Emergency Management Agency (FEMA), the State Historic Preservation Officer (SHPO), and the U.S. Army Corps of Engineers to complete these assessments and obtain necessary permits for construction.

Financial

The estimated construction cost, excluding engineering and permitting, is in the range of \$15 Million to \$20 Million. The Town has been selected by FEMA for funding (\$10 million) under the Pre-Disaster Mitigation Grant program for the rehabilitation project, contingent on satisfying FEMA requirements. The Town plans to apply for a loan with the Colorado Water Conservation Board (CWCB) for the remaining construction cost.

Additional Information

Additional information and ongoing updates regarding the planned Goose Pasture Tarn Dam Rehabilitation, including instructions for submitting comments and questions, can be found at the Town of Breckenridge website for the Project:

www.TownOfBreckenridgeGPTD.com