

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Bureau of Sport Fisheries and Wildlife
P. O. Box 1306
Albuquerque, New Mexico

2-RBS

July 10, 1959

Memorandum

To: Regional Director, Bureau of Reclamation, Region 4,
Salt Lake City, Utah

From: Regional Director

Subject: Colorado River Storage Project, Bostwick Park Project,
Colorado (BR) - Bureau of Sport Fisheries and Wildlife
Report

This memorandum, prepared in cooperation with the Colorado Department of Game and Fish, constitutes the report of the Bureau of Sport Fisheries and Wildlife on the fish and wildlife resources of the Bostwick Park Project in Colorado. This report was prepared under the authority of the Fish and Wildlife Coordination Act, 48 Stat. 401, as amended; 16 U.S.C. 661 et seq., and Section 8 of the Colorado River Storage Project Act, 70 Stat. 105. It has received the concurrence of the Colorado Department of Game and Fish by letter of July 6, 1959, signed by Executive Director Thomas L. Kimball.

The Bostwick Park Project, located in Gunnison and Montrose Counties, Colorado, will affect 17 miles of Cimarron Creek from Silver Jack Dam site to the Gunnison River confluence and 0.3 mile of the West Fork within the reservoir site. Land to be irrigated will amount to 5,608 acres.

This report is premised under our understanding of project plans as of June 1, 1959. The Bureau of Sport Fisheries and Wildlife should be advised of any change in project operational or design plans.

The Bureau of Reclamation will construct Silver Jack Dam 0.5 mile downstream from the confluence of the West and Main Forks of Cimarron Creek near Cimarron, Colorado. Silver Jack Reservoir initially will hold 10,600 acre feet of water, of which 8,000 acre-feet are allocated to

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irrigation, 1,500 acre-feet to fish and wildlife, and 1,100 acre-feet to sediment. When the reservoir contains less than the maximum capacity at the beginning of the irrigation season, 15.8 percent of the active content will be allocated to fish and wildlife. The reservoir will inundate 248 acres of land at normal water surface elevation of 8,914.7 feet, mean sea level. This high-water line will reach about 2 miles up Cimarron Creek and 0.3 mile up the West Fork of Cimarron Creek. The fish and wildlife pool will be about 34 feet deep and 70 acres in area.

The Bostwick Park Project will provide irrigation water for 4,293 acres of supplemental service and 1,315 acres of full service lands. Construction of the Lytle lateral and Bostwick Park siphon and laterals will permit distribution of water to about 1,075 acres of full service lands. The existing ditches and laterals that obtain water from the Cimarron Ditch will be used to distribute project water to the 4,293 acres of supplemental service lands and the remaining 240 acres of full service lands.

A minimum fishery release of 25 second-feet will be bypassed to Cimarron Creek at the Cimarron Ditch headgate from May 16 to August 31, and 8 second-feet will be bypassed during the remainder of the year. Lesser flows may have to be released during occasional dry years. This water will maintain the aquatic habitat and improve the trout stream fishery. Three sources will provide the above flows. The sources are: (1) bypasses at the Cimarron diversion in the amount required for downstream water rights, (2) flows in excess of needs for project irrigation, (3) releases from that portion of reservoir storage allocated to fish and wildlife. The last releases and other operation of the fish and wildlife pool will be administered by the Colorado Department of Game and Fish. Project plans also include installation of a trash-rack type of fish screen in Cimarron Canal near the heading.

The 4.5 miles of stream upstream from the Cimarron Canal headgate ranges from poor quality in the upper section where the channel is unstable, to good quality downstream from Silver Jack Dam site where the channel and banks are less unstable. High, muddy spring floodflows spoil early season fishing by scouring the stream bottom. The Colorado Department of Game and Fish furnishes an adequate supply of fish by stocking heavily in the 2.5-mile reach of the stream to be affected within the Uncompahgre National Forest boundary. This 2.5-mile section receives the heaviest fishing use of any reach within the project area.

Cimarron Creek, in the 14.5 miles downstream from the Cimarron headgate, is a poor to fair trout fishery. Most of this reach flows through a rugged canyon which makes access difficult. Private land borders this section, and many landowners forbid trespassing or fishing. The Colorado Department of Game and Fish stocks trout in only a short stretch near the mouth of the stream, but a significant natural population exists upstream. A small number of fishermen fish this 14.5-mile reach, and to them, the

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stream yields a rewarding catch and pleasant hours of recreation. Extremely high and erosive spring runoff flows impair the aquatic habitat and ruin good fishing in the early part of the season. Irrigation diversions adversely affect the habitat and fishing in the late season.

The game-fish population consists chiefly of stocked rainbow trout. Cutthroat, brown, and Eastern brook trout comprise the rest of the population.

Fishermen's expenditures without the project are estimated to be \$46,000 annually, most of which is associated with the 2.5-mile section to be affected within the Uncompahgre National Forest.

Silver Jack Reservoir will provide a cold-water lake fishery of changing quality. During the first few years after filling, it will provide abundant food which will support many large and fast-growing trout. After about 5 years, fertility will diminish, and the reservoir will assume the mediocre quality of most high altitude fluctuating reservoirs. The surface of the reservoir will cover about 248 acres and it will fluctuate, with normal operation, a maximum of 59 feet. Average fluctuation over the period of study will be 41 feet. Fishing use, like lake fertility, will be great at first and less later.

Fishermen's expenditures associated with Silver Jack Reservoir will be about \$50,000 annually.

Cimarron Creek, from the dam down to the Gunnison River confluence, will not be subjected to flows as high as historic spring floods under project operation. The reservoir will store much of this water. Stabilization of summer flows, by means of the 25 second-foot fishery and irrigation bypasses, will eliminate the adverse historic conditions of severely depleted flows during the latter part of the irrigation season. Winter fishery releases will preserve aquatic habitat and fish life. This operation will also benefit spawning migrants from the Gunnison River.

It is estimated that fishermen's expenditures associated with the stream under project conditions will be about \$89,000 annually.

Effects of the project on wildlife populations are insignificant.

In summary, without-the-project fishermen's expenditures will be \$46,000 and the total with-the-project fishermen's expenditures will be \$139,000. The difference, \$93,000, is attributable to operation of the project

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It is recommended--

- (1) That additional detailed studies of fish and wildlife resources affected by the project, be conducted as necessary, after the project is authorized, in accordance with the Fish and Wildlife Coordination Act, 48 Stat. 401, as amended; 16 U.S.C. 661, et seq., and Section 8 of the Colorado River Storage Project Act, 70 Stat. 105, and that such reasonable modifications in the authorized project facilities be made by the Secretary as he may find appropriate to preserve and propagate these resources.
- (2) That federal lands and project waters in the project area be open to free use for hunting and fishing, except for sections reserved for safety, efficient operation, or protection of public property.
- (3) That the currently planned project allocation to fish and wildlife of 1,500 acre-feet of water storage, or 15.8 percent of the active storage in Silver Jack Reservoir be retained in all forthcoming reports of the Bureau of Reclamation.
- (4) That current project plans for a trash-rack type of fish screen to be installed in Cimarron Canal be retained in all forthcoming reports of the Bureau of Reclamation.

Cooperation with the Bureau of Reclamation implemented inclusion in project plans of features and operational procedures to benefit fish resources. Benefits from public use of fish and wildlife, in turn, add a significant value to the project. In this regard, it should be noted that although the provisions of recommendations Nos. 3 and 4 are at present included in project plans, it was deemed advisable to recommend retention of those provisions in all future reports in order to clearly set forth fish and wildlife interests in the project.

Construction of the project as planned will create a reservoir fishery with the maintenance of a fish and wildlife pool. Operation will improve the trout fishery of Cimarron Creek and benefit the Gunnison River by providing spawning grounds.

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Inasmuch as this report and recommendations are based on the Bureau of Reclamation's plans for the Bostwick Park Project as understood to June 1, 1959, the Fish and Wildlife Service expects to be advised of any subsequent change in plans so the report can be modified accordingly.

/s/ John C. Gatlin

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Bureau of Sport Fisheries and Wildlife
Branch of River Basin Studies
Room 117, Building 40, Denver Federal Center
Denver 25, Colorado

April 25, 1960

To: Regional Director, U. S. Bureau of Reclamation, Region 4,
Salt Lake City, Utah

From: Field Supervisor

Subject: Bostwick Park Project--Single-purpose Alternative

In response to Mr. DeLong's memorandum of April 22, 1960, we have determined the size of a reservoir at the present Silver Jack site which would function as a single-purpose alternate.

We feel that a reservoir of 4,600 acre-feet total active storage capacity above the outlet works would be sufficient to duplicate our present project benefits. Note that the 4,600 acre-feet includes space allotted for sediment storage.

In the future, we shall try to include single-purpose analyses with our tentative recommendations and evaluations for all projects in order to aid in your cost allocations.

/s/ D. J. Illige

Denis J. Illige