# COLORADO WATER CONSERVATION BOARD 823 State Centennial Building 1313 Sherman Street Denver, Colorado 80203

## March, 1973

#### FRUITLAND MESA PROJECT

The Fruitland Mesa project is located in west-central Colorado in the Gunnison River Basin of the Upper Colorado River Basin. The project would develop unused water supplies from Soap, Curecanti, and Crystal Creeks, for irrigation of supplemental and full service land between the Black Canyon of the Gunnison National Monument and the town of Crawford. Benefits would also be provided for recreation, fish and wildlife.

#### Status

The Fruitland Mesa project was authorized for construction September 2, 1964 (Public Law 88-568) as a participating project under the Colorado River Storage Project Act of April 11, 1956 (Public Law 84-485). A definite plan report was completed in June, 1967. Because of changes in plan, costs, and benefits, the definite plan report has been revised and submitted to the Commissioner for approval. The draft environmental statement was filed with the Council on Environmental Quality September 3, 1976 and the final environmental statement was filed March 25, 1977. The President recommended the deletion of construction funds for this project. Congress deleted funding from the FY 1978 budget and the budget authority for FY 1977 was rescinded.

A repayment contract with the Fruitland Mesa Water Conservancy District was signed in 1969. Archaeological surveys of the project area were conducted in 1975 and 1976. Designs for the Soap Park access road were prepared by a consulting engineering firm in accordance with a contract awarded in 1976. Total federal project expenditures through September 30, 1977 amount to \$3,288,600.

#### <u>Plan</u>

Project water would be obtained from Soap, Curecanti, and Crystal Creeks. Regulation of project water supplies would be provided at the potential Milly K. Goodwin Lake on Soap Creek and at the existing Gould Reservoir on Iron Creek.

Releases from Milly K. Goodwin Lake would be conveyed about 10.6 miles by the Black Mesa Conduit to the head of the Fruitland Canal near Crystal Creek. Along its course, the conduit would intercept natural flows of Curecanti Creek. The Fruitland Canal would be 18.3 miles long. It would distribute flows received from the Black Mesa Conduit as well as flows of Crystal Creek Diversion Dam. The canal would provide water to several turnouts, the six largest being to: Dyer Creek, a tributary of Crystal Creek, for diversion from (1) Crystal Creek downstream into the Crystal Valley Ditch for irrigation of lands along that stream; (2) the existing Dyer Fork Ditch for irrigation of lands above Gould Reservoir; (3) the Cattleman's Ditch for irrigation of presently irrigated lands below Gould Reservoir; turnout to provide storage water to Gould Reservoir; (5) Castle (4) Canyon, a natural channel which would convey water directly to the existing Gould Canal; and (6) Poison Springs, a natural channel that would carry flows to the lands between the Gould Canal and Poison Springs draw. Minor turnouts from the canal would be made directly to project lands and to distribution laterals. Sections of the Gould Canal west of Castle Canyon would be enlarged by the owners. Two siphons in the canal have already been replaced by the Bureau of Reclamation under a construction contract.

**Operation** of the existing Gould Reservoir would be integrated in project operation. Project water as well as present supplies would be released from the reservoir to the existing Gould Canal and several small existing ditches.

Laterals would be constructed to distribute water from Fruitland Canal to full service lands. Land drains would be constructed wherever the need for them is demonstrated in project operations.

Fishery pools would be maintained in both Milly K. Goodwin Lake and Gould Reservoir. Minimum fishery flows would be maintained in Soap and Curecanti Creeks. Recreational facilities would be provided and operated by the Forest Service at Milly K. Goodwin Lake and in Little Soap Park.

A pipeline would be constructed by the National Park Service to convey a small amount of project water from the Fruitland Canal for public use at the Black Canyon of the Gunnison National Monument. Water would be provided to the Bureau of Land Management at the terminus of the Gould Canal for livestock and wildlife use in the Black Ridge area on lower Fruitland Mesa. Conveyance of this water would be the responsibility of BLM.

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# Water Supply

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Irrigation supplies (acre-feet) Effects on Colorado River Increase in salt load (tons) Stream depletion (acre-feet) Increase in salinity concentration at Imperial Dam (mg/1)		45,400 10,930 21,300
Increase in salt load From concentration due to sta	ream depletion	1.1 2.6
Irrigation Service Area (acres)		
Full service land Supplemental service land		11,940 6,310
Total		18,250
Project Features		
Soap Park Dam Height (feet) Crest length (feet) Milly K. Goodwin Lake capacity (acre-fe Active Inactive and dead	et)	254 1,170 50,165 <u>1,235</u>
Total		51,400
	Crystal Creek	Curec <i>a</i> nti Creek
Diversion dams Overflow crest length (feet) Diversion capacity (second-feet)	60 250	10 250
	Length ( <u>miles)</u>	Diversion capacity (second-feet)
Distribution		
Black Mesa Conduit Pipe line section	10.9 2.5	275 275
Tunnel section Fruitland Canal Laterals	8.4 18.8 13.6	275 275 4 to 25

# Estimated Costs

Construction costs (January, 1976 prices)

Soap Park Dam and Milly K. Goodwin Lake \$23,000,000 Crystal Creek Diversion Dam 670,000 Curecanti Creek Diversion Dam 200,000 Black Mesa Conduit 42,700,000 Fruitland Canal 7,550,000 Gould Canal structures improvement 610,000 Laterals 2,300,000 Drains 525,000 Transmission lines 270,000 Permanent operating facilities 440,000 Operation and maintenance building - Soap Park Dam 80,000 Public land disposition 300,000 Access roads to public lands 625,000 Recreation facilities 670,000 Specific fish and wildlife facilities 4,300,000 Service facilities (depreciation and salvage) -40,000 Total cost \$84,200,000 Annual operation, maintenance and replacement costs \$154,000 B/C Ratio (3 1/4%) Direct .52:1

Total

.87:1

### Local Interest

State and local interests are actively encouraging construction of the project. The Fruitland Mesa Water Conservancy District was organized in 1960 to be the administrative and contractual agency for the reclamation features of the project. The state of Colorado, through the Colorado Water Conservation Board, supplied \$14,000 to the Bureau of Reclamation to aid in the investigations. The Colorado River Water Conservation District has assisted in the investigations and has secured the necessary water rights for the project.

## Conclusions and Recommendations

This section of Colorado is semi-arid and is presently undergoing a general decline in population due to the undependable and inadequate water supply (approximately 25% of optimum through existing facilities over the past 25 years). The area has been designated a depressed area under the Public Works and Economic Development Act of 1965. Completion of the project would be of great economic value to the area, including an increase of over 2 million dollars to the local tax base.

The recreational benefits derived from local fisheries along the streams and at Gould and Soap Park Reservoirs would serve to take local pressure away from the Curecanti National Recreation Area and provide additional facilities for the overflow from Curecanti and Black Canyon of the Gunnison area.

No construction funds for the project were included in the President's FY 1979 budget message. Although the project had a favorable benefit-cost ratio at time of authorization, constantly changing criteria and conditions have greatly increased the costs without a similar reflection of benefits. There is a possibility that some reformulation of the project could result in a more favorable benefit-cost ratio.

In view of the unfavorable benefit-cost ratio, there appears to be little or no likelihood that construction funds can be secured at this time. However, the project should not be allowed to drift in limbo. It is the staff recommendation that the board request the Governor and Colorado's congressional delegation to seek the sum of \$75,000 for further advance planning on the Fruitland Mesa project.

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