

LAGUNA DIVERSION DAM
Laguna Dam Road
Yuma vicinity
Yuma County
Arizona

HAER AZ-87
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

LAGUNA DIVERSION DAM

HAER No. AZ-87

- Location:** Laguna Dam Road, Yuma, Yuma County, Arizona
- Dates of Construction:** Construction began on July 20, 1905. After some financial difficulties due to changes in the design, labor troubles, floods, and transportation problems, the contractor secured an annulment of the contract on January 23, 1907. The federal government then finished the project on March 27, 1909.
- Builder:** The contract for the construction of the Laguna Diversion Dam was originally awarded to J.G. White & Company. The federal government finished construction.
- Original Owner, Use:** U.S. Bureau of Reclamation. The dam was built as part of an irrigation system, generally known as the Yuma Project.
- Present Owner, Use:** U.S. Bureau of Reclamation. The dam is currently maintained as a control for tailwater from the Imperial Dam, located 5 miles above this site. The large sluice gate on the California side remains open, passing water from desilting operations at the Imperial Dam.
- Significance:** The Laguna Diversion Dam is significant for its unusual "Indian Weir" design, which made it the first of its kind built in the United States. The dam is also notable as the first dam built on the Colorado River.
- Description:** The dam is a rock-filled weir that stretches across the Colorado River in Arizona and California, about 14 miles north of Yuma, Arizona. The dam measures 4,844' long. It consists of three parallel concrete walls across the river bed. The crest, middle, and toe walls were, respectively, 57 1/2' and 93 1/2' apart, and each is 5' thick. The crest wall is 14' high, the middle is 14', and the toe wall is 7'. Rock fill was placed between these walls and above the crest wall and below the toe wall. This type of design provided a suitable diversion on a river having unstable deposits under its bed.
- The settling basin on the California side was designed so the velocity of water flowing through it and into the canal would be about 1' per second. Silt in the basin could be sluiced out periodically through three large steel gates, each with a height of 18' and a width of 35'. These gates are the

most striking feature of Laguna Diversion Dam today and remain open since water is now being diverted at Imperial Dam, located some 5 miles above.

History: The Laguna Diversion Dam was built as part of the larger Yuma Project, an irrigation project overseen by the U.S. Bureau of Reclamation. Silt carried by the Colorado River caused nearby canals to be filled with sediment. This problem was met at Laguna Diversion Dam by a combination of settling and sluicing devices and by admitting only surface water into the canals.

Alterations were made in 1923-24 due to the lowered river level. At some unknown date, the gates to the Yuma Main Canal were closed off.

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Historians: T. Lindsay Baker and Steve Rae, August 5, 1971

**Project
Information:**

The Laguna Diversion Dam was inventoried for the Historic American Engineering Record as part of the Southwest Water Resources Project, a joint project with the Texas Tech Water Resources Center. The survey was subsequently published as *Water for the Southwest: Historical Survey and Guide to Historic Sites* by the American Society of Civil Engineers in September 1973.