

Chimney Hollow to have one of first asphalt core dams in United States

Reservoir to be build SW of Loveland

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This graphic, provided by Northern Water, depicts Chimney Hollow Reservoir, located southwest of Loveland, after it is built. The reservoir, which will hold water for 13 providers, also will have a new recreation site to join Carter Lake, Pinewood and Flatiron reservoirs in the same area. *(Special to the Reporter-Herald)*

When Chimney Hollow Reservoir is built, the dam will be one of the first in the United States with an asphalt core — a method developed in Germany in the 1960s and used widely in other countries.

The reservoir, located southwest of Loveland, will have one large and one small dam, allowing it to hold 90,000 acre-feet of water for 13 providers, including the city of Loveland.

The large dam will stand 350 feet tall — the largest built in Colorado in nearly 50 years and the tallest ever in Larimer County — and will span about 3,000 feet, or about half a mile.



A barn and another structure dot the landscape on the south end of the Chimney Hollow site near Flatiron Reservoir. (*Jenny Sparks / Loveland Reporter-Herald*)

After more than a decade of planning and permitting, the U.S. Army Corps of Engineers issued a record of decision earlier this month allowing construction of the reservoir with several environmental mitigation requirements. Northern Water, which is managing the project for the water providers, estimates that construction could begin in late 2018 or early 2019 and take up to four years.

They estimate water could begin flowing into the reservoir in 2023, firming up a supply of Windy Gap water from the Colorado River by providing a place to store it during wet years for use in dry years.

The traditional type of dam used in the United States, including others in Larimer County such as Carter Lake and Horsetooth Reservoir, have an impermeable core of clay that is surrounded by rocks.

In the design of this project, engineers considered that option, but realized that there was not enough clay on site, so instead they chose an asphalt core, which is said to be safer and stronger, explained Joe Donnelly, assistant project manager with Northern Water.

An independent panel of experts reviewed the different options and agreed that was the best fit, noted Brian Werner, spokesman for Northern Water

Dams with asphalt cores are widespread in Europe, including in Norway, Austria and Germany, as well as in Canada, but there has not yet been one built in the United States.

A project in Arizona with an asphalt core dam is expected to start about the same time as Chimney Hollow, but because it is smaller (about half as tall), construction will not take as long, and it likely will be the first completed in the United States, Donnelly said.

Chimney Hollow's two dams will become the second and third.

The largest dam at Chimney Hollow will be 1,000 feet wide at the bottom, tapering up to 30 feet wide at the top, Donnelly explained. The asphalt core, he said, will be 4 feet wide in the center of the dam.

Surrounding the core will be rock to provide the sturdiness and strength, 12 million cubic yards that will be mined on site from the land that, in about six years, will be covered with water.

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Joe Donnelly, project manager for Northern Water, left, and Brian Werner, spokesman for Northern Water, take in the view Tuesday from the Chimney Hollow site near Flatiron Reservoir southwest of Loveland. (Jenny Sparks / Loveland Reporter-Herald)