

COLORADO WATER CONSERVATION BOARD  
823 State Centennial Building  
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Denver, Colorado 80203

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NARROWS PROJECT

The Narrows project area lies along the lower South Platte River, extending generally from Fort Morgan to the Nebraska state line. The project was originally authorized by the Congress in 1944 as a part of the comprehensive plan for the Missouri River Basin project. Pre-construction activities on the project started in 1947, but were terminated in 1952 because of the lack of official support for the project by the state of Colorado.

The project was re-authorized by the Congress in 1970 as a unit of the Missouri River Basin project. The Lower South Platte Water Conservancy District was organized in 1964 as the principal sponsoring and contractual agency for the project. This district includes portions of Logan, Morgan, Sedgwick and Washington counties. The Central Colorado Water Conservancy District was organized in 1965 and is also a sponsoring and contractual agency for the project. This latter district includes portions of Adams and Weld counties.

Plan of Development

During the fifteen-year period 1947-1961, which was used for the feasibility study of the Narrows project, an average of 187,000 acre-feet of water from the South Platte River flowed across the state line in excess of compact commitments. During the period 1965-1971, the average annual wasted flow was approximately 400,000 acre-feet of water. The Narrows project was designed to conserve a portion of these unused flows.

The Narrows Dam would be located on the South Platte River a few miles above the city of Fort Morgan. It would serve the functions of irrigation, flood control, recreation, and fish and wildlife enhancement. The reservoir would provide supplemental irrigation water for presently irrigated lands in Morgan, Logan, Washington, Adams and Sedgwick counties. A fish hatchery would be located a short distance downstream from the dam for stocking purposes. Specific lands and facilities, including the existing Jackson Lake, would be acquired for recreation and fish and wildlife purposes. The project would involve the construction of the Narrows Dam, relocation of the Union Pacific Railroad and State Highway 144, recreation facilities, fish and wildlife facilities, rehabilitation of Jackson Lake Dam, and the fish hatchery. Distribution of the stored waters would occur through existing facilities.

Storage water would be released as necessary from the reservoir to supplement irrigation within the 166,370-acre service area of the Lower South Platte Water Conservancy District, and, through exchange, 120,700 acres in the Central Colorado Water Conservancy District. Project water stored in the Narrows Reservoir would be released either into the South Platte River through a river outlet for delivery to existing downstream diversion works and through a canal outlet works directly into the Fort Morgan Canal. Minimum downstream flows for fishery requirements would be met by stream accretions, return flows, flows for operating the fish hatchery, and minor releases from reservoir storage.

Major recreational facilities would be constructed as a part of the project. It is estimated that approximately 1,225,000 visitor days could be anticipated at the reservoir area within the first year of operation, with a rapid increase thereafter.

### Project Statistics

#### Estimated Allocation Costs:

Flood Control	\$ 20,430,000
Irrigation	92,044,000
Recreation	27,328,000
Fish and Wildlife	14,581,000
Highway Improvement	6,380,000
Cultural Resource Activities (P.L. 93-291)	1,490,000

Total Cost (January 1977 Prices)    \$162,253,000

#### Narrows Reservoir capacity (acre-feet):

Dead and inactive	50,000
Irrigation	373,000
Joint use (irrigation, flood control and sediment)	75,000
Flood control	475,000
Surcharge	<u>636,000</u>

Total Capacity    1,609,000 a.f.

Estimated annual irrigation yield    119,000 a.f.

Benefit-cost ratio    2.5 to 1

### Environmental Impact

The principal environmental impact of the Narrows project will be the inundation of several miles of stream channel by the reservoir. No significant stream fishery now exists in that portion of the river. However, a considerable reservoir fishery will be created by the water

impounded in the reservoir. Virtually all of the lands to be acquired for the reservoir are now in private ownership.

Some loss of nesting sites for water fowl and upland game birds will occur. However, waterfowl use of the area is expected to almost triple as a result of the increased water area which will be available as the result of the reservoir impoundment. The hunting area for small upland game, such as pheasants and rabbits, will be decreased, but will be increased for waterfowl. Sport hunting for other animals, such as raccoons, coyotes and foxes, will be decreased as the result of the reservoir inundation of the lands. There will be minor impacts on big game animals.

No adverse downstream water quality effects are anticipated. The operation of the dam and reservoir will reduce the seasonal and cyclical fluctuations in the water supply and permit better water quality to be applied to irrigation lands. Construction of the Narrows Dam and Reservoir and development of the Jackson Lake Reservoir will create a quality water-oriented outdoor recreation and fish and wildlife resource for public use. Historical or archaeological sites or resources have been surveyed in accordance with the National Historic Preservation Act. Protection and preservation of historic and cultural resources will be in compliance with Executive Order 11593 and 36 CFR 800.

#### Current Status

Advance planning on the project was essentially completed in 1951. After the project's re-authorization in 1970, advance planning began anew and is now virtually completed. Repayment contracts for the project have been executed by the Lower South Platte Water Conservancy District and the Central Colorado Water Conservancy District. The available project water has been oversubscribed in the Lower South Platte District and the conservancy board will have to make a decision concerning water allocation.

Current flood data necessitated a restudy of the Narrows Dam design which increased the project cost and delayed filing of the environmental statement. The Bureau of Reclamation filed a draft environmental statement on December 8, 1975. The final statement was filed on May 4, 1976.

Funds to initiate preconstruction planning were first appropriated in FY 1972. Preconstruction planning has progressed since 1972, with land acquisition initiated in August, 1976. If construction funds are approved for FY 1979, initial construction contracts for relocation of the Union Pacific railroad will be scheduled for FY 1980.

Through December 31, 1977, a total of \$5,100,000 has been expended on the Narrows project from federal funds. An additional amount of about \$1,500,000 has been expended from state and local funds.

## Conclusions and Recommendations

The South Platte Valley below Denver is one of the leading agricultural areas of the United States. It is a major livestock feeding and processing center. Chronic shortages of available water supplies lead to constant litigation and decreased crop yield. The only remaining flows available in the South Platte River for use in Colorado are those which escape at the state line during floods and other high-water periods. In 1970 alone, almost 800,000 acre-feet of water reached the Nebraska state line, most of which could have been stored in the Narrows Reservoir for use in more critical years.

The Narrows Reservoir will provide a major flood control facility for that area of the state below the reservoir to the state line. Some flood damages occur on the South Platte River almost every year. With control of the middle reach of the river through Chatfield and Bear Creek Dams and control of the lower reach of the river through Narrows Dam, flood damages on the South Platte River will be significantly reduced. Floods originating in the Bijou Creek drainages will not be controlled.

The project will also provide major fish and wildlife benefits and major recreation benefits. The reservoir will be the largest ever constructed in the state. It will contain a permanent pool of approximately 50,000 acre-feet. Situated near the heart of the population center of the state, it will provide water-oriented recreation on a scale not matched by any other facility east of the Continental Divide. The South Platte River below Denver now has minimal fishery value. The Narrows Reservoir and Jackson Reservoir will provide major warm water fisheries.

In 1977, the Carter Administration denied construction funds for the Narrows Unit, although they were recommended by President Ford. Questions raised by the Carter Administration which formed the basis for denial of funds included environmental impacts, safety of dam, flood control benefits, and water quality. As a result of these questions, further studies were made by the Bureau of Reclamation and private consulting engineers to determine the validity of the claims. These studies have been completed; and, in a report released recently by the Bureau, it was concluded that (1) a safe dam can be constructed at the Narrows site and that seepage rates would be well within earlier estimates; (2) that flood control benefits have been re-evaluated and remain valid; (3) that water quality of the reservoir would not preclude swimming and boating; (4) that the dam construction would have no adverse effect on waterfowl in a migratory pattern downstream; and (5) a groundwater recharge alternative to the Narrows Unit is not economically feasible.

At the time President Carter's budget recommendations were prepared, the additional information requested for the Narrows project was not available. It is available now and fully supports the construction of the project. The project is already in a construction

status. The resumption of construction therefore would not violate the "no new starts" philosophy.

Nothing remains to be done on the Narrows project except construction. The Bureau of Reclamation has a construction capability to the extent of \$3,500,000 for FY 1979. It is therefore the staff recommendation that the board request the Governor and Colorado's congressional delegation to seek an appropriation of \$3,500,000 for FY 1979 to permit the resumption of project construction, as Colorado's first priority.

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