

MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS,
MILL CREEK 3 UPPER FLOWLINE

HAER No. CA-2272-M

Mill Creek
Yucaipa vicinity
San Bernardino County
California

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of Interior
1111 Jackson Street
Oakland, California 94607

HISTORIC AMERICAN ENGINEERING RECORD

MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS, MILL CREEK 3 UPPER FLOWLINE

HAER No. CA-2272-M

Location: The Mill Creek 3 Upper Flowline (MC 3 Flowline) runs from the MC 3 Intake west to the MC 3 Penstock, within Mill Creek Canyon in San Bernardino County, California. The MC 3 Flowline runs west on USGS topographic map Forest Falls, Sections 13, 14, 15, 16, and 17; T. 1S., R. 1W.) and Yucaipa (Section 17; T. 1S., R. 1W.).

Significance: The MC 3 Upper Flowline is a contributing feature to the Mill Creek Hydroelectric System Historic District. MC 3 is one of the earliest examples of a high-head hydroelectric system within the United States and one of the first commercial three-phase alternating current stations in California. Three-phase alternating later became the industry standard.

Description: The MC 3 Upper Flowline is nearly six miles long. It consists of concrete pipes, tunnels and inverted siphons. There are about 25,000 linear feet of concrete pipe, with about a 31-inch diameter on the inside. They line the 19 tunnels associated with MC 3. The outer walls of the pipes are about three inches thick, and made with Portland cement cast at the site. They are buried about three feet below the surface and are laid throughout the MC 3 tunnels, except where the siphons are located. Concrete manholes structures with metal lids are situated along the flow line and are used to do repairs and inspections.

History: The MC 3 Flowline was constructed as part of the Mill Creek 3 Hydroelectric System. The MC 3 system was constructed between 1899 and 1903 by the Redlands Electric Light and Power Company, later absorbed by Edison Electric Company of Los Angeles in 1901. The MC 3 system is still in operation today and is owned and operated by Southern California Edison. Please see the Historic Context section in the general Historic American Engineering Record for the Mill Creek 2 and 3 Hydroelectric Systems (HAER No. CA-2272) for additional information.

Sources:

Fowler, Frederick Hall. *Hydroelectric Power Systems of California and Their Extensions into Oregon and Nevada, Water-Supply Paper 493*. Washington, D.C.: Government Printing Office, 1923.

White, David R. M. "Cultural Resource Management Plan for the Southern California Edison Company Mill Creek Hydroelectric Project (FERC Project No. 1934) San Bernardino County, California," June 1993.

Low, George P. "The Generating, Transmission and Distribution Systems of The Edison Electric Company of Los Angeles, Cal.," *The Journal of Electricity, Power and Gas*. vol. XIII, no. 1. January, 1903.

"Means Much to Redlands: Big Light and Power Deal Closed," *Los Angeles Times*. May 25, 1901, 8.

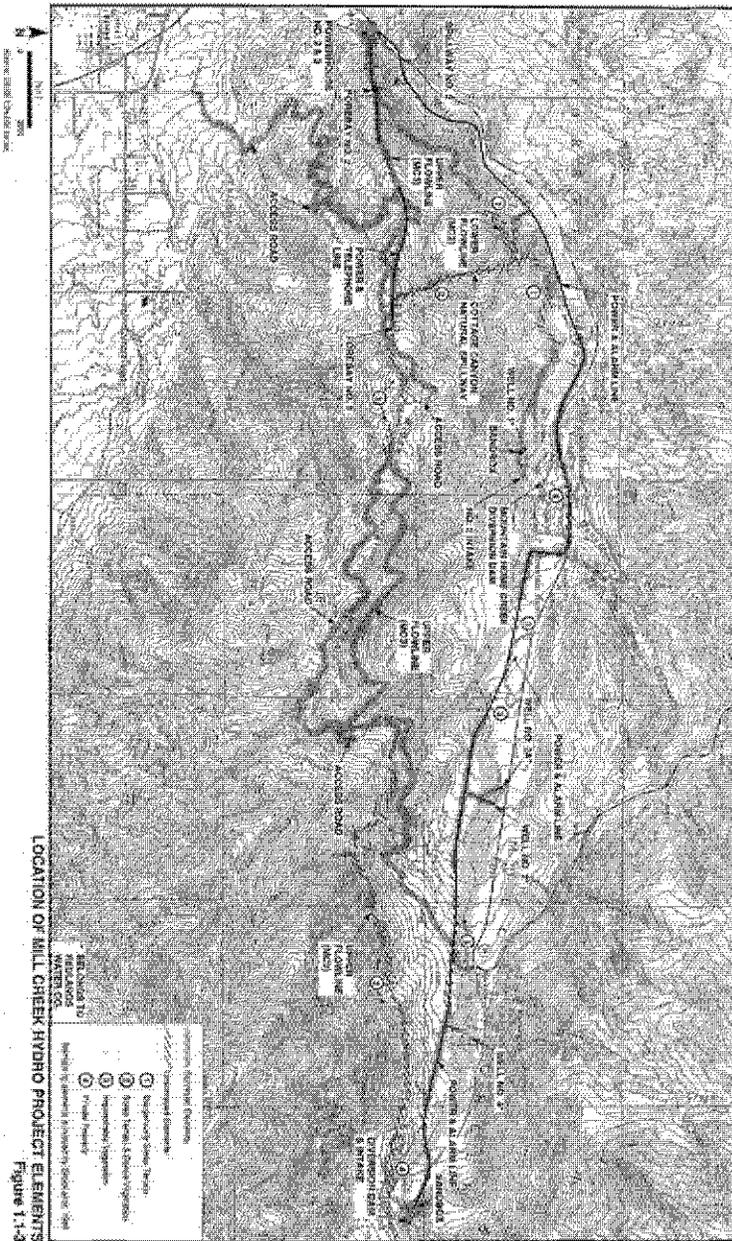
“Redlands Electric Light & Power Co., Edition Electric Co. of Los Angeles, Mill Creek Powerhouses,” *National Register of Historic Places Inventory – Nomination Form*, April 30, 1985, item number 7, 10.

Secord, Paul R. “National Register Nomination: Southern California Edison Company, Mill Creek Hydroelectric System,” National Park Service, 1985. The building has been declared a contributing element to the Mill Creek Hydroelectric Project Historic District.

Historian: Christeen Taniguchi, Senior Architectural Historian, and Nicole Collum, Architectural Historian II, Galvin Preservation Associates, 1611 S. Pacific Coast Highway, #104, Redondo Beach, CA 90277, 2008-2009.

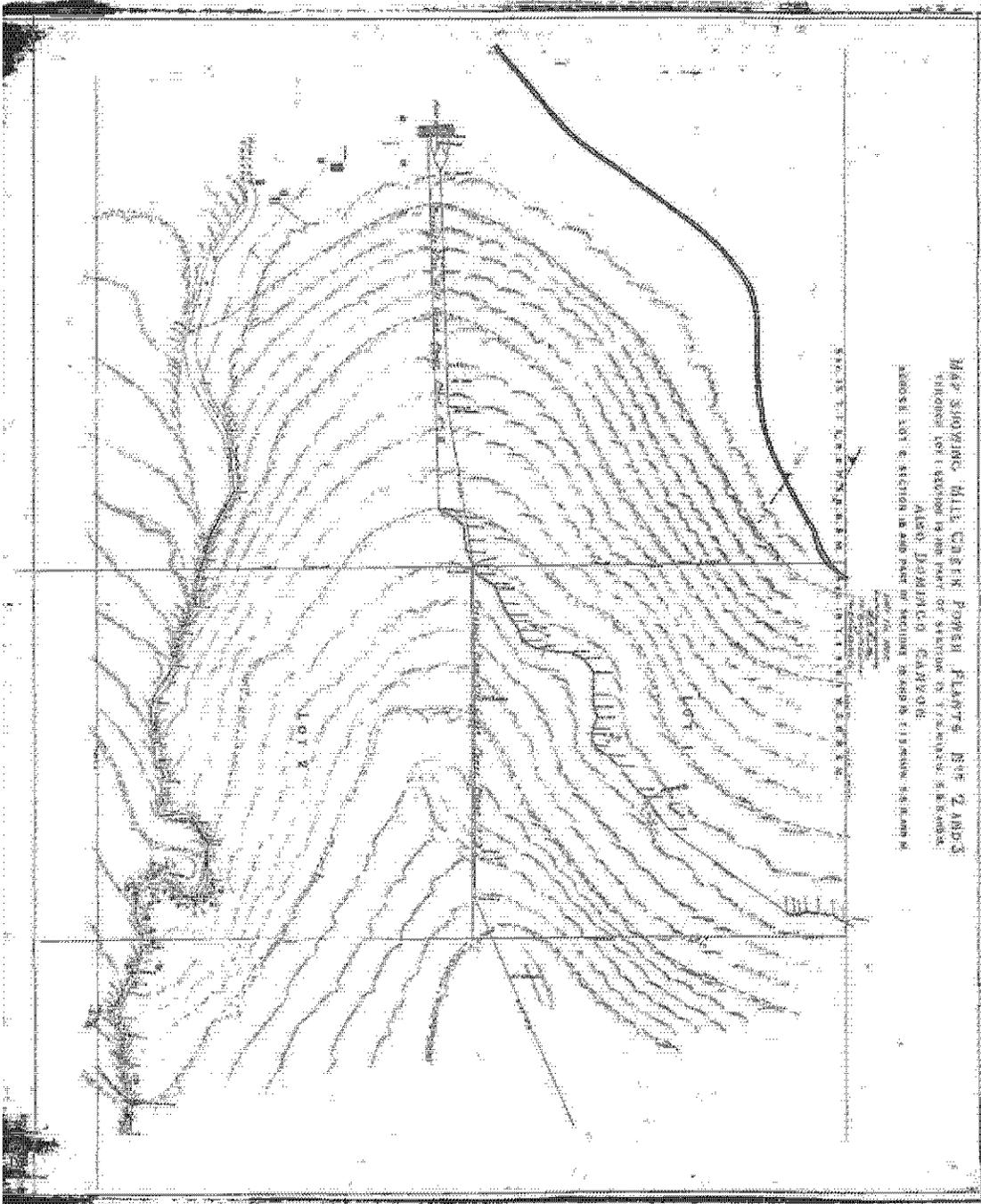
Project Information: MC 2 has not operated since 1992 when it was damaged during floods. It was not, however, decommissioned. The Southern California Edison Company, in conjunction with the San Bernardino National Forest, the agency that owns the property, proposes to formally decommission the facility. This process will include filling the sandbox and forebay with slurry, and removing the metal features. Although MC 3 is still in operation, it is also being recorded as part of this project because of the system’s close association with MC 2.

MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS,
 MILL CREEK 3 UPPER FLOWLINE
 HAER No. CA-2272-M
 (Page 3)

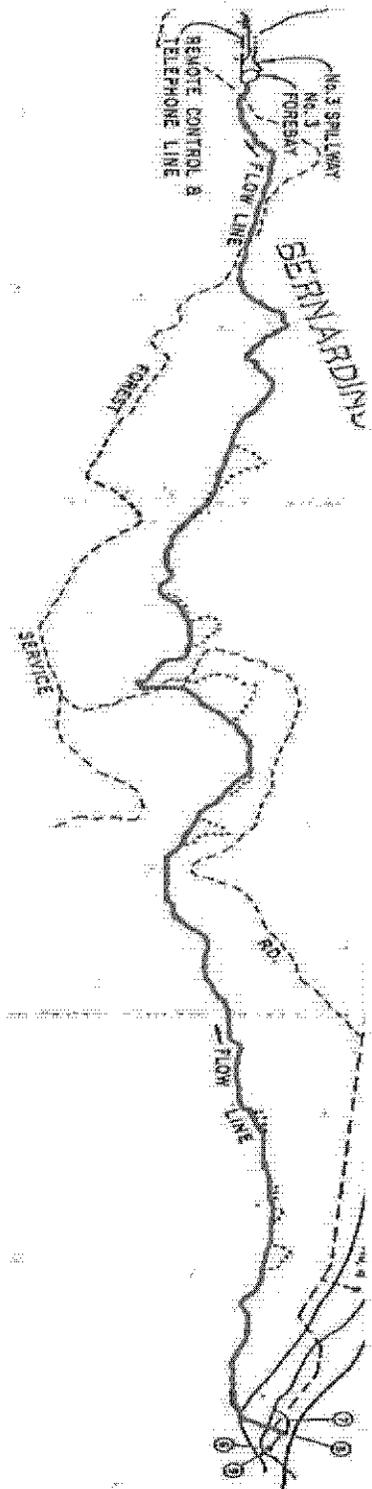


Location of Mill Creek Hydro Project Elements. (Map Courtesy of Southern California Edison)

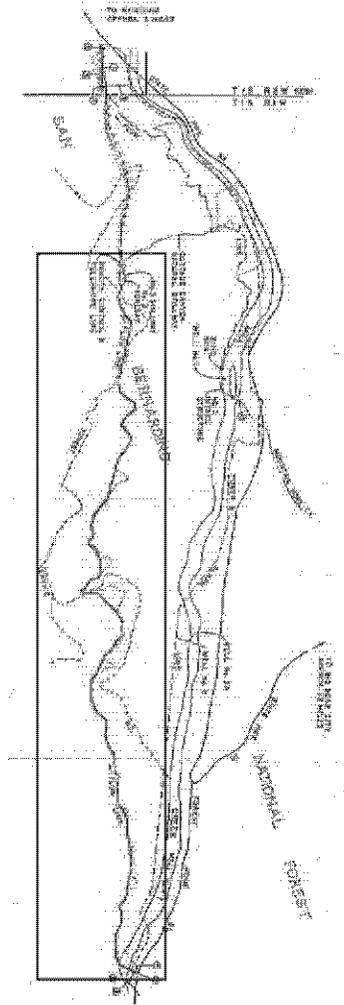
MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS,
MILL CREEK 3 UPPER FLOWLINE
HAER No. CA-2272-M
(Page 4)



Overview map of Mill Creeks 2 and 3 from circa 1903 using data from surveys conducted by F.C. Finkle (Courtesy of Southern California Edison)



MILL CREEK 3 UPPER FLOWLINE SITE PLAN DETAIL



MILL CREEK 3 UPPER FLOWLINE SITE KEY PLAN

Mill Creek 3 Upper Flowline Site Plan. Map indicates the location of the MC 3 Upper Flowline.