

High Mountain Dams in Upalco Unit,
Kidney Lake Dam
Ashley National Forest
4.7 miles north of Miners Gulch Campground
Hanna-Vieinity MOUNTAIN HOME VICINITY
Duchesne County
Utah

HAER No. UT-42-J

HAER
UTAH,
7-MDHO.V,
1-J-

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park Service
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80537

HISTORIC AMERICAN ENGINEERING RECORD

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High Mountain Dams in Upalco Unit, Kidney Lake Dam

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Location: 4.7 miles north of Miners Gulch Campground, Ashley National Forest
Hanna-vieinity, Duchesne County, Utah
MOUNTAIN HOME VICINITY.
UTM: 12.532440.4494260
Quad: Kidney Lake

Date of Construction: 1920

Builder/Designer: Farnsworth Canal and Reservoir Company

Present Owner: Moon Lake Water Users Association, Roosevelt, Utah 84066

Original Use: Dam

Present Use: Dam

Significance: Kidney Lake is by far the largest of the reservoired high mountain lakes in the Upalco Unit of the Central Utah Project. One of three lakes in the Brown Duck Basin dammed by the Farnsworth Irrigation Company in 1920, its 630-foot dam is among the largest built in the Unit. The dam itself is representative and relatively well-preserved, but the recent replacement of the outlet mechanism has comprised its historical integrity.

Inventoried by: Clayton Fraser and James Jurale
Fraserdesign
Loveland, Colorado

October 20, 1985

HISTORICAL INFORMATION

The Farnsworth Canal and Reservoir Company filed for irrigation water storage rights on three high mountain lakes--Island, Kidney and Brown Duck--in the Lake Fork River drainage in July 1915. The permits were approved by the State Engineer the following April and, by November 1920, small-scale earth-fill dams had been completed at all three lakes to raise and control the water levels. Located on a small tributary of the Lake Fork River, Kidney Lake Dam is by far the largest of the reservoirs in the Brown Duck Basin. Its 630-foot dam is the longest of the three and is built using typical earth fill construction with sloped, riprap-covered faces. In 1977, the original outlet works, with a cribbed log support structure, were replaced with the current inclined steel pipe outlet and screw. It is proposed that the dam be breached to lower the lake to within three feet of its natural level.

ARCHITECTURAL INFORMATION

Dam length: 630 feet
Dam height: 24 feet
Dam width: 14 feet
Construct: Earth fill dam with stone riprap facing
Lake size: 194.2 acres; 3,288 acre-foot maximum capacity; 20 vertical foot maximum drawdown
Outlet: Gated steel pipe

BIOGRAPHICAL INFORMATION

"Preliminary Engineering Report: Stabilization of High Mountain Lakes, Upalco Unit, National Forest Service Report, 1970, page 20.

William F. Gettleman, "Report on the Lakes and Reservoir of the Headwaters of the Uintah, Whiterocks and Lakefork Rivers, Uintah Project, Utah; Feb. 1932," page. 20.

Field inspection by Clayton Fraser, July 22, 1985.

For additional information, see Irrigation Canals in the Uinta Basin, HAER No. UT-30.

