

COLORADO WATER CONSERVATION BOARD
102 Columbine Building
1845 Sherman Street
Denver, Colorado 80203

March, 1975

SAN MIGUEL PROJECT

The San Miguel project area is in southwestern Colorado in the San Miguel River basin area. The principal towns in the area are Norwood, Nucla and Naturita. The project was authorized by the Congress in 1968 as a participating project of the Colorado River Storage Project. The San Miguel Water Conservancy District was organized in 1957 as the sponsoring and contractual agency for the project. The district includes portions of Montrose and San Miguel counties.

Plan of Development (Feasibility Report)

The San Miguel project is a multiple-purpose water resource development which would regulate flows of the San Miguel River for irrigation, municipal and industrial use, fish and wildlife conservation, recreation and flood control.

River flows would be regulated at the Saltado Reservoir. Releases would be made from the reservoir to the river for existing water rights, municipal and industrial use, and fish and wildlife. Other water for irrigation, municipal and industrial use, and fish and wildlife would be released into the Norwood Canal which would divert from the outlet of Saltado Dam. The Norwood Canal would be the first link in a chain of irrigation facilities that would extend west from Saltado Reservoir, generally along the southern perimeter of the irrigable land area. This chain would include in successive order the Naturita Reservoir at the terminus of the Norwood Canal, the Basin Canal heading at the Naturita Reservoir, the Radium Reservoir which would receive water from the Basin Canal, and the Paradox Canal heading on West Fork of Dry Creek below the outlet of Radium Reservoir. The Mailbox Park Canal would branch northwest from the Norwood Canal and the Long Park lateral would branch from the Paradox Canal. Other distribution laterals and land drains would be provided as needed. Existing reservoirs and distribution systems would be integrated with the project irrigation system and exchanges effected to bring project water to some lands above project works.

Municipal and industrial water would be made available in the San Miguel River and in the Naturita and Radium Reservoirs. The industrial water would be used to develop the natural resources of the area which include coal, oil, potash, gypsum, timber, uranium, vanadium, copper, lead, zinc, silver and gold. It is anticipated that 20,000 acre-feet per year will be needed by 1980 and 44,000 acre-feet per year by 1990. Recreational facilities would be provided at the three project reservoirs. The Saltado Reservoir would be operated for flood control on the basis of runoff forecasts. Measures for fish and wildlife would include maintenance of minimum flows and channel improvements in the river below Saltado Reservoir, provision for two inter-connected sections at Radium

200

Reservoir and control of water elevations for waterfowl in the east section, a 200-acre irrigated waterfowl preserve adjacent to Radium Reservoir, and sport fisheries at each project reservoir.

Project Statistics (Estimated)

Irrigation	\$ 79,802,000
Municipal and industrial	18,247,300
Fish and wildlife	5,382,700
Recreation	1,068,000
Flood control	<u>1,500,000</u>
Total Cost	\$106,000,000

Water allocation

Irrigation (39,000 acres)	77,800 a.f.
Municipal and industrial	44,000 a.f.
Fish and wildlife	<u>500 a.f.</u>
Total	122,300 a.f.
Annual depletion of the Colorado River	85,000 a.f.
Annual salinity contributed to Colorado River	4 to 6 ppm
Benefit-cost ratio	1.34 to 1
Annual benefits	\$5,000,000

Environmental Impact

No major environmental problems have been identified as yet in the San Miguel project. Construction of Saltado Reservoir in the San Miguel River Canyon would convert a few miles of stream fishing to reservoir fishing and sufficient releases downstream would be made to maintain fishery below the dam. Diversion of water from the reservoir to the project lands would be largely by tunnel, thereby reducing the impact of construction on aesthetics of the surrounding scenic area. Conversion of rangeland to irrigation, as was included in feasibility plans, would have some impact on the deer population in portions of the area and would increase the salinity of the Colorado River downstream from the project. Advance plans are now under way to reduce significantly the new land acreage to be included in the project, which would modify or alleviate these environmental problems.

Current Status

Planning studies are being conducted to meet the needs of the area and to reduce the project's adverse impact on the salinity of the Colorado River. Deletion of the potential Paradox and Dry Creek basin irrigated areas from the feasibility plan and substitution of the potential West Lilylands area would dramatically reduce the project's salinity impact. Studies are being made to determine if high elevation runoff occurring south of the project area can be developed for project use. In addition, sprinkler irrigation is being studied for full

207

service lands which would reduce irrigation diversion requirements and return flow.

The San Miguel Definite Plan Report is scheduled to be completed by December, 1977. A plan of development which recognizes changes since the feasibility plan was authorized and best serves the national and local needs should be selected by December, 1975.

Although plan formulation studies for this project are only beginning, the opportunity to reformulate the project appears favorable. Preliminary studies indicate that a project plan can be developed that would be responsive to the needs of the area and yet lessen the impact on salinity of return flows over the impact of the plan contained in the Feasibility Report.

Water for M&I development and for supplementing the existing agricultural base is strongly supported by the San Miguel Water Conservancy District and by local political officials. Preliminary studies indicate the possibility of additional development of water supplies from the Lone Cone area for use to expand the agricultural acreage without a significant increase in salinity effects. However, the need for development of significant quantities of M&I water as contained in the plan at time of authorization has not been clearly demonstrated. There exists a need to have an authoritative inventory of available mineral resources in the area prepared. This inventory would be helpful to identify if significant quantities of industrial water would be needed in the near future for development of coal, uranium, potash, oil, gypsum, wood pulp, or other mineral resources within the project area.

Total investigative costs to June, 1974, including feasibility and advance planning, amount to \$1,246,773.

Conclusions and Recommendations

The entire area of the San Miguel project is encompassed within the boundaries of the Four Corners Economic Development Region because of persistent unemployment and depressed incomes. The area has considerable mineral resources and a temporary economic boom occurred in the 1950's as the result of uranium exploration, mining and processing. This activity has tapered off to a relatively low level, leaving many unemployed people. The coal resources are considerable, although of a fairly low quality. A sizable thermal generating plant utilizing local coal resources has been constructed and is being operated by the Colorado-Ute Electric Association. A potential for much greater energy production exists in the area if adequate water supplies can be provided.

The principal economy of the area is based upon livestock production and the associated growing of livestock feeds. The area is quite arid and irrigation is necessary for the production of crops. Local interest for the project has been very strong and persistent.

Advance planning on the project up to this time has progressed slowly due to lack of adequate funding. The President has recommended the appropriation of \$458,000 for F.Y. 1976 to accelerate the advance planning. It is recommended that the Governor and the members of Colorado's congressional delegation be requested to support this recommended appropriation.