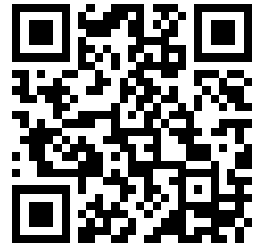


ANDERSON RANCH POWERPLAN

TEMENT/FEASIBILITY REPORT

ANDERSON RANCH POWERPLANT THIRD UNIT

BOISE PROJECT, IDAHO

FINAL ENVIRONMENTAL STATEMENT AND FEASIBILITY REPORT

DEPARTMENT OF THE INTERIOR
James G. Watt, Secretary

BUREAU OF RECLAMATION
Robert N. Broadbent, Commissioner

FINAL
ENVIRONMENTAL STATEMENT
AND
FEASIBILITY REPORT

ANDERSON RANCH POWERPLANT THIRD UNIT
BOISE PROJECT, IDAHO

Prepared by:
Pacific Northwest Region
Bureau of Reclamation
U.S. Department of the Interior

In cooperation with:
Idaho Department of Fish and Game
Forest Service
U.S. Fish and Wildlife Service
Idaho Cooperative Fishery Research Unit

This is the final environmental statement and feasibility report on a proposal for the Bureau of Reclamation to increase power generation at the existing Anderson Ranch Powerplant located in Elmore County, Idaho on the South Fork of the Boise River. Other functions included in the proposed plan are fish enhancement, outdoor recreation, and environmental quality.

The key feature of the proposed plan would be the installation of a 30-megawatt generating unit at the existing Anderson Ranch Powerplant. The proposed plan also includes measures to (1) improve year-round minimum instream flows in the South Fork Boise River, (2) enhance fish and aquatic insect production and survival in the South Fork and its tributaries, (3) improve environmental conditions along the South Fork Boise River below Anderson Ranch Dam, (4) improve existing recreation facilities at Anderson Ranch Reservoir, and (5) develop additional campsites at Anderson Ranch Reservoir.

The draft environmental statement on this proposal was filed with the Environmental Protection Agency and made available to the public on September 17, 1981 (DES 81-37). That environmental statement was also used to obtain public review and comment as required by Executive Order 11988, "Floodplain Management," and to fulfill the requirements of Section 404(r) of the Clean Water Act of 1977 (Public Law 95-217).

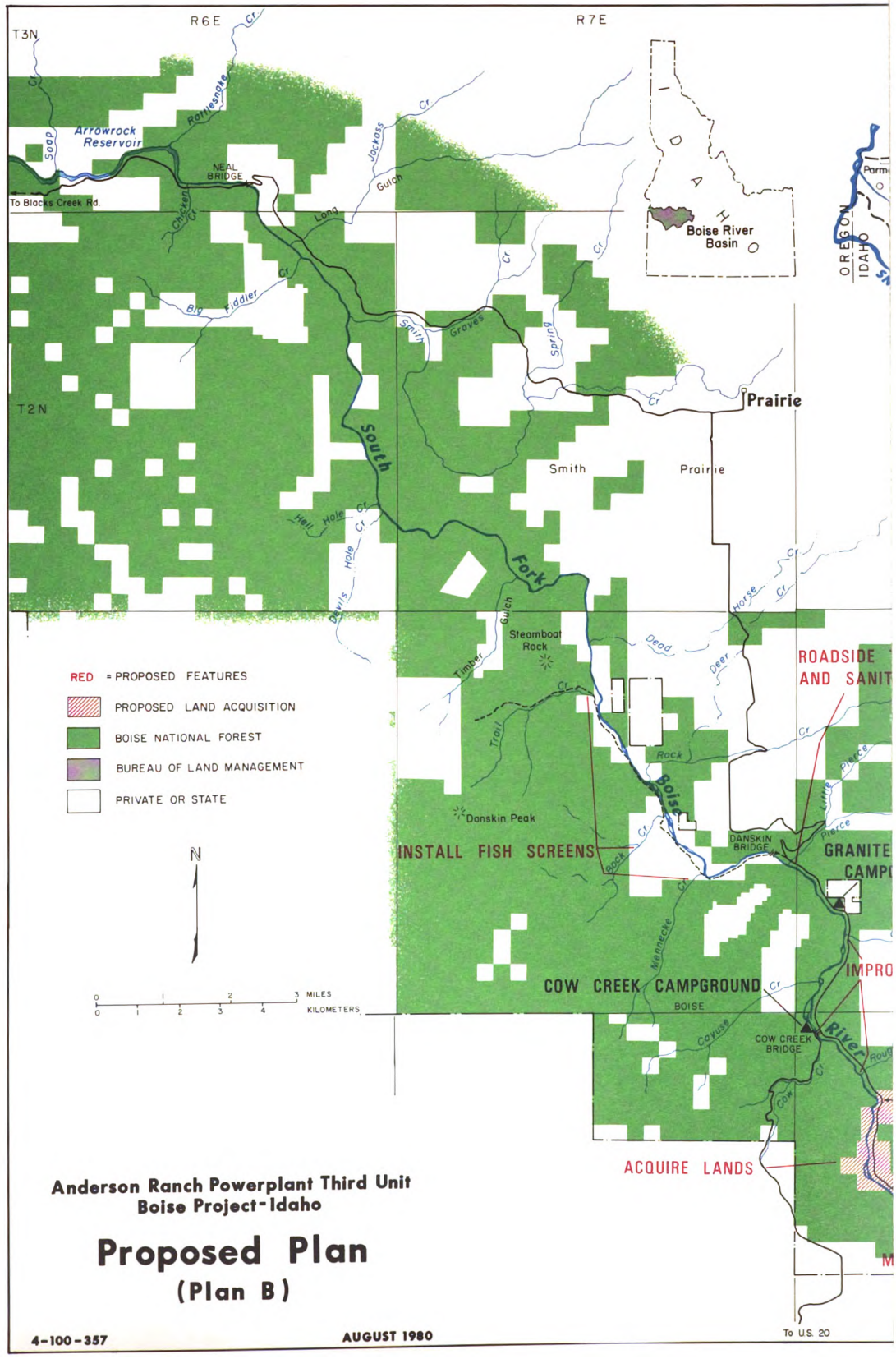
The current document is intended to serve as the final environmental statement and feasibility report on the proposed plan. This document presents the results of the required agency and public review of the draft environmental statement and the feasibility report of April 1981. Based on that review, it has been concluded that (1) no changes are required in the proposed plan and (2) the analyses presented in the draft environmental statement and feasibility report remain valid. The current document is therefore meant to be used in conjunction with the draft environmental statement and feasibility report, thereby eliminating the need to republish those documents.

For further information on the processing or content of this document, please contact Robert A. Adair, Bureau of Reclamation, Box 043, 550 West Fort Street, Boise, Idaho 83724 or call (208) 334-1209.

Statement Number: FES 82-19

Filing Date: JUN 2 1982

THIS REPORT WAS PREPARED UNDER THE AUTHORITY OF THE FEASIBILITY STUDIES ACT OF SEPTEMBER 7, 1966, (PUBLIC LAW 89-561) AND THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (PUBLIC LAW 91-190, AS AMENDED). PUBLICATION OF THE FINDINGS IN THIS REPORT SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE COMMISSIONER OF RECLAMATION OR THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THIS REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE BUREAU OF RECLAMATION AND THE DEPARTMENT OF THE INTERIOR.

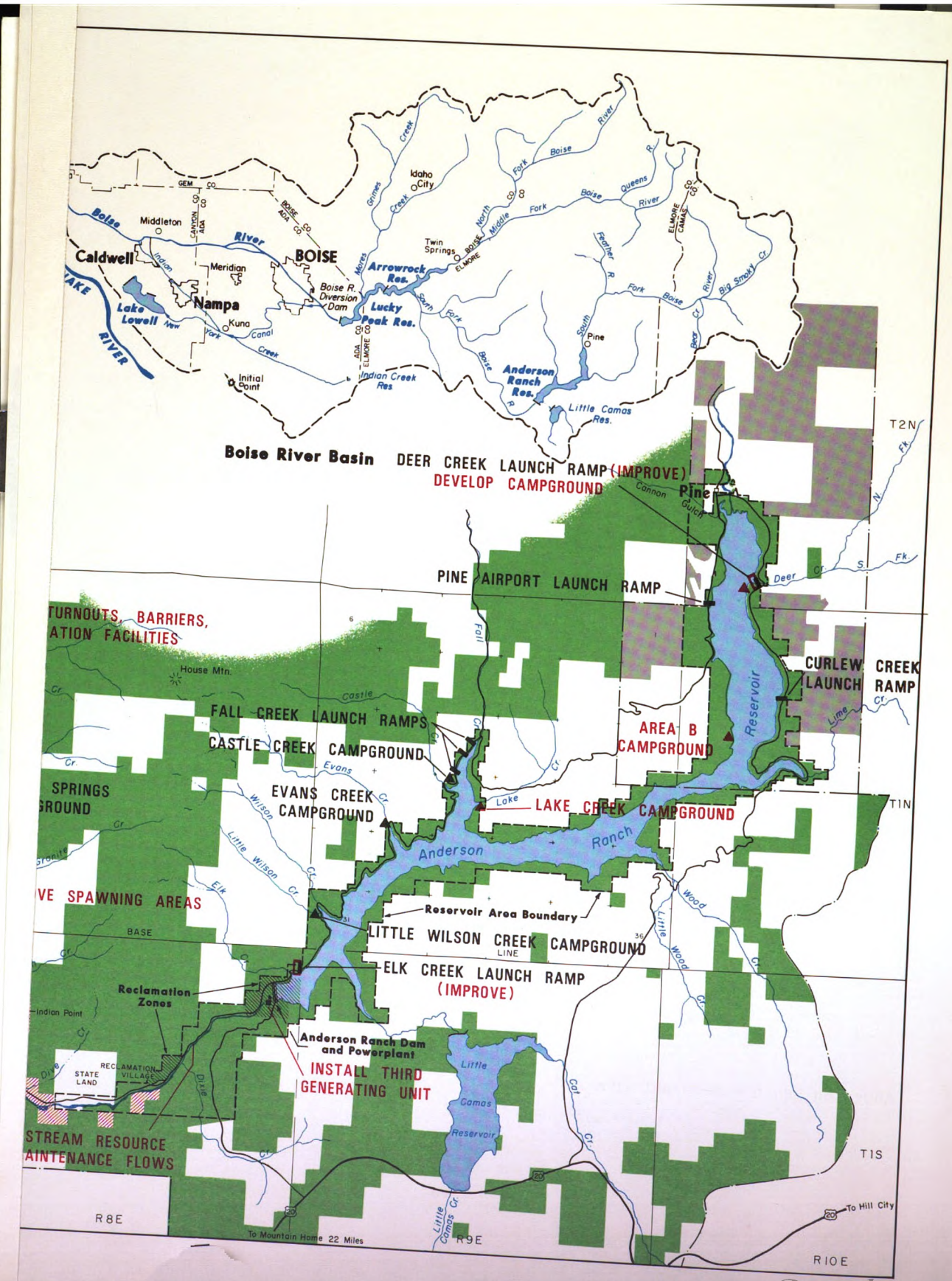


Anderson Ranch Powerplant Third Unit
Boise Project-Idaho

Proposed Plan
(Plan B)

4-100-357

AUGUST 1980



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PURPOSE OF THIS DOCUMENT

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This document is intended to serve as the final environmental statement and feasibility report on the proposed Anderson Ranch Powerplant Third Unit development in Elmore County, Idaho. The Bureau of Reclamation's proposal is to (1) install a 30-megawatt generating unit at Reclamation's existing Anderson Ranch Powerplant on the South Fork of the Boise River, (2) improve streamflows in the South Fork, (3) provide fishery enhancement measures, (4) improve environmental quality along the South Fork, and (5) provide improved recreational facilities at Anderson Ranch Reservoir.

The project proposal is described and evaluated in detail in Reclamation's draft environmental statement (dated September 17, 1981) and its feasibility report (dated April 1981). The plan formulation, environmental evaluation, and other analyses were done in cooperation with the Idaho Department of Fish and Game, the Forest Service, the Idaho Cooperative Fishery Research Unit, the U.S. Fish and Wildlife Service, numerous other agencies and interest groups, and the general public.

Results of Review

The draft environmental statement and the feasibility report on the proposal have now received the full review required by law and policy, including formal review by the states of the Columbia River basin; by Federal, state, and local agencies; and by interested organizations and individuals. Two public hearings have been held on the adequacy of the draft environmental statement.

Based on the comments received, it was concluded that:

1. No changes are required in the proposed plan, and the plan is acceptable as formulated.

2. The plan involves no unresolved conflicts with other water and land resource uses, and there are no other unresolved environmental conflicts.

3. All legal requirements relating to the formulation, evaluation, and review of a proposed Federal water project have been met.

As a result, it was concluded that this document should be prepared to present all the comments and testimony received as a result of the review of the draft environmental statement and the feasibility report and to respond to those comments where necessary.

Since the draft environmental statement and the feasibility report were considered as companion reports during the review process, all comments received have been treated as if they apply to both the environmental statement and the report. Accordingly, the comments, responses, and related material are presented in this one document. The current Council on Environmental Quality regulations specifically provide (a) for the preparation of an abbreviated environmental statement if only minor corrections are needed and (b) for the combining of the final environmental statement with other project reports in order to reduce duplication and paperwork.

The current document is therefore meant to be used in conjunction with the draft environmental statement and the April 1981 feasibility report for the detailed discussion of the proposed plan and its impacts. This eliminates the need to republish those documents.

Draft Environmental Statement of September 1981

The draft environmental statement of September 17, 1981, (DES 81-37) remains valid. The statement presents a detailed analysis of the affected environment and the environmental consequences of the proposed plan and the various alternatives considered. It was prepared in response to the National Environmental Policy Act of 1969 and other applicable laws and regulations.

Feasibility Report of April 1981

The feasibility report of April 1981 remains valid. The report presents the results of a detailed feasibility investigation leading to a proposed plan for increasing the generating capacity of the existing Anderson Ranch Powerplant, enhancing the fishery resource, and making other improvements. The multiagency plan formulation process was conducted in accordance with the "Principles and Standards for Planning Water and Related Land Resources" and other applicable laws and regulations. Detailed plans and estimates are presented, along with the results of evaluations of the anticipated economic, social, and environmental effects of the plans.

SUMMARY OF DRAFT ENVIRONMENTAL STATEMENT

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The "Summary" from the draft environmental statement is reproduced here to describe the plans considered and their major environmental consequences in order to aid in understanding the comments received on the proposed plan. The "Summary" is printed just as it appeared in the September 1981 draft environmental statement, except that the agency name has been changed from the Water and Power Resources Service to the Bureau of Reclamation and photos have been included. The summary sections of the draft environmental statement follow.

Purpose of and Need for Action

The Anderson Ranch Dam and Powerplant are located in Elmore County, Idaho on the South Fork of the Boise River. The dam and powerplant are Federal facilities operated and maintained by the Bureau of Reclamation.

The Federal southern Idaho power system supplies electricity to portions of Idaho, Wyoming, Utah, Nevada, and Oregon from Federal hydroelectric facilities at Anderson Ranch, Palisades, Black Canyon, Boise River Diversion, and Minidoka Dams, all Bureau of Reclamation projects. Powerloads in the southern Idaho system exceed Federal power generation in the area by a substantial margin. As a result, power must be imported from other Federal powerplants in the Pacific Northwest to meet system deficiencies. No Federal powerplant additions or enlargements are currently authorized for construction in the southern Idaho system. However, the demand for Federal power is expected to increase significantly in the future. Bonneville Power Administration (BPA) projections for the southern Idaho power system indicate that if all Federal generation under study for southern Idaho were authorized and constructed, there would still be a generation deficiency. Efforts are also being made in the non-Federal sector to provide new generating capacity, but projections are that new Federal and private generating resources likely to be developed in the next few years will not be capable of meeting energy loads.

When Anderson Ranch Powerplant was built, two generating units were installed, and space was left for a third unit to be added later. Since some of the required facilities are already in place, a third unit could be added relatively economically.

The 29-mile reach of the South Fork Boise River below Anderson Ranch Dam has developed into one of the highest quality native rainbow trout streams in southwest Idaho and one of the best in the entire State. The Idaho Department of Fish and Game (IDFG) has successfully managed the rainbow trout fishery under special regulations since the mid-1970's. The South Fork is highly prized by fly-fishermen, and the special values of the stream are clearly recognized by a large share of the public.

Recognizing the increasing fishing pressure anticipated, the goal of the IDFG and other fishing interests is to improve the South Fork fishery. The success of the fishery depends directly on spawning success, the river operation, and a high quality river environment. Fishery enhancement and a restricted winter power peaking operation can protect and perpetuate the fishery.

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Some streamside and bottomland areas along the South Fork from Anderson Ranch Dam downstream to Danskin Bridge are heavily disturbed by those who drive, park, and camp along the river as well as by cattle grazing. Litter and human wastes are a problem in the general area. To insure the continued viability of the wild rainbow trout fishery and other environmental values of the river corridor, the IDFG and others have stated that a high quality streamside (riparian) and bottomland environment is essential. If the present uses of the streamside area could be controlled, the environment would be improved for both fish and wildlife and related recreational values.

Some of the lands along the South Fork Boise River are inaccessible or potentially inaccessible because of their private ownership status. Permanent public access to the river would be desirable for fishermen, boaters, and others. The acquisition of private lands along the river between Anderson Ranch Dam and Danskin Bridge would (1) insure public access for fishing and other recreational pursuits, (2) insure against conflicting land uses and/or developments, and (3) allow the Forest Service to adopt a unified management plan for most of the lands along the South Fork downstream from the reservoir. Public access is not now a problem on these lands, but it could become so in the future.

There are specific needs at the existing recreation sites around Anderson Ranch Reservoir. The Deer Creek and Elk Creek boat launch ramps need to be stabilized because they are being undercut and damaged by wave action. Additional parking space, sanitation facilities, and campsites are needed at some existing recreation areas. Boat-access areas are needed to spread existing use and to provide recreation and sanitation facilities in undeveloped areas already receiving use. Current shortages exist in the supply of campsites, picnic sites, and boat lanes.

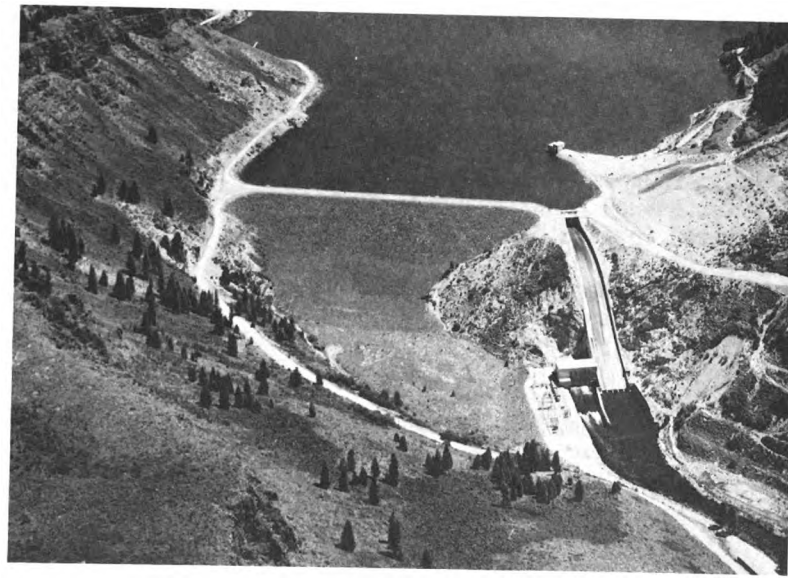
Alternatives Including the Proposed Action

Three alternative plans were developed. Plan A emphasizes national economic development (NED), Plan C emphasizes environmental quality (EQ), and Plan B (the proposed action) was formulated as a combination plan to meet both objectives.

The Idaho Department of Fish and Game, the Forest Service, the U.S. Fish and Wildlife Service, the Idaho Cooperative Fishery Research Unit, other cooperating agencies, interest groups, and the public took part in plan formulation.

An overriding formulation goal became clear in the early stages of study--any increase in power generation at Anderson Ranch Dam would be acceptable only if it could be accomplished without harming the trout fishery and other stream resource values. This conclusion was a result of public opinion and the positions of the State and Federal fish and wildlife agencies. It was therefore decided by the Bureau of Reclamation that the stream and its fishery should be protected and enhanced wherever possible.

The three alternative plans are similar because of the need to limit power operations to protect the fishery. The proposed action (Plan B) is fully compatible with the recommendations in the U.S. Fish and Wildlife Service's Fish and Wildlife Coordination Act Report of June 1980.



Anderson Ranch Dam and Powerplant on the South Fork of the Boise River.

The South Fork below Anderson Ranch Dam has become a high quality trout stream. The proposed plan includes year-round minimum streamflows and fishery enhancement measures.

The Proposed Action--Plan B

Plan B, the proposed plan, includes the national economic development components of power, fish enhancement, and recreation as well as two environmental quality components.

Under any of the alternatives for development, a 30-megawatt (MW) capacity generating unit would be installed at Anderson Ranch Powerplant to increase electrical generation, primarily during the flood control season, from the water releases that cannot now be used for generation at this site. The two existing generating units will have a combined generating capacity of about 40 MW when the scheduled rewinding of the generators is complete. Thus, with the Third Unit installed, the total generating capacity of the powerplant would be 70 MW.

The proposed 30-MW generator would produce an average of 19.1 million kilowatt-hours (kWh) of energy per year. This would meet the average electrical energy needs of about 1,200 to 1,400 homes. The proposed third generating unit would be limited to about 30 MW under any of the alternative plans because of the physical limitations of the existing penstock and the existing powerplant structure.

Power operations would remain incidental to the operation of the reservoir for its authorized functions of irrigation and flood control. Reservoir releases during the flood control and irrigation seasons would continue as they are now. There would be some provision for increased power peaking during winter weekdays--the maximum allowable rate of increase in flows and the maximum release through the power units would be increased over the existing limits. This is not planned as a regular practice but could be used to respond better to peak southern Idaho power demands, if necessary, or in the case of forced outages at other generating units. The river operation would also be modified to reduce the stranding of fish and aquatic insects in side channels and pools.

Findings to date indicate that these potential winter power peaking flow changes would not cause significant impacts on the river fishery and other stream resources. To be certain, however, Plan B includes a 5-year post-construction study to assess the actual effects of the proposed river operation on fish and stream resources. Modifications could be made in powerplant operations as a result of study findings.

Fish enhancement measures would include improved year-round minimum flows in the South Fork Boise River. In constrast to the 200-cubic-foot-per-second (ft^3/s) minimum flow maintained in past years, improved stream resource maintenance flows of 300 ft^3/s (September 16 through March 31) and 600 ft^3/s (April 1 through September 15) are proposed for the river below Anderson Ranch Dam to increase aquatic insect production, decrease egg mortality, and increase fish spawning and rearing habitat in the river. In the driest years the proposed flows may have to be reduced.

Other proposed fish enhancements include (1) the placement of spawning gravels in selected side channels near Cow, Granite, and Rough Creeks to improve spawning and (2) installation of fish screens at irrigation diversions on

Bock, Trail, and Mennecke Creeks to reduce losses of spawning trout and their young to irrigation ditches and pastureland areas below Danskin Bridge. These features are intended to maintain and improve the production of rainbow trout so as to insure a viable population of trout in spite of increasing fishing pressure.

Recreation facilities would be developed at Anderson Ranch Reservoir. Two existing boat ramps would be improved, and three campgrounds would be developed--one for vehicle access and two for boat access.

A final decision on construction of the potential boat-access campground at Area B would be deferred until postauthorization wildlife studies are completed. This deferral is intended to allow the collection of information which would document the degree of conflict this development might have on wildlife habitat.

Two environmental quality components are included in Plan B. To improve streamside and bottomland conditions along the South Fork Boise River and to upgrade existing health and sanitation conditions in the general area, roadside turnouts, barriers, and sanitation facilities would be located along the river in the heavily used reach from Anderson Ranch Dam downstream to Danskin Bridge. The roadside facilities would improve environmental conditions in the streamside area while providing parking areas for fishermen and other recreationists. The sanitation facilities (toilets and trash cans) would be an improvement in an area which now almost totally lacks such facilities.

The acquisition of private lands in the heavily used river stretch from Reclamation Village downstream to Indian Point would assure fishermen and other recreationists continued public access to the South Fork. It would also permit the Forest Service to adopt a unified management plan for most of the lands along the river downstream from the reservoir.

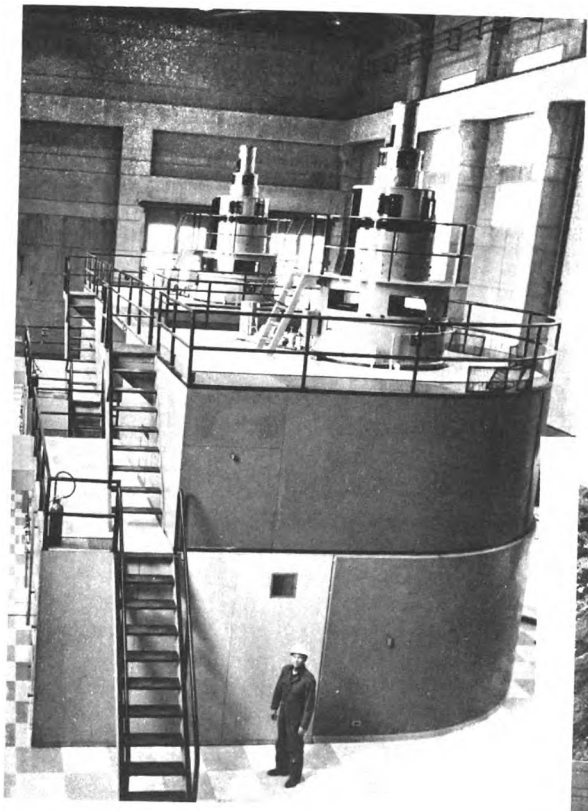
The Bureau of Reclamation would operate and maintain the third generating unit along with its present operation of Anderson Ranch Powerplant. The Forest Service would operate and maintain the recreation and environmental quality features, and the IDFG would operate and maintain the fish enhancement features under the overall administration of the Forest Service.

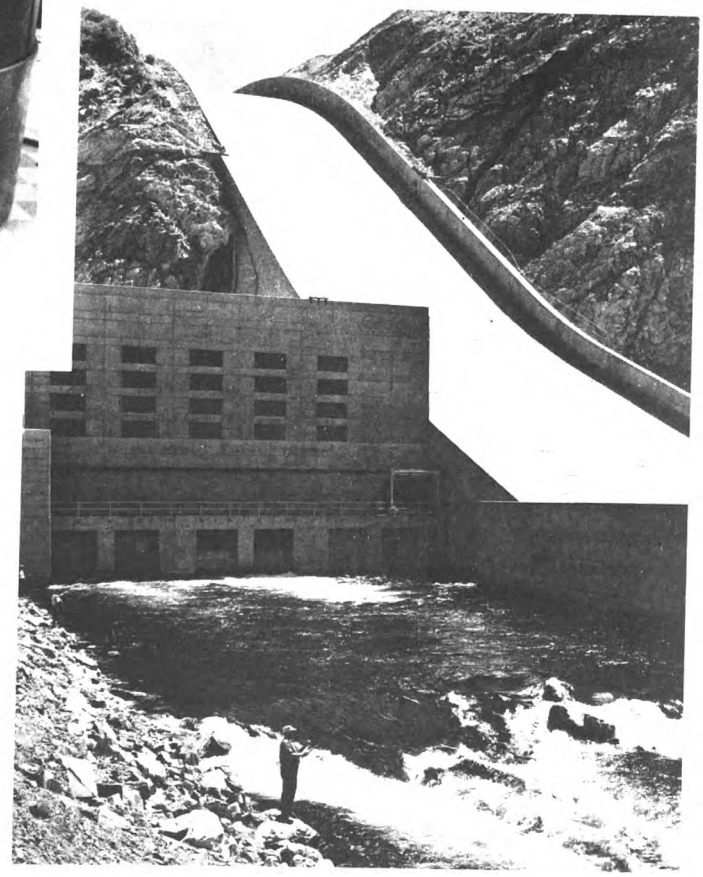
The NED Emphasis Alternative--Plan A

Plan A was formulated to emphasize economic objectives. Hydroelectric power development would make the greatest monetary contribution.

Because of the strong public sentiment toward most elements of the potential developments, the physical and operational constraints involved, and the requirements to develop viable alternatives that could reasonably be implemented in place of Plan B, Plan A is essentially the same as Plan B except in regard to the items discussed below.

Minimum instream flows in the South Fork Boise River would be 200 ft^3/s year-round. Stream resource maintenance flows of 300 ft^3/s and 600 ft^3/s would not be provided as in Plan B. However, the winter power peaking operation and the operation of the potential third generating unit would be restricted as in Plan B.





Anderson Ranch Powerplant has two existing generating units, with space for a third. The powerplant is adjacent to the dam's spillway.

Due to a year-round minimum instream flow of 200 ft^3/s, the third generating unit (30 MW) would produce an average of 19.6 million kWh of electrical energy per year under Plan A as compared to 19.1 million kWh under Plan B. The difference in electrical generation between Plans A and B would be 500,000 kWh per year or enough energy to serve about 40 average homes.

Roadside turnouts, barriers, and sanitation facilities would not be constructed or installed, nor would private lands along the South Fork Boise River be acquired.

The EQ Emphasis Alternative--Plan C

Plan C was developed to emphasize environmental objectives. Plan C is essentially the same as Plan B except in regard to the items discussed below.

The existing winter power peaking operation would remain in effect; no changes would be made in regard to the maximum allowable rate of increase in flows or the maximum release through the power units. However, the maximum rate of decline would be modifed, as in Plans A and B, to reduce the stranding of fish and aquatic insects in side channels and pools. Because of the lack of any significant change in the winter power peaking operation, the 5-year South Fork Boise River fish and stream resource study would be omitted.

To meet stream resource maintenance flow needs of 300 and 600 ft^3/s, the potential 30-MW generating unit would produce less electrical energy than Plan A (19.6 million kWh per year) but the same as Plan B (19.1 million kWh per year).

The boat-access campground development at Area B at Anderson Ranch Reservoir would be omitted to protect wildlife habitat.

The No Action Alternative--Plan D

In the absence of an authorized Bureau of Reclamation project, several structural and/or management programs would probably be adopted. These provide a framework for the projection of future environmental conditions in the study area. The difference between future environmental conditions "with" and "without" project development defines the net environmental effect of the project. Future developments or activities include:

Electrical Energy.--Powerplant capacity at Anderson Ranch Dam will be increased within the next few years from 34.5 to 40 MW by replacing the stator windings of the two existing generating units with higher capacity winding. This replacement is scheduled as a part of Reclamation's normal project operation and maintenance program and is not a part of the proposed action covered in this environmental statement. The temperature of the water below the dam would

increase slightly (about .5° C) with operation of the two rewound units. Power projections for the southern Idaho system show that federally supplied loads will continue to increase, requiring either increased imports or additional generation within the area.

Fish and Wildlife.--Improved stream resource maintenance flow needs of 300 and 600 ft^3/s (depending on season) would be met whenever water is available, but flows would be unauthorized and subject to modification. Overall, the future of the South Fork fishery generally appears good, although effort and harvest are expected to increase each year. If the IDFG finds that fry recruitment is not adequate to maintain the trout population at desired levels, further size restrictions, reduced bag limits, or a catch and release fishery regulation may be necessary to provide more production to the South Fork system.

The Bureau of Reclamation predicts a recreation demand of about 110,000 recreation-days for fishing at Anderson Ranch Reservoir in the year 2000. The IDFG would continue to manage the reservoir fishery to produce large kokanee. If past powerboat trends on the reservoir continue into the future, the potential would exist for increased conflict between sport boating and sport fishing interests. Future speedboating and water-skiing activities could interfere with kokanee trolling efforts when both uses occur in the same general area. The quality of the kokanee angling experience would decline due to impaired fishability.

Recreation.--At Anderson Ranch Reservoir the demand for recreation is expected to increase in the future. A demand for up to 302,000 recreation-days has been predicted by Reclamation for the year 2000. In a limited number of areas, toilets and trash cans would be installed by the Forest Service to minimize public health and sanitation hazards. The Forest Service may also decide to enlarge and upgrade the parking area at the Pine Airport boat ramp.

In the future the existing resort operators at Fall and Deer Creeks, or other commercial entities, may provide limited marina services. Such developments are expected to provide boat storage opportunities. The Forest Service may also grant permits to commercial operators at areas near the Pine Airport and Deer Creek for campground and related facility development. Up to 150 units with water and electrical hookups may be provided by the commercial operators. Facility construction by commercial operators and others would serve to increase the recreation capacity of the reservoir area but would not solve the problem of overuse.

A shortage of recreation facilities would lead to the overuse of facilities and force some recreationists to find substitute locations for their recreational activities. Damage due to dispersed recreation and overuse in sensitive, undeveloped areas around the reservoir would be in the form of soil compaction, soil erosion, and the loss of vegetation. Litter and human waste problems would be intensified.

Recreation demand along the South Fork Boise River is expected to grow at a slower rate than for the Anderson Ranch Reservoir area. A year 2000 total recreation demand of about 56,000 recreation-days is predicted and expected for the area below the dam (present recreational use totals about 30,000 recreation-days per year). Increased damage to soils and vegetation would occur in undeveloped areas due to uncontrolled access, dispersed recreation, and overuse. The absence of trash cans and toilets would tend to promote litter and human wastes in the general area. No major recreation facility additions along the river are anticipated between 1980 and the year 2000.

Land Use.--Recreation and grazing would remain the predominant land use activities along the South Fork Boise River. To control vehicular access and damage to bottomland and streamside areas along the river, the Forest Service might initiate a signing program to encourage and direct recreationists to areas more suited for intensive use. However, this effort would be only marginally successful. Dispersed recreation, vehicular access, and parking in undeveloped areas would continue, especially on the private lands interspersed along the river.

Damage to streamside and bottomland soils and vegetation would increase due to dispersed recreation and overuse. As a result, the Forest Service may decide to close some damaged undeveloped areas. Area closures and a shortage of recreation facilities would force recreationists to find substitute locations for their activities. In the absence of an expanded fencing program, livestock grazing also would likely remain a cause of degraded streamside and bottomland conditions.

About 573 acres of State land would be added to the Federal land base along the South Fork by a State/Forest Service land exchange. However, the goal of placing all streamside lands between Anderson Ranch Dam and Danskin Bridge under Forest Service management appears unlikely due to limited funds for private land acquisition. This would hinder the Forest Service's ability to adopt a unified management plan for most of the lands along the river downstream from the reservoir and could affect future public access to the river.

Present land uses in the vicinity of Anderson Ranch Reservoir would continue. Predominant uses include recreation, seasonal and year-round cabin developments, commercial developments, livestock grazing, and winter range for big game. The county road system would remain essentially as it is except for paving the road connecting the village of Pine to U.S. Highway 20.

Other Alternatives Considered but Eliminated from Detailed Study

Several alternatives for the third generator were evaluated during planning studies, ranging from 13.5 to 50 MW. Under current economic criteria, units from 13.5 to 30 MW would be justified by benefits in excess of costs. Sizes over 30 MW would require substantial changes to the existing penstock and powerplant structure.

Two alternatives were considered that involved a winter power peaking operation with rapid rates of rise and high peak flows. A reregulation dam about 2 miles below the dam would have been required to moderate the severe river fluctuations. These alternatives were dropped because of opposition to a reregulation dam by public groups.

Two potential fish enhancement measures eliminated were (1) instream improvements such as gabions, boulders, deflectors, and other measures to create pool and riffle areas and (2) removal of tributary obstructions. The first was not included because IDFG felt that the existing habitat was close to optimum, and potential instream improvements would not significantly increase the trout population. The second element was not included because (1) the obstructions are a problem only during low water years and (2) fly-fishermen clubs are already removing or modifying some of the major obstructions under IDFG supervision.

A number of potential recreation improvement measures were eliminated from detailed study. These included (1) construction of a 20-unit campground at Reclamation Village, (2) construction of four footbridges across the South Fork between Anderson Ranch Dam and Danskin Bridge, (3) floatboat takeouts near Neal and Danskin Bridges, (4) a boat launch ramp extension and low water parking area at Elk Creek on Anderson Ranch Reservoir, (5) right-of-way acquisition and trail construction between Danskin and Trail Creek Bridges, (6) the acquisition of State lands (573 acres) between Anderson Ranch Dam and Indian Point to be accomplished by a land exchange between the State and the Forest Service, (7) boat ramp improvements at Fall Creek #2 and #3 low water ramps, and (8) construction of campgrounds at Anderson Ranch Reservoir sites #23-24 and #25.

Comparative Analysis of Proposed Action and Alternatives

The alternatives were evaluated on the basis of economic, environmental, regional development, and social well-being effects. Although the plans are quite similar, Plan B emerges from these evaluations as the preferred alternative.

From an EQ standpoint, Plans B and C are preferable to Plan A. Plan A does not provide for the acquisition of private lands or the installation of roadside turnouts, barriers, and sanitation facilities along the South Fork Boise River.

Under Plan A, minimum instream flows below Anderson Ranch Dam would be only 200 ft^3/s, the same as provided in the past. Stream resource maintenance flows of 300 and 600 ft^3/s would be authorized under Plans B and C to significantly enhance fish and aquatic insect production in the South Fork. However, in the absence of a Bureau of Reclamation project, stream resource maintenance flows below Anderson Ranch Dam could be subject to future modification.

The proposed modifications in winter power peaking flow limits (Plans A and B) are relatively minor. The modified winter peaking operation would not be a regular practice but would be used only as needed. The plans include

operating restrictions to protect the South Fork fishery. Increased aquatic insect drift due to winter power peaking should have little or no effect on the abundance of fish populations.

Plans A, B, and C include screening of irrigation diversions on Bock, Trail, and Mennecke Creeks and the placement of spawning gravels in three South Fork Boise River side channels. These measures would improve the river fishery by increasing aquatic insect and rainbow trout production.

The addition of camping facilities at Anderson Ranch Reservoir (Plans A, B, and C) would increase the capacity of the reservoir area to accommodate recreational use. The proposed boat-access campground at Area B is not included in Plan C.

The proposed acquisition of private lands along the South Fork would insure future public access. Vehicle turnouts and related facilities would improve environmental conditions along the river. These features are included in Plans B and C but not in Plan A (the NED emphasis plan).

Overall, the EQ benefits clearly outweigh the EQ adverse effects, especially in Plans B and C. Environmental impacts during project construction would be minor and about the same for Plans A, B, and C.

Social benefits clearly outweigh any adverse effects. Social impacts would be about the same for Plans A, B, and C.

From an economic standpoint, the benefit-cost ratios are 1.24 for Plan B (the proposed plan), 1.46 for Plan A (the NED emphasis plan), and 1.26 for Plan C (the EQ emphasis plan); net annual dollar benefits would total about $188,000, $330,000, and $195,000, respectively.

Affected Environment

The South Fork Boise River above Anderson Ranch Reservoir drains a basin of about 1,140 square miles. Reservoir inflow averages 716,000 acre-feet per year. About 68 percent of this inflow occurs during the April-June period. Riverflows are regulated at Anderson Ranch Dam.

The water of Anderson Ranch Reservoir and the South Fork downstream from the reservoir is of excellent quality and in compliance with Idaho standards. However, during periods of high runoff, some South Fork tributaries degrade main river spawning bars by the addition of heavy loads of fine sand and silt from disturbed watersheds.

The reservoir exhibits distinct thermal stratification. The powerplant intake draws cold water from near the bottom of the reservoir; spillway releases are withdrawn from warmer surface strata. Combined temperature releases from Anderson Ranch Dam rise slightly when the spillway is in use.

Spring releases to the river below Anderson Ranch Dam for flood control are unrestricted and made based upon Boise system runoff forecasts and rule curves which dictate reservoir space requirements. Irrigation releases usually begin

in April and continue into September. During the irrigation season, flows are generally held at about 1,600 ft^3/s; hydroelectric generation remains at or near the present generating capacity of 34.5 MW.

During the winter when power peaking operations are in effect at the dam, flows have fluctuated daily from about 200 ft^3/s to a maximum of 1,725 ft^3/s. Power peaking normally occurs on weekdays from January through March to generate electricity during hours when it is needed most. When sufficient water is available, the power peaking operation may begin as early as October. When water supplies are low, no peaking operations are undertaken. The winter power peaking operation ends when high flood control or irrigation releases begin.

Visual and sound qualities in the project area are generally high. The varied nature of the landscape is enhanced by a vegetative mosaic of pine-aspen forests and open sagebrush-grassland communites. Minor adverse noise levels in the area are caused by human activity; however, domestic animals, birds, and other wildlife add a generally desirable sound quality.

Downstream of Anderson Ranch Dam, streamside vegetation is dominated by cottonwood, willow, locust, and alder; sagebrush and other shrubs are intermixed. The grass understory is predominantly bluebunch-wheatgrass associated with Sandberg's bluegrass, Idaho fescue, and cheatgrass. Bottomland vegetation is a mosaic of deciduous and coniferous trees and shrubs; sagebrush-grassland communities; and small, isolated meadows.

Adjacent to Anderson Ranch Reservoir, south- and west-facing slopes are predominantly sagebrush-grassland communities; dense stands of cheatgrass, sagebrush, bitterbrush, and numerous forbs are common. North- and east-facing slopes foster denser vegetative communities. Moist sites are dominated by aspen, Douglas-fir, and ponderosa pine; understory species include young deciduous and coniferous trees, shrubs, grasses, and forbs. The drier sites support sagebrush-grassland communities.

According to the U.S. Fish and Wildlife Service, no federally listed threatened or endangered plant species are known to occur in the project area. However, based on habitat requirements and known occurrences in Elmore County, four plant species proposed for Federal endangered status could occur within the general area.

The South Fork Boise River below Anderson Ranch Dam has developed into a quality rainbow trout stream. It offers a quality angling experience, both in esthetics and high catch rates. Other game fish populations in the South Fork include mountain whitefish, Dolly Varden, and smallmouth bass. Mountain whitefish are abundant and produce a good fishery through the winter months when the trout season is closed.

Because of the limited spawning gravels available in the main channel of the South Fork, many tributaries are important spawning areas. Most of the tributaries have moderate to steep gradients. Unscreened irrigation diversions on Bock, Trail, and Mennecke Creeks cause losses of adult spawners as they drop back downstream and to fry moving downstream later in the summer.

An Idaho Cooperative Fishery Research Unit study indicates that present winter power peaking operations produce no significant changes in either total aquatic insect populations or functional groups of insects. The existing winter power

peaking regime does result in the downstream movement of midge larvae and mayflies. However, following peaking, aquatic insects are still abundant in the South Fork. Peaking flows generally have been found to produce species- and site-specific effects on aquatic insects. Under the existing winter peaking regime, rainbow trout and certain aquatic insects have flourished.

Anderson Ranch Reservoir provides a high quality kokanee, a fair trout, and an improving smallmouth bass fishery. Other common species found in the reservoir are chiselmouth, mountain and large-scale sucker, yellow perch, and Dolly Varden. No threatened or endangerd species of fish are known to occur in the reservoir or in the South Fork Boise River either above or below the reservoir.

Canyon slopes and bottomlands adjacent to the river provide important winter and spring range for mule deer. Canyon bottomlands are avoided as much as possible by elk due to human interference. However, during severe winters, elk do move into the South Fork and Lime Creek areas to forage. The most common game bird is the chukar partridge. Other game birds include mourning doves, gray partridge, mountain quail, and blue grouse. A variety of songbirds also nest or migrate through the project area. Furbearing mammals found in the area are beaver, muskrat, coyote, and mountain cottontail. Other small mammals include badger, porcupine, and yellow-bellied marmot.

Raptors include the golden eagle, bald eagle, osprey, prairie falcon, and several species of hawks and owls. No peregrine falcon sightings have been confirmed in the area, but habitat in the river canyon below Danskin Bridge may be suitable for nesting. Bald eagles are thought to be predominantly transitory to this area and are commonly seen along the river in March and April. Waterfowl use Anderson Ranch Reservoir, the South Fork, and adjacent side channels.

Two species of wildlife presently classified as endangered under the Federal Endangered Species Act occur or could occur in the study area. The bald eagle makes extensive fall and winter use of the streamside area along the river for feed and roosting. The project area is within the general range of the American peregrine falcon; however, there have been no recent sightings of peregrines in the study area.

The Anderson Ranch Reservoir shoreline is administered by the Forest Service. Public use facilities include seven boat launch ramps and four designated campgrounds. Private facilities include the Fall Creek and Deer Creek Lodges and summer or year-round cabins.

Bottomlands and sideslopes adjacent to the river below Anderson Ranch Dam are predominantly used for recreation and livestock grazing. Vehicle access and off-road parking are uncontrolled; vehicle turnouts, wheel tracks, and campsites are numerous and scattered. The Forest Service operates and maintains two small campgrounds (Cow Creek and Granite Springs); no other private or federally developed recreation facilities exist along the river below the dam.

About 30 percent of the lands adjacent to the river and within the canyon are privately owned. The remainder is under Federal ownership and administered by the Forest Service; small parcels of land are also administered by the Bureau of Reclamation.

The remnants of two historic structures and associated artifacts are located between Reclamation Village and Danskin Bridge. The significance of these sites is indeterminate at this time because of the lack of comparative information. Sites of this nature are common in southern Idaho, yet no statements can be made about them other than they were probably early miner or sheepherder camps. The study area contains no properties listed on the National Register of Historic Places.

All counties in the region experienced population increases from 1970-76. Most of this growth occurred in Ada and Canyon Counties.

Environmental Consequences

The Proposed Action--Plan B

Wherever construction is ongoing, there would be a localized lowering of air quality due to airborne particulates and exhaust emissions. Air quality impacts would be short term and insignificant.

During construction, temporary turbidity would occur in localized areas of the South Fork Boise River and Anderson Ranch Reservoir. Turbidity impacts are expected to be short term and minor.

With the third generating unit in place, Anderson Ranch Powerplant would use water currently being spilled or bypassed to generate additional power. Redistribution of spillway releases to the power outlet would slightly increase summer release temperatures (less than 1° C).

The proposed river operation would have a negligible effect upon other water uses. Authorized project functions of irrigation and flood control would not be affected by the adoption of stream resource maintenance flows, enhanced power peaking, or the addition of a third generator.

Visual impacts during construction would be short term and minor. Movement of equipment, smoke and/or dust, and temporary structures would contribute to a slight degradation of visual quality. Roadside turnouts and barriers would control vehicular access and parking along the South Fork and enhance visual quality due to a slight improvement in streamside and bottomland vegetation. Trash cans and toilets would decrease litter and human wastes in the general area. Additional campsites at Anderson Ranch Reservoir would help reduce dispersed recreation and damage to soils and vegetation in undeveloped areas.

Construction sounds would result in temporarily high noise levels at the construction sites. The degree of impact would be minor and largely determined by personal tolerances. No long-term adverse effects would occur from project operation.

Vegetation would be temporarily disturbed in the immediate area of construction. Any land not permanently occupied by new facilities would be revegetated with plants native to the area and beneficial to wildlife.

Impacts to the fish and aquatic insects of the South Fork Boise River would be directly related to the river operation. When operating at or near the proposed winter power peaking limits, increased levels of insect drift would

occur, but no major change in total aquatic insect abundance is expected. Increased insect drift should have little or no effect on the abundance of fish populations since it is not believed that food is presently limiting either the trout or whitefish population. During winter power peaking the rate of decline would also be modified to prevent the occasional stranding of fish and aquatic insects in side channels and pools.

Overall, the river fishery would be significantly enhanced. Stream resource maintenance flows would increase aquatic insect production, decrease egg mortality, and increase the availability of fish rearing and spawning habitat. Installation of fish screens would significantly reduce the loss of adult spawners and fry to irrigation ditches and pasture areas. Placement of spawning gravels in side channel areas would increase the rearing and production value of these areas.

Impacts to wildlife populations during construction would result from a temporary loss of habitat, disturbance or destruction of nest sites and/or dens, and the killing of some small animals unable to escape from the path of construction equipment. Long-term impacts from construction should not be significant after vegetation has been reestablished. There would be a minor increase in wildlife habitat and vegetation for bottomland species along the South Fork due to the proposed roadside turnouts and barriers.

The boat-access campground proposed at Area B would displace a few individuals of some wildlife species from the immediate area due to increased human activity. This displacement would not have a significant effect on local populations of these animals. However, a final decision on construction of the Area B campground would be deferred until postauthorization wildlife studies are complete. Facility construction at Area B would be deleted from the plan if the potential adverse effects were found to be significant.

As a result of Section 7 consultation with the U.S. Fish and Wildlife Service in accordance with the Endangered Species Act, it has been concluded that the proposal would not have an adverse effect on any threatened or endangered plant, fish, or wildlife species.

Acquisition of private lands adjacent to the South Fork would insure continued public access. This would enable the Forest Service to adopt a unified management plan for most of the lands along the river downstream from the reservoir. Improved resource management would afford protection and enhancement of wildlife and habitat types. Recreation and grazing would remain the predominant land use activities.

At Anderson Ranch Reservoir, land use changes related to campsite development would occur at Deer Creek, Lake Creek, and Area B. About 12,250 recreation-days of additional use would be accommodated annually as a result of facility construction. The new facilities would help satisfy the existing demand for recreational facilities at the reservoir, and they would help reduce dispersed recreation and resource deterioration in undeveloped areas around the reservoir.

There is a possibility that the construction of the Area B camping facility, and to a lesser extent the Deer Creek and Lake Creek camp units, might increase the potential for conflict between sport boating and sport fishing interests. However, if past powerboat use trends on Anderson Ranch Reservoir continue into the future, the potential for conflict would probably occur without any action being taken under this proposal.

With Plan B, winter power peaking fluctuations could occur more rapidly giving wading fishermen less time to notice the rising water and to take action to leave the river. Fishermen who do not act in a prudent manner may become stranded on the unroaded side of the river. Strandings would be slightly more common with the proposed action.

Under the present proposal the remnants of two historic structures located between Reclamation Village and Danskin Bridge would not be affected; furthermore, these sites would not be subject to a perceptible increase in deterioration or vandalism as a result of this project. If for some reason project features were to be constructed near a cultural resource site, an evaluation to determine whether the site would be eligible for inclusion on the National Register of Historic Places would be performed.

A 4-year construction period is anticipated. An average of 10 workers would be required during the first year of project construction with about 50 required over the last 3 years. The wages and salaries from these jobs would benefit the communities where the workers would live, principally Mountain Home. The increase in indirect and induced employment in the area is estimated at about 55 jobs. It is anticipated that only one permanent operation and maintenance job would be available in the operating phase of the project.

A 30-MW generator would increase the average annual production of energy by 19.1 million kWh. Additional generation at Anderson Ranch Powerplant would reduce wheeling expenses and transmission losses and slightly reduce power imports to the Federal southern Idaho system during periods when energy loads are the highest.

Total annual equivalent project benefits would be about $970,100. This estimate includes $813,900 for power, $117,900 for fish enhancement, and $38,300 for recreation.

NED Emphasis Alternative--Plan A

Plan A is the same as Plan B except that no roadside turnouts, barriers, and sanitation facilities would be installed along the South Fork Boise River nor would private lands be acquired. Under Plan A, minimum instream flows would be 200 ft^3/s year-round. Stream resource maintenance flows of 300 and 600 ft^3/s would not be provided as in Plan B.

The environmental effects of Plan A would be the same as for those plan elements included in Plan B. Impacts attributable to acquiring private lands and providing roadside turnouts and related facilities along the river would not occur. Aquatic resource, social, and economic effects would differ slightly from those presented under Plan B.

At year-round minimum flows of 200 ft3/s, water coverage of aquatic habitat for insect production in the main channel would be about 77 percent of its maximum potential as compared to 90-percent coverage at 300 ft^3/s with Plan B. The number of additional trout redds for egg production would be less than expected under Plan B due to reduced water coverage of side channel habitat.

Because Plan A does not include the provision for increased minimum instream flows for the South Fork fishery, no dependable capacity would be lost and the average annual production of energy would be slightly increased over Plan B. The Third Unit would produce an average of 19.6 million kWh of electrical energy per year under Plan A as compared to 19.1 million kWh under Plan B.

Total annual equivalent project benefits would be about $1,042,400. This estimate includes $936,800 for power, $67,300 for fish enhancement, and $38,300 for recreation.

EQ Emphasis Alternative--Plan C

A comparison of Plan C with Plan B reveals that (1) in regard to the winter power peaking operation, the maximum rate of rise and maximum release through the powerplant would not be modified and (2) a boat-access campground would not be developed at Area B. The environmental consequences of Plan C would be the same as for those plan elements included in Plan B. Impacts relating to visual quality, vegetation, aquatic resources, wildlife, land use, recreation, and social and economic factors would differ slightly from those presented under Plan B.

Adverse fish and aquatic insect effects related to the winter power peaking operation would not be increased over future without project conditions since the existing river operation would remain in effect. Thus, the 5-year fish and stream resource study included in Plans A and B would not be initiated upon Third Unit installation.

In the absence of Area B development, less reservoir campsites would be available to accommodate present and future recreation needs. About 8,250 recreation-days (as compared to 12,250 recreation-days with Plan B) of additional use would be accommodated. Soil and vegetative damage from dispersed recreation and overuse in undeveloped reservoir areas would not be reduced to the same degree as with Plan A or Plan B, which include facility development at Area B. Dispersed recreation at Area B would continue to displace some species of wildlife, but not to the same degree as with Plan A or Plan B.

Power production and associated impacts would be the same as in Plan B, except there would be no improved flexibility to meet peak daily southern Idaho winter power needs--a nonmonetary benefit foregone because Plan C does not include the provision for a more rapid rate of rise when needed to meet winter peakloads (as in Plans A and B).

Total annual equivalent project benefits would be about $957,400. This estimate includes $813,900 for power, $117,900 for fish enhancement, and $25,600 for recreation.

ENVIRONMENTAL COMMITMENTS

ENVIRONMENTAL COMMITMENTS

The environmental commitments associated with the proposed plan (Plan B) are still valid. They are reproduced below just as they appeared in the draft environmental statement, except that the agency name has been changed from Water and Power Resources Service to Bureau of Reclamation and the references to page numbers in the draft environmental statement have been omitted. The "Environmental Commitments" section of the September 1981 draft environmental statement follows.

A. Preconstruction Phase

1. To improve environmental conditions along the South Fork Boise River, roadside turnouts, barriers, and sanitation facilities would be constructed or installed. Facility designs, numbers, and locations would be determined during postauthorization studies in accordance with the carrying capacity of the South Fork area. These studies would be accomplished through interagency and public participation.

2. A final decision on construction of the Area B campground would be deferred until postauthorization wildlife studies are completed. This deferral is intended to allow the collection of information which would document the degree of conflict this development might have on wildlife resources.

3. Facility construction at Area B would be deleted from the plan if adverse effects were found to be significant. If the campground were built, its size could be reduced or use could be restricted during times when it might conflict with wildlife use.

4. If for some reason project features were to be constructed near a cultural resource site, an evaluation to determine whether the site would be eligible for inclusion on the National Register of Historic Places would be performed prior to construction. If mitigation is determined necessary, funds would be available to perform mitigation activities before facility construction.

B. Construction Phase

1. During third unit installation, stream resource maintenance flows of at least 300 ft^3/s or 600 ft^3/s (depending on season and availability of water) would be maintained in the South Fork Boise River below Anderson Ranch Dam to protect the quality fishery.

2. For safety, install additional warning signs at strategic locations near the road along the South Fork Boise River and at access points warning the public of possible streamflow fluctuations and rising river levels.

3. Install fish screens on existing irrigation diversions in Mennecke, Bock, and Trail Creeks to reduce losses of adult spawners and fry to irrigation ditches and pastureland areas below Danskin Bridge.

4. Design and install fish screens so they do not hamper or impair normal irrigation operation and maintenance procedures.

5. Provide spawning gravels near Cow, Granite, and Rough Creeks to improve trout spawning in the South Fork Boise River.

6. Acquire private lands adjacent to the South Fork Boise River for transfer to the Forest Service for management.

7. Construct or install roadside turnouts, barriers, and sanitation facilities along the South Fork Boise River to improve environmental conditions in the general area.

8. Measures will be taken to protect and restore the natural landscape.

9. Any long-term adverse impact on the esthetic character of the project area would be minimized by proper landscaping, site design, and site restoration. As soon as an area is no longer needed for construction, stockpiling, or access, any land disturbed but not permanently occupied by new facilities would be covered with topsoil, landscaped, and revegetated with plants native to the area and beneficial to wildlife.

10. Following construction, the Deer Creek area would be landscaped and revegetated with native grasses and trees.

11. Measures will be taken to prevent water pollution.

12. Cofferdams required to facilitate instream construction would be erected of clean, washed, crushed stone or other suitable materials free of contaminants that would not contribute significantly to the turbidity or siltation of the river.

13. Machinery for instream construction would operate from the streambank, not in the stream, whenever possible.

14. Sanitary wastes would be disposed of by burial at approved sites or by other approved methods.

15. Disturbance of the streambed would be kept to a minimum, and the streambed would be returned as nearly as possible to its original condition or better.

16. Excavated materials would not be stockpiled or deposited near or on streambanks, steep slopes, wetlands, or other watercourse perimeters where they could be washed away by high water or storm runoff or encroach upon the watercourse itself.

17. Any waste waters discharged into surface waters would be essentially free of settleable material.

18. Contractors would be required to comply with all State and Federal laws and regulations regarding the control and abatement of water pollution.

19. Water quality monitoring by the contractors would be required during any construction activities that would impact water quality.

20. Measures will be taken to prevent noise and air pollution.

21. Contractors would be required to use such methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of atmospheric contaminants and noise.

22. Open burning of project debris and unsalvable structural materials would be prohibited.

23. Pesticides used would be those registered with the Environmental Protection Agency.

24. Sequenced construction of the tailrace weir would begin upon termination of irrigation releases; stream resource maintenance flows (300 ft^3/s) would be met during the construction period whenever water is available.

25. Contractors would be required to have all necessary permits prior to construction.

C. Operating Phase

1. Provide stream resource maintenance flow of 300 ft^3/s from September 16 through March 31 whenever water is available.

2. Provide stream resource maintenance flow of 600 ft^3/s from April 1 through September 15 whenever water is available.

3. Restrict the maximum winter power peaking release to about 1,800 ft^3/s. An 1,800-ft^3/s release limit would help protect the fishery downstream of Anderson Ranch Dam.

4. The rate of decline in powerplant releases would remain unrestricted down to 600 ft^3/s. Further flow reductions, however, would occur at a maximum rate of about 35 ft^3/s per 10 minutes down to 300 ft^3/s. This operational change would reduce the stranding of fish and aquatic insects in side channels and pools.

5. The Bureau of Reclamation would fund a 5-year postconstruction South Fork Boise River study to assess the influence of the proposed river operation on fish and stream resources.

6. The Bureau of Reclamation would contact and consult those entities affected prior to adopting a significant change in river operations.

7. Irrigation releases would be limited to the existing generation of 34.5 megawatts or about 1,600 ft^3/s with minimum fluctuations.

8. The Bureau of Reclamation would limit the Level III procedure at the enlarged Anderson Ranch Powerplant to the seasonal maximums identified or, if in the flood control season, to the flood control release being made at that time.

9. If the side channel rehabilitation program should be so efficient as to require only a part of the estimated funds, or on the other hand, if only partly successful, some of the programed operation and maintenance funds could be used for other fish enhancement measures.

10. The Idaho Department of Fish and Game would administer and be responsible for fish facilities under the overall administration of the Forest Service. Annual operation, maintenance, replacement, and power costs would be the responsibility of the Bureau of Reclamation.

11. The Idaho Department of Fish and Game would operate and maintain the fish screens through agreements with the private landowners.

12. The Idaho Department of Fish and Game would be responsible for spawning channel rehabilitation at three areas near Cow, Granite, and Rough Creeks. For purposes of estimating costs, spawning gravel replacement could be necessary at these sites as often as every 5 years at the expense of Reclamation. If replenishment is not needed that often, additional sites could be improved or other measures adopted.

13. Recreation developments and environmental quality features would be turned over to the Forest Service for administration, operation, and maintenance.

14. The project would comply with Executive Order 11988, Floodplain Management.

15. The project would comply with Executive Order 11990, Protection of Wetlands.

REVIEW OF DRAFT ENVIRONMENTAL STATEMENT AND FEASIBILITY REPORT

REVIEW OF DRAFT ENVIRONMENTAL STATEMENT AND FEASIBILITY REPORT

The draft environmental statement and the feasibility report on the Anderson Ranch Powerplant Third Unit proposal have been circulated for review as required by law and policy. No changes are required in the project prosposal as a result of that review.

The draft environmental statement was filed with the Environmental Protection Agency on September 17, 1981. Copies of the April 1981 feasibility report and the September 1981 draft environmental statement were then sent to the states of the Columbia River basin and to interested Federal agencies as required by law and procedures approved by the President. In addition, the documents were sent to state and local agencies and to interested organizations and individuals for information and review. In all, the documents were distributed to more than 250 agencies, organizations, and individuals (see "Distribution List"). A number of letters of comment were submitted to Reclamation as a result of the 90-day review (September 17 to December 16, 1981).

Public hearings were held on the adequacy of the draft environmental statement. The Bureau of Reclamation held the hearings in Mountain Home, Idaho on November 18, 1981, and in Boise, Idaho the next day. Reclamation personnel were on hand to informally answer questions and provide information on the plan to those who requested it. About 25 people attended the two hearings. Of those, six presented testimony.

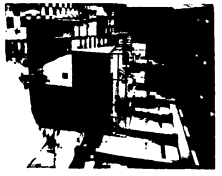
The comments and testimony which stated an opinion on the proposed plan were almost unanimously in favor of the plan as formulated. This favorable outcome may reflect the fact that the project plan was formulated by a multiagency group with the assistance of interested individuals and organizations, particularly the Boise Valley Fly Fishermen of Boise. During the final phases of plan formulation there was strong technical and public support for the plan elements which were ultimately included in the project proposal.

In addition to the public participation during plan formulation, initial drafts of the feasibility report and the draft environmental statement were reviewed at the field level by study participants and others. Subsequently, proposed versions of the feasibility report and the draft environmental statement were reviewed by the agencies of the Department of the Interior. Following each review, comments were analyzed and the documents were revised as necessary. None of the above reviews required a basic change in the plan elements.

All letters of comment and a summary of the testimony received as a result of the review are presented in the last section of this report, along with required responses by the Bureau of Reclamation. Even though a letter of comment may refer to one document only, it is treated as if it applies to both the draft environmental statement and the feasibility report.

About half of the 19 letters of comment and half of the 6 speakers at the public hearings stated support for the proposed plan. A number of the letters and several speakers asked for additional information on portions of the plan (such as the recommended streamflow regime) or asked why certain elements (such as campgrounds along the South Fork of the Boise River) had been left out of the proposed plan. Reclamation's detailed responses to those comments are shown in the last section of this report.

About a third of the letters received had no comment on the proposal. None of the letters objected to the proposed plan, although one questioned the proposed acquisition of lands. One speaker at a public hearing stated dissatisfaction with many of the plan elements.



DISTRIBUTION LIST

DISTRIBUTION LIST

The September 1981 draft environmental statement and the April 1981 feasibility report were distributed to the following agencies, organizations, and individuals.

I. DOCUMENTS DISTRIBUTED FOR REVIEW AND COMMENT

A. By the Commissioner of the Bureau of Reclamation

U.S. Department of the Interior

Bureau of Indian Affairs
Bureau of Land Management
Bureau of Mines
U.S. Fish and Wildlife Service
Geological Survey
National Park Service

Other Federal Agencies

Advisory Council on Historic Preservation
Department of Agriculture
Department of the Army
Department of Commerce
Department of Energy
- Bonneville Power Administration
- Federal Energy Regulatory Commission

*° Department of Health and Human Services
Department of Housing and Urban Development
Department of Labor
Department of Transportation
*° Environmental Protection Agency

State

° Governor John V. Evans, Boise, Idaho
° Idaho Department of Water Resources, Boise, Idaho
*° Water Resources Department, Salem, Oregon
*° State Engineer's Office, Cheyenne, Wyoming

B. By the Regional Director, Bureau of Reclamation, Pacific Northwest Region

State and Local Entities

Idaho

Idaho Department of Agriculture, Boise
*° Idaho Department of Fish and Game, Boise
° Idaho Department of Fish and Game, Region III, Boise

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* Submitted written comments on draft environmental statement or feasibility report
° Will receive final environmental statement and feasibility report

State and Local Entities

Idaho (continued)

° Idaho Department of Fish and Game, Region IV, Jerome
° Idaho Department of Health and Welfare, Water Quality Bureau, Boise
Idaho Department of Lands, Boise
+*° Idaho Department of Parks and Recreation, Boise
Idaho Department of Transportation, Boise
Idaho Department of Water Resources, Boise
° Division of Energy Resources, Boise
° Idaho Fish and Game Commission, Boise
Idaho Legislative Council, Boise
° Idaho Public Utilities Commission, Boise
Idaho Soil Conservation Commission, Boise
*° Idaho State Archeologist, Boise
*° Idaho State Clearinghouse, Division of Economic and Community Affairs, Boise
° Idaho State Historic Preservation Officer, Boise
° Idaho Water Resource Board, c/o Idaho Department of Water Resources, Boise
Northwest Power Planning Council
° Larry Mills, Boise
° Robert Saxvik, Boise
Ada County Commissioners, Boise
Ada Planning Association, Boise
*° Camas County Commissioners, Fairfield
° Elmore County Commissioners, Mountain Home
° Elmore County Planning and Zoning Commission, Mountain Home
° Elmore County Waterways Commission, Mountain Home
° Mountain Home Highway District, Mountain Home

Wyoming

Governor Edward Herschler, Cheyenne
° Wyoming Reclamation Representative, Cheyenne

Colleges and Universities

° College of Idaho, Caldwell, Idaho
Snake River Regional Study Center
Idaho State University, Pocatello, Idaho
Museum
University of Idaho, Moscow, Idaho
° Idaho Cooperative Fishery Research Unit
Water Resources Research Institute

+ Testified at public hearing
* Submitted written comments on draft environmental statement or feasibility report
° Will receive final environmental statement and feasibility report

Water User Organizations

Ballentyne Ditch Company, Ltd., Boise, Idaho
Big Bend Irrigation District, Parma, Idaho
Boise-Kuna Irrigation District, Kuna, Idaho
° Boise Project Board of Control, Boise, Idaho
Boise Valley Irrigation Ditch Company, Boise, Idaho
Capital View Irrigation District, Boise, Idaho
Farmers Union Ditch Company, Eagle, Idaho
Idaho Water Users Association, Boise, Idaho
Nampa-Meridian Irrigation District, Nampa, Idaho
New Dry Creek Ditch Company, Ltd., Eagle, Idaho
New York Irrigation District, Boise, Idaho
Pioneer Ditch Company, Inc., Star, Idaho
Pioneer Irrigation District, Caldwell, Idaho
Settlers Irrigation District, Boise, Idaho
South Boise Mutual Irrigation Company, Ltd., Boise, Idaho
Wilder Irrigation District, Caldwell, Idaho

Electric Companies, Cooperatives, and Municipalities

Burley Municipal Distribution System, Burley, Idaho
City of Albion, Albion, Idaho
City of Declo, Declo, Idaho
City of Heyburn, Heyburn, Idaho
City of Idaho Falls, Electric Light Department, Idaho Falls, Idaho
City of Minidoka, Public Utility, Minidoka, Idaho
City of Mountain Home, Mountain Home, Idaho
City of Rupert Electric Department, Rupert, Idaho
Dee-15 Light and Power, Heyburn, Idaho
East End Mutual Electric Company, Ltd., Rupert, Idaho
Empire Electric Company, Heyburn, Idaho
Fall River Rural Electric Cooperative, Inc., Ashton, Idaho
Farmers Electric Company, Rupert, Idaho
Lost River Electric Cooperative, Inc., Mackay, Idaho
Lower Valley Power and Light, Inc., Afton, Wyoming
Prairie Power Cooperative, Inc., Fairfield, Idaho
Raft River Rural Electric Cooperative, Inc., Malta, Idaho
Riverside Electric Company, Rupert, Idaho
Rural Electric Company, Rupert, Idaho
Salmon River Electric Cooperative, Inc., Challis, Idaho
South Side Electric Lines, Inc., Declo, Idaho
Unity Light and Power Company, Burley, Idaho
Wells Rural Electric Company, Wells, Nevada

Will receive final environmental statement and feasibility report

Organizations and Individuals

*° Ada County Fish and Game League, Boise, Idaho
American Rivers Conservation Council, Washington, D.C.
Boise State University Conservation Group, Boise, Idaho
+*° Boise Valley Fly Fishermen, Boise, Idaho
Deer Creek Lodge, Anderson Ranch Reservoir, Idaho
Fall Creek Resort, Anderson Ranch Reservoir, Idaho
Federation of Fly Fishermen, Murtaugh, Idaho
° Fly Fishermen of Idaho, Meridian, Idaho
Golden Eagle Audubon Society, Nampa, Idaho
° Idaho Conservation League, Boise, Idaho
Idaho Environmental Council, Idaho Falls, Idaho
Idaho Farm Bureau Federation, Boise, Idaho
+*° Idaho Consumer Affairs, Inc., Nampa, Idaho
Idaho Wildlife Federation, Hope, Idaho
League of Women Voters of Idaho, Boise, Idaho
Sierra Club, Cascade, Idaho
Southwest Idaho Water Development Association, Mountain Home, Idaho
The Nature Conservancy--Idaho Chapter, Boise, Idaho
Trout Unlimited
° Nampa-Caldwell, Nampa, Idaho
° Treasure Valley Chapter, Boise, Idaho
Western Regional Director, Woodland, Washington
Wilderness Society, Boise, Idaho
Wildlife Society--Idaho Chapter, Boise, Idaho

° Glen Allen, Boise, Idaho
Clayne L. Baker, Boise, Idaho
+° Robert C. Baker, Mountain Home, Idaho
Lowell Bakes, Boise, Idaho
Loren Basler, Boise, Idaho
W. B. Boyer, Boise, Idaho
William N. Carter, Boise, Idaho
Representative J. Vard Chatburn, Albion, Idaho
Ed Chaney, Eagle, Idaho
Richard W. Collins, Boise, Idaho
Gerald Cornwell, Boise, Idaho
Marty Downey, Boise, Idaho
° Rupert Gates, Caldwell, Idaho
Vernon S. Hidy, Boise, Idaho
+° John Hiler, Mountain Home, Idaho
° Dr. Bob Juola, Boise, Idaho
° Dr. Fenton C. Kelley, Boise, Idaho
Representative Dan Kelly, Mountain Home, Idaho
John R. Knowles II, Boise, Idaho
Vern Knox, Meridian, Idaho
° Chris Korte, Boise, Idaho
Representative Virgil Kraus, Mountain Home, Idaho

+ Testified at public hearing
* Submitted written comments on draft environmental statement or feasibility report
° Will receive final environmental statement and feasibility report

Organizations and Individuals (continued)

° Gil Longstroth, Boise, Idaho
Bob Loughrey, Boise, Idaho
Duane Marler, Boise, Idaho
° Ken McGee, Boise, Idaho
William Meiners, Meridian, Idaho
Virgil Moore, Idaho Falls, Idaho
Ottis Peterson, Boise, Idaho
Pine Tavern, Anderson Ranch Reservoir, Idaho
Warren Reynolds, Kuna, Idaho
Gary E. Richardson, Boise, Idaho
Barry L. Ross, Boise, Idaho
E. C. Scheider, Boise, Idaho
Paul Schneider, Burnsville, Minnesota
° Mel Schulte, Boise, Idaho
Charles R. Severen, Boise, Idaho
Charles E. Shinn, Boise, Idaho
Forrest K. Skaggs, Boise, Idaho
Senator J. Wilson Steen, Glenns Ferry, Idaho
Representative Kenneth Stephenson, Nampa, Idaho
° Bill Sweet, Meridian, Idaho
+° J. W. Twitchell, Mountain Home, Idaho
C. C. Warnick, Moscow, Idaho
Jay Webb, Boise, Idaho
° Dr. Robert White, Bozeman, Montana
Joe Wyllie, Boise, Idaho

DOCUMENTS DISTRIBUTED FOR INFORMATION

A. By the Commissioner of the Bureau of Reclamation

United States Senate, Washington, D.C.

° Honorable James A. McClure
° Honorable Steven D. Symms

United States House of Representatives, Washington, D.C.

° Honorable Larry Craig
° Honorable George V. Hansen

Testified at public hearing
Will receive final environmental statement and feasibility report

B. By the Regional Director, Bureau of Reclamation, Pacific Northwest Region

Congressional Delegation--Field Offices

° Honorable Larry Craig, Boise, Idaho
° Honorable George V. Hansen, Boise, Idaho
° Honorable James A. McClure, Boise, Idaho
° Honorable Steven D. Symms, Boise, Idaho

Federal Agencies

Department of Agriculture
° District Ranger, Forest Service, Boise National Forest, Mountain Home, Idaho
° Forest Supervisor, Forest Service, Boise National Forest, Boise, Idaho
Regional Forester, Forest Service, Ogden, Utah
*° State Conservationist, Soil Conservation Service, Boise, Idaho
State Director, Farmers Home Administration, Boise, Idaho
Department of the Army
*° District Engineer, Corps of Engineers, Walla Walla, Washington
Division Engineer, Corps of Engineers, Portland, Oregon
Department of Commerce
Regional Representative, Seattle, Washington
Department of Energy
Bonneville Power Administration, c/o Zane Harper, Portland, Oregon
Bonneville Power Administration, Burley, Idaho
° District Office, Bonneville Power Administration, Idaho Falls, Idaho
*° Program Coordinator, Bonneville Power Administration, Portland, Oregon
*° Regional Engineer, Federal Energy Regulatory Commission, San Francisco, California
Regional Representative, Seattle, Washington
Department of Health and Human Services
Regional Director, Seattle, Washington
Department of the Interior
*° Area Manager, U.S. Fish and Wildlife Service, Boise, Idaho
Chief, Western Field Operation Center, Bureau of Mines, Spokane, Washington
District Chief, Water Resources Division, Geological Survey, Boise, Idaho
District Chief, Water Resources Division, Geological Survey, Portland, Oregon
° District Manager, Boise District Office, Bureau of Land Management, Boise, Idaho
° Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Boise, Idaho
Regional Director, U.S. Fish and Wildlife Service, Portland, Oregon

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* Submitted written comments on draft environmental statement or feasibility report
° Will receive final environmental statement and feasibility report

Federal Agencies (continued)

Department of the Interior (continued)
*° Regional Director, National Park Service, Seattle, Washington
National Park Service, Water Resources Laboratory, Colorado State University, Fort Collins, Colorado
Regional Hydrologist, Geological Survey, Menlo Park, California
*° State Director, Bureau of Land Management, Boise, Idaho
Department of Transportation
Division Engineer, Federal Highway Administration, Boise, Idaho
Environmental Protection Agency
° Director, Idaho Operations Office, Boise, Idaho

Newspapers

Associated Press, Boise, Idaho
Free Press, Nampa, Idaho
Idaho Statesman, Boise, Idaho
Mountain Home News, Mountain Home, Idaho
United Press International, Boise, Idaho
° The Idaho Citizen, Boise, Idaho

TV Stations

KAID, Boise, Idaho
KBCI, Boise, Idaho
KIVI, Nampa, Idaho
KTVB, Boise, Idaho

Radio Stations

KBOI, Boise, Idaho
KFLI, Mountain Home, Idaho
KFXD, Nampa, Idaho

Libraries

° Boise Public Library, Boise, Idaho
° Boise State University Library, Boise, Idaho
° Caldwell Public Library, Caldwell, Idaho
° Camas County District Library, Fairfield, Idaho
° College of Idaho Library, Caldwell, Idaho
° Colorado State University, Fort Collins, Colorado
° Eagle Public Library, Eagle, Idaho
° Glenns Ferry Public Library, Glenns Ferry, Idaho
° Idaho State Library, Boise, Idaho
° Meridian District Library, Meridian, Idaho
° Mountain Home Public Library, Mountain Home, Idaho
° Nampa Public Library, Nampa, Idaho
° State Planning Library, Boise, Idaho
° University of Idaho Library, Moscow, Idaho

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* Submitted written comments on draft environmental statement or feasibility report
° Will receive final environmental statement and feasibility report

Organizations and Individuals

CH2M Hill, Corvallis, Oregon
Environmental Management Service Co., Fort Collins, Colorado
ESE, Inc., Englewood, Colorado
Gore Electric Company, Inc., Redmond, Washington
Idaho Power Company, Boise, Idaho
Interdevelopment Inc., Arlington, Virginia
National Wildlife Federation, Washington, D.C.
NPS Industries Inc., Bellevue, Washington
Southern Natural Gas Company, Birmingham, Alabama
Southwest Research and Information Center, Albuquerque, New Mexico
Utility Data Institute, Inc., Washington, D.C.

Cecil D. Andrus, Boise, Idaho
Lt. Governor Phil Batt, Boise, Idaho
Stella Christiansen, Provo, Utah
Gene Gray, Payette, Idaho
Wayne Haas, Boise, Idaho
Reed Hansen, Idaho Falls, Idaho
Franklin Jones, Boise, Idaho
Erland Juntunen, Washington, D.C.
John Kamerrer, Pullman, Washington
Mark Keller, Mountain Home, Idaho
Donald Kramer, Castleford, Idaho
Herman McDevitt, Pocatello, Idaho
° Herb Pollard, Boise, Idaho
Scott Reed, Coeur d'Alene, Idaho
° Monte Richards, Boise, Idaho
Dave Shaw, Boise, Idaho
James Shawver, Eden, Idaho
Marv Taylor, Boise, Idaho
Richard Wagner, Lewiston, Idaho
Bob Witkowski, Wilkes-Barre, Pennsylvania
Peter Zimowsky, Boise, Idaho

° Will receive final environmental statement and feasibility report

COMMENTS AND RESPONSES

COMMENTS AND RESPONSES

This section summarizes the testimony received at the two public hearings and presents all letters received as a result of the review of the September 1981 draft environmental statement and the April 1981 feasibility report. The Bureau of Reclamation's responses to specific comments are provided as required.

Hearing Testimony

Public hearings were held in November 1981 in Mountain Home and Boise, Idaho.

A record of the hearing sessions was made available in December 1981 at the Ada County Courthouse in Boise; at the Elmore County Courthouse in Mountain Home; at libraries in the general area; and at Reclamation's Central Snake Projects office and Pacific Northwest regional office, both in Boise.

Session One, Mountain Home, Idaho, November 18, 1981

About 15 people attended the Mountain Home session in addition to Reclamation personnel. Four people presented testimony during the formal hearing session.

The first speaker stated his support for the powerplant addition.

The second speaker, a representative of the Idaho Department of Parks and Recreation, expressed support for the analysis and consideration given to outdoor recreation in the formulation of the plan and in the draft environmental statement. He stated that fishing and white water boating in the South Fork Boise River should benefit greatly from the actions proposed and that facility development such as that proposed at Anderson Ranch Reservoir is needed to keep pace with the demand.

The third speaker, a member of the Elmore County Planning Commission, (1) questioned the practicality of replenishing spawning gravels for rainbow trout in the South Fork Boise River, (2) stated that money for the environmental improvements below Anderson Ranch Dam would be better spent if used to develop additional campgrounds at Anderson Ranch Reservoir where most of the public use occurs, (3) questioned whether power from the new unit would be used in Elmore County where it would be produced, (4) asked about possible summer power peaking and about control of summer streamflows for irrigation, and (5) questioned whether Anderson Ranch Reservoir drawdown would increase with the proposed project.

Bureau of Reclamation Response--(1) The cooperating fish and wildlife agencies identified the spawning gravel proposal as a desirable enhancement measure for the area. If it should prove to be unsuccessful or only partly successful, some of the funds programed for fish enhancement might be used to implement alternative fish enhancement measures, depending on the total amount of fishery enhancement funds available.

(2) During project planning, the Bureau of Reclamation, the Forest Service (which manages the lands around the reservoir), and others evaluated the potential for developing additional vehicular access campgrounds at Anderson Ranch Reservoir and found the potential sites for such development extremely limited. The desirable near-term developments were included in the proposed plan. In consultation with the Forest Service it was concluded that additional campground developments should be deferred for future Forest Service action.

(3) Power from the new generating unit would go into the Federal Columbia River Power System. Under a 1981 agreement between the Bonneville Power Administration and the Idaho Power Company, the Idaho Power Company can exchange some of its power for power from the Federal system. The amount exchanged can be equal to the amount used by the company's residential and small farm customers, and any resulting cost savings are passed on directly to those customers, including those in Elmore County.

(4) The proposed plan does not include summer power peaking (rapid streamflow fluctuations for power production). Reservoir releases for irrigation would be controlled in the same way with the project as they are now.

(5) Anderson Ranch Reservoir drawdown would be essentially the same as it is under present conditions. The existing commitments of reservoir space to present irrigation, flood control, and power uses would continue to be fully recognized under the proposed plan. Because all reservoir storage space is already obligated, no new consumptive water uses are proposed. Nonconsumptive uses (increased hydropower production and improved stream resource maintenance flows) can be included in the present proposal because they can be met without harm to other project functions or conflict with existing water rights and entitlements.

The fourth speaker, a rancher in the project area, protested the treatment of livestock grazing operations in the draft environmental statement. He stated that he felt the statement gave the impression that the area along the South Fork of the Boise River is consistently overgrazed, that livestock are detrimental to the area, and that livestock operators are negligent in their management practices. He noted that cattle operators in the area believe they are doing a good job of management and that lands along the river are used only in conjunction with other private and Forest Service lands on a rest-rotation management plan adopted by the operators and the Forest Service.

Bureau of Reclamation Response--There was no intent to ignore or downplay the cooperative efforts being made by the livestock operators and the Forest Service to run environmentally and economically sound livestock operations. Reclamation recognizes that a rest-rotation system of grazing and livestock management has been followed by the livestock operators and the Forest Service. It is also recognized that cattle along the river help to keep down underbrush, grass, and other vegetation, reducing hazards from rattlesnakes and fire. However, the varied ownership patterns (private and Forest Service lands are intermixed) and a lack of fencing in some places causes resource conflicts in certain areas. As use of the streamside area by fishermen and others increases, future conflicts are probably unavoidable.

Session Two, Boise, Idaho, November 19, 1981

About 10 people attended the second hearing session. Of those, two spoke for the hearing record.

The first speaker, vice president and representative of the Boise Valley Fly Fishermen, reviewed the club's concerns and comments, as later submitted to Reclamation in its letter of November 19, 1981. Because the content of the Boise Valley Fly Fishermen testimony was the same as its detailed letter of comments, the Bureau of Reclamation responses to those comments are shown with the Boise Valley Fly Fishermen letter in the last section of this report.

The second speaker, chairman of the Idaho Consumer Affairs, Inc. Energy and Natural Resources Committee and a representative of the Idaho Wildlife Federation's Subcommittee on Energy, (1) suggested an overnight campground be constructed at Reclamation Village, (2) suggested upgrading existing Forest Service campgrounds along the South Fork Boise River at Cow Creek and Granite Springs, (3) suggested a hiking trail be constructed along the South Fork Boise River from Reclamation Village downstream to Arrowrock Dam, and (4) questioned why a potential reregulation dam downstream from Anderson Ranch Dam was deleted from the plan. Related questions were raised by these organizations in their December 11, 1981, letter, which is included at the end of this report.

Bureau of Reclamation Response--(1) The construction of a 20-unit campground at Reclamation Village was eliminated from the plan because such a facility would disturb Bureau of Reclamation project personnel and their families who live at the village. In addition, concern was expressed by the fish and wildlife agencies that the campground might concentrate fishermen in the upper segment of the South Fork, which would adversely affect the quality of the fishery in that reach.

(2) Upgrading the existing Forest Service campgrounds at Cow Creek and Granite Springs was considered but eliminated from the study since these sites are relatively inefficient from the standpoint of Forest Service maintenance costs. Because of the need to make the best use of available maintenance funds, it was decided that expansion of these sites would not be prudent. In addition, fish and wildlife agencies were concerned that expansion of camping facilities along the South Fork would encourage overuse of the area, adversely affecting the quality fishery and the streamside habitat.

(3) A county road already extends from Reclamation Village downstream to Danskin Bridge. Trail construction between Danskin Bridge and Trail Creek downstream was eliminated as a potential plan element at the request of the Forest Service and the fish and wildlife agencies due to expected increases in vandalism and fire hazards on adjacent Forest Service and private land, negative wildlife impacts within the riparian zone, and lack of support from the landowner because public use in certain areas would interfere with his ranching operations. Downstream from Trail Creek, trail construction is not feasible because of steep canyon walls and other topographic limitations within the South Fork Canyon and along Arrowrock Reservoir.

(4) During the early phases of the study, alternatives were considered which would involve power peaking operations with extremely rapid changes in streamflow. A reregulation dam located about 2 miles downstream from Anderson Ranch Dam would have been required to smooth out the water releases from the reservoir. This alternative was dropped during the plan formulation process because of strong opposition by a number of agencies and public groups who believed that the loss of 2 or more miles of high quality trout stream could not be offset by the increase in power production or by potential benefits from regulated flows.

Letters

This section includes all letters received as a result of the review of the draft environmental statement and the feasibility report. Reclamation's responses to specific comments are included.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
AREA OFFICE - IDAHO AND NEVADA
4620 OVERLAND ROAD, ROOM 238
BOISE, IDAHO 83705
FTS: 554-1960 / COMM: 208/334-1960

OCT 15 1981

TO: Director, Office of Environmental Affairs, Bureau of Reclamation, Washington, DC

FROM: Area Manager, Fish and Wildlife Service, Idaho/Nevada Area, Boise, ID (ES)

SUBJECT: Draft Environmental Impact - Anderson Ranch Powerplant Third Unit, Boise Project, Idaho.

As pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969 and regulations issued by the Council on Environmental Quality, we are submitting our review comments on the referenced document.

The draft document fully satisfies the U.S. Fish and Wildlife Serivce on all environmental concerns for the proposed project. Our Service's recommendations have been fully incorporated into the planning processes, and we appreciate the Bureau of Reclamation's receptive attitude for conserving and enhancing the environmental values of the Anderson Ranch Dam-South Fork Boise River Area.

for L. A. Mehrhoff

cc: RD (AE-LWD)
WO-ES (OEC-ER 81/23)

DLewis:ff

NO RESPONSE NECESSARY

United States Department of the Interior

NATIONAL PARK SERVICE

Pacific Northwest Region
Westin Building, Room 1920
2001 Sixth Avenue
Seattle, Washington 98121

IN REPLY REFER TO:
DES 81/37(PNR-E)

December 7, 1981

Memorandum

To: Regional Director, Bureau of Reclamation, Boise, Idaho

From: Acting Regional Director, National Park Service, Pacific Northwest Region

Subject: Draft Environmental Statement, Anderson Ranch Powerplant Third Unit, Boise Project, Idaho (DES-81/37)

We have reviewed the subject document as requested in a memorandum from the Acting Director, Office of Environmental Affairs, dated September 17, 1981, and have the following comments.

RECREATION

The proposed project provides much needed recreation. It appears well conceived in terms of matching the project setting and design with particular recreation facility needs. We are especially pleased to note that recreation demand data was obtained from, and therefore is compatible with, the Idaho Statewide Comprehensive Outdoor Recreation Plan.

ARCHEOLOGICAL AND HISTORICAL RESOURCES

We concur with proposed plans to evaluate and safeguard cultural resources which may be affected by project construction. However, evidence of coordination with the State Historic Preservation Officer should be included in the final document as required by 36 CFR 800.

Charles H. Odegaard

RESPONSE

ARCHEOLOGICAL AND HISTORICAL RESOURCES

The Bureau of Reclamation and the Idaho State Historic Preservation Office coordinated their activities throughout project planning. At the request of that office, the draft environmental statement served as the vehicle for comment on archeological and historical resource effects due to project construction. The Idaho State Historical Society letter of October 27, 1981, (copy included later in this section), which states that the project would not affect archeological or historical properties, is presented as evidence of coordination with the Idaho State Historic Preservation Officer as required by 36 CFR (Code of Federal Regulations) 800.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho State Office
Federal Building - Box 042
550 W. Fort Street
Boise, Idaho 83724

IN REPLY REFER TO
1797 (920)

NO RESPONSE NECESSARY

December 14, 1981

Mr. Stephen F. Specht
Acting Director (150)
Office of Environmental Affairs
Bureau of Reclamation
Dept. of Interior
18th & C Streets N.W.
Washington, D.C. 20240

Dear Mr. Specht:

We have reviewed the draft environmental statement for Anderson Ranch Powerplant Third Unit, Boise Project, Idaho. We have no comments.

Sincerely yours,

John S. Davis
Chief, Division of Planning
and Environmental Coordination

cc: Director (202-B)

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United States Department of Agriculture

Soil Conservation Service

Room 345
304 North 8th Street
Boise, Idaho 83702

NO RESPONSE NECESSARY

November 18, 1981

John R. Woodworth
Regional Environmental Officer
USDI, Bureau of Reclamation
Federal Building & U.S. Courthouse
Box 043-550 West Fort Street
Boise, Idaho 83724

Dear Mr. Woodworth:

42

The Soil Conservation Service has reviewed the feasibility report and Draft Environmental Impact Statement for the Anderson Ranch Power-plant Third Unit and have no comments.

Thank you for the opportunity to review and comment.

Sincerely,

Amos I. Garrison, Jr.
State Conservationist

cc: Rodney M. Alt, SRC, SCS, Boise, Idaho

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta, Georgia 30333
(404) 262-6649

December 9, 1981

Mr. Robert A. Adair
Water and Power Resources Service
Department of the Interior
Box 043, 550 West Fort Street
Boise, Idaho 83724

Dear Mr. Adair:

We have reviewed the Draft Environmental Impact Statement (EIS) for the Anderson Ranch Powerplant Third Unit, Boise Project, Idaho. We are responding on behalf of the Public Health Service.

(a) The EIS does not address mosquitoes or other vector populations and the effects of this project on those populations. It was noted that any insecticides that might be required during construction would be approved by the contracting officer. The Final EIS should discuss beneficial or adverse effects of this project on mosquito or other vector populations, their potential health threats, proposed or current control methods that may be used, kinds and volumes of pesticides that may be used, and anticipated application procedures.

(b) The Final EIS should provide a description of the treatment and/or disinfection that will be given to water from the planned well at the Deer Creek area.

(c) Although the Draft EIS states that the recreational facilities will be maintained by the Forest Service, the Final EIS should indicate the frequency of services that will be provided. There should also be a statement concerning the location of the solid wastes disposal site and whether or not the disposal site has been approved by the State of Idaho.

Thank you for the opportunity to review this EIS. Please send us a copy of the Final EIS when it becomes available. If you should have any questions about our comments, please contact Mr. Lee Tate of my staff at FTS 236-6649.

Sincerely yours,

Frank S. Lisella, Ph.D.
Chief, Environmental Affairs Group
Environmental Health Services Division
Center for Environmental Health

RESPONSE

(a) The draft environmental statement did not address the effect of the proposed project on mosquito and other vector populations for the following reasons. First, mosquito and other vector populations would not be affected by the proposed project. Second, project proposals would not create any additional mosquito or other disease carrying insect habitat. Third, in the absence of increased vector populations, there would be no additional threat of vector-borne disease transmission. Fourth, mosquito and other vector populations are not a problem in the project area.

The use of pesticides during construction is anticipated to be minimal, if any, and would be limited to short-term nuisance control applications in accordance with applicable regulations. Pesticides used would be those registered with the Environmental Protection Agency.

(b) Well water to be extracted at the proposed Deer Creek campground is expected to meet all public drinking water standards without treatment. If needed, a treatment system would be selected during the required postauthorization studies. In any event, the system would comply with all applicable Federal, State, and local health and water quality laws and regulations. The system selected, as well as the other features of the water system to be installed, would be approved by the Bureau of Reclamation, the Forest Service, and local health officials.

(c) Forest Service solid waste disposal services and other maintenance operations would continue to comply with all Federal, state, and local regulations. At this time it is not possible to identify the location of the disposal site to be used after the proposed campgrounds have been constructed, but only State approved disposal sites would be used.

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BUILDING 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362

REPLY TO ATTENTION OF:

NPWEN-PL

11 December 1981

Mr. Stephen F. Specht
Acting Director
Office of Environmental Affairs
Bureau of Reclamation
Washington, D.C. 20240

44

Dear Mr. Specht:

This letter is in response to your letter of 17 September 1981 to the Office of the Chief of Engineers requesting comments on your Draft Environmental Impact Statement (DEIS) on the Anderson Ranch Powerplant Third Unit, Boise Project, Idaho. Your letter was forwarded to our District for review.

We have reviewed the DEIS for the Anderson Ranch Powerplant, Third Unit, Elmore County, Idaho. Our review does not reveal any effects on navigation or hydropower development. Moreover, we have reviewed the project for flood control and hydrologic concerns and found no inadequacies.

(a) In regard to Section 404(r) of the Clean Water Act, the Council on Environmental Quality directed (in their 17 November 1980 letter to all agencies) the Corps of Engineers to review Section 404(r) submittals. Our review did not uncover any major problem with your 404(b)(1) evaluation. We do suggest that you use the 404(b)(1) format shown by 40 CFR 230 (24 December 1980 Federal Register) in the Final Environmental Impact Statement. This format references each section in the evaluation. Nonapplicable sections can be stated as such in the final evaluation. Congressional review of the evaluation would be enhanced by this method.

We appreciate the opportunity to review this DEIS.

Sincerely,

Lawrence V. Armacost

LAWRENCE V. ARMACOST, P.E.
Chief, Planning Branch

RESPONSE

(a) *The section 404(r) comment was discussed with a representative of the Corps of Engineers, Walla Walla District Office. The Corps instructed the Bureau of Reclamation that the 404(b)(1) evaluation format shown in 40 CFR 230 would enhance Corps, Environmental Protection Agency, and congressional review. The Corps representative reiterated that the Corps has no problem with the 404(b)(1) evaluation as shown in the draft environmental statement and recommended that no changes be made in the final environmental statement. The format comment should be followed in preparing future 404(b)(1) evaluation reports.*

FEDERAL ENERGY REGULATORY COMMISSION
333 MARKET STREET, 8th FLOOR
SAN FRANCISCO, CA. 94105

NO RESPONSE NECESSARY

December *14, 1981*

Mr. L. W. Lloyd
Regional Director
U.S. Bureau of Reclamation
Pacific Northwest Region
Federal Building and U.S. Courthouse
Box 043-550 West Fort Street
Boise, Idaho 83724

Dear Mr. Lloyd:

This is in reply to your letter of September 17, 1981, in which you invite comments on your draft "Environmental Statement" and "Feasibility Report on Anderson Ranch Powerplant Third Unit, Boise Project, Idaho."

The proposed plan would increase generating capacity at Anderson Ranch powerplant by installing a new 30-megawatt (MW) unit which would increase the average annual generation by 19,100,000 kilowatt-hours (kWh). The proposed plan would also significantly enhance (1) the area's fishery resources by providing improved streamflows, fish screens, and other measures; (2) enhance recreation at Anderson Ranch Reservoir by providing improved public use facilities; and (3) enhance environmental quality along the South Fork of the Boise River by providing for the acquisition of private lands to insure future access by fishermen and others and to control vehicle use along the river.

When Anderson Ranch Powerplant was built, two generating units were installed and space was left for a third unit to be added later. The two existing units have a combined nameplate rating of 27 megawatts and a safe overload of 34.5 MW. Rewinding of the two existing generators, which would increase their combined generating capacity to 40 MW, is to be accomplished in the next two years under the U.S. Bureau of Reclamation's operation and maintenance program. The rewinding of the two existing units was therefore not included in the current study, and the proposed Third Unit was evaluated as an increment after the rewinding.

Water is conveyed to the powerplant by a tunnel and 15-foot-diameter steel outlet pipe through the dam. Three 90-inch-diameter penstock branches lead to the powerhouse to serve the two existing units and the proposed Third Unit.

A total generating capacity of 70 MW at about 3,200 cubic feet per second appears to be the practical limit of the plant based on hydraulic considerations. Any higher flows would require installing surge tanks to handle sudden water fluctuations and to mitigate adverse water-hammer effects in the power conduit. The two existing units could each generate up to 20 MW after rewinding. The remaining 30 MW of capacity would be provided by the proposed Third Unit. Power would be generated mainly during the spring flood season when the flows now passing the dam exceed the capacity of the two existing units.

The net Federal investment shown in the feasibility report is $10,478,000 at July 1979 price level with an annual equivalent project cost of $781,950 based on a 100-year period of analysis and a 6-7/8 percent Federal discount rate. Net annual benefits are shown to be $970,100 giving a benefit-cost ratio of 1.24 to 1. Since the Anderson Ranch Powerplant Third Unit Study was formulated on criteria in existence prior to publication of the Water Resources Council's "Procedures for the Evaluation of National Economic Development Benefits and Costs in Water Resources Planning (Level C)," December 14, 1979, it has been exempted from full application of these procedures. The exemption stipulates that partial application be made to determine the effects of applying the new procedures to the determination of power benefits. The benefit-cost ratio computed using the new procedures is shown to increase to 1.59 to 1 due to real fuel cost escalation.

Energy benefits were determined by separating the peak and off-peak energy production. Energy produced during the southern Idaho peakload period of June, July, and August was assigned a value equal to the cost of energy from an oil-fired combustion turbine, while energy produced off-peak was assigned a lesser value equal to energy from a coalfired powerplant. Intermittent capacity benefits were determined by estimating the capacity which would be available 50 percent or more of the time during the critical load period.

Power produced at Anderson Ranch Powerplant is used in the Bonneville Power Administration's (BPA) Federal "Southern Idaho Power System." Projections made by BPA for the southern Idaho system show that the Federal load will increase from 3.16 billion kWh in 1985-86 to 4.3 billion kWh in 1990-91 and to 6.64 billion kWh in 1997-98. Assuming no increase in Federal generation in the southern Idaho area, BPA estimates that imports will increase to 2.2 billion kWh in 1985-86, to 3.3 billion kWh in 1990-91, and to 5.6 billion kWh in 1997-98. In recent years imports have ranged from 2 - 5 billion kWh annually. Imported electric power is wheeled from BPA's La Grande, Oregon, substation over private utility lines to meet southern Idaho system loads. Additional generation at Federal plants in southern Idaho would aid in reducing wheeling charges.

Other sources also point toward increased electrical energy needs. Studies made for the proposed Idaho State Water Plan of December 1976 estimated that the average energy needs in Idaho will increase from about 11.7 billion kWh in 1973 to 40.6 billion kWh in 2000 and 93.1 billion kWh in 2020.

The following field level comments of the San Francisco Regional Office of the Federal Energy Regulatory Commission's Office of Electric Power Regulation are made in accordance with the National Environmental Policy Act of 1969 and the August 1973 Guidelines of the Council on Environmental Quality. Our principal concern with developments effecting land and water resources is the possible effect of such developments on bulk electric power supply facilities, including potential hydroelectric developments. Our comments on the draft Anderson Ranch Powerplant Third Unit Environmental Statement and Feasibility Report are specifically directed toward project economic feasibility and need for power. The need for additional electric energy in the Federal southern Idaho system and in Idaho is well documented.

Our analysis of the economic feasibility of the Anderson Ranch Powerplant Third Unit is based on July 1981 price levels, an update from the July 1979 price levels used in your studies. Cost estimates shown in your reports were updated using a combination of U.S. Bureau of Reclamation cost indexes and Engineering News Record indexes. Power benefits were estimated independently by this office utilizing the Load Carrying Capability (LCC) concept to estimate project capacity benefits. The LCC of a hydroelectric powerplant is a function of the incremental amount of expected availability of hydro capacity added during the system's annual peak load periods. Our energy benefits were based on the same assumptions utilized in your study. Our estimate of the net Federal investment for the Anderson Ranch Powerplant Third Unit (July 1981 Price Level) is $12,745,000 with an annual cost of $1,010,000 based on a 100-year period of analysis and a 7-3/8 percent Federal discount rate. Our estimate of electric power benefits utilizing procedures prior to 1979 amount to $1,104,400 and power benefits utilizing procedures after 1979 amount to $1,861,300. Adding non-power benefits of $156,200 (unescalated) gives benefit-cost ratios for the two procedures of 1.25 to 1 and 2.0 to 1, respectively.

We feel that the assumption, that all of the Third Unit generation during the months of June, July, and August would have an on-peak oil-fired combustion turbine value, might be optimistic. An analysis of the system's production cost would be required to determine more accurately the hydro energy value during the three-month load period.

Sincerely,

(Acting for) Eugene Neblett
Regional Engineer

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE

SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: M/S 443

15 DEC 1981

L. W. Lloyd, Regional Director
Bureau of Reclamation
Box 043
550 West Fort Street
Boise, Idaho 83724

Subject: Feasibility Report (FR) and Draft Environmental Impact Statement (DEIS) on the Anderson Ranch Powerplant Third Unit, Boise Project, Idaho

Dear Mr. Lloyd:

Thank you for sending us the above DEIS, FR, and Section 404(b)(1) evaluation for our review. In general, the DEIS is well done and thorough.

Assuming Plan B is selected and is constructed and operated in the environmentally sound manner described in these reports, we will have no objections to the proposed project. It appears that the cooperative planning process has resulted in an excellent project.

(a) We have two suggestions for your consideration. First, in very dry years there may not be sufficient water to continually maintain the new improved minimum flows (FR page 4). It could be environmentally advantageous to have a formal coordination process with the resource agencies and other interested groups before modifying the minimum flow regimes during critical water years. A group like that as described on DEIS page 2-8 could be beneficial when such decisions regarding environmental trade-offs must be made.

(b) Second, the final Feasibility Report and/or Final EIS should contain a revised analysis of the costs and benefits of the proposed project which conforms to the requirements of the Pacific Northwest Electric Power Planning & Conservation Act of 1980. The enclosure, which was taken from our comments on the proposed Minidoka Powerplant project, outlines the basic considerations in such an analysis.

We have no comments on the Section 404(b)(1) evaluation.

RESPONSE

(a) The Bureau of Reclamation is committed to meet the river operation criteria established in the draft environmental statement. Although conditions periodically arise which can temporarily reduce streamflows in the South Fork Boise River, maintaining and improving the quality of the South Fork environment and the recreational experience will continue to be primary objectives in the river operations.

In the event sufficient water is not available to meet stream resource maintenance flow requirements in very dry years, Reclamation would, as in the past, notify the Idaho Department of Fish and Game (IDFG) of the water release options available, if any, and afford IDFG the opportunity to choose a course of action from among these options. The IDFG has 50,000 acre-feet of storage space in Lucky Peak Reservoir downstream to help meet fishery resource needs in the reservoir system. The options available for consideration are constrained by the amount of runoff physically available, by existing water rights and storage space ownership, and by the formal Boise River reservoir system operating agreement. When significant deviations from the proposed river operation are foreseen as unavoidable (as in a critical water year), the Bureau of Reclamation would, as in the past, issue a news release to inform the public as to why the significant flow deviation is necessary.

The process the Environmental Protection Agency refers to on page 2-8 of the draft environmental statement describes a proposed interagency procedure for modifying the recommended basic, long-term river operating criteria, if it is ever necessary to modify them. Such a formal coordination process is not warranted in the case of a short-term reduction of minimum flows caused by inadequate water supplies because the alternative actions in that instance are essentially nonexistent and rapid response is essential, as was recognized by the agencies and interest groups involved in formulating the proposed plan.

(b) Revision of the Anderson Ranch Powerplant Third Unit cost and benefit analysis in conformance with the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Regional Act) is not appropriate at this time. As a Federal agency, the Bureau of Reclamation is required to follow separate, established procedures. Moreover, the Regional Act does not provide a substitute set of evaluation procedures.

The Bureau of Reclamation in the Anderson Ranch powerplant study followed established evaluation procedures for Federal water resource agencies applicable for feasibility studies. In addition, the Federal Energy Regulatory Commission and Bonneville Power Administration have reviewed the feasibility report and draft environmental statement, confirming the projected power needs and concurring with the economic analysis used in the study (letters included in this section). If the project is authorized by Congress, the power needs will be reconfirmed at the time of the postauthorization studies, and an economic analysis will be made incorporating the appropriate procedures established for use at that time by Federal agencies engaged in water and related land planning.

From the Standpoint of tne Environmental Protection Agency's areas of concern and expertise, we are rating this DEIS LO-1 (LO - Lack of Objections; 1 - Adequate Information). This rating will be published in tne Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act, as amended.

We appreciate tne opportunity to review these reports. If you would like to discuss our comments, please contact Judi Schwarz, of my staff. She can be reached at (206) 442-1096 or (FTS) 399-1096.

Sincerely yours,

Elizabeth Corbyn, Chief
Environmental Evaluation Branch

Attachment

Project Cost-Effectiveness/Cost-Benefit Analysis

The Feasibility Report's (FR's) analysis of costs and benefits needs to be reworked so that it conforms to the requirements of the Pacific Northwest Electric Power Planning & Conservation Act of 1980 (Regional Act). The current analysis does not answer the questions which must be answered before the Bonneville Power Administration (BPA) can make an acquisition decision under the terms of the Regional Act.

Specifically, the Regional Act provides that BPA must acquire conservation first, renewables (such as hydroelectric power) second, cogeneration third, and conventional thermal generation last. These resource acquisition priorities are to be implemented in conjunction with a cost effectiveness "test" which is still being defined, as of this date. Thus the repealed Water Resources Council procedures are no longer an appropriate means of evaluating the benefits of proposed water power development projects.

An appropriate technique would be to compare the present value of the costs of the project over the project's economic life time with the present value of the life cycle costs of alternative "similarly reliable and available" forms of generation, to determine whether the proposal would be cost-effective. Alternatively in cost/benefit terms the upper limit on the benefits would probably be established by BPA's current estimate of its long run incremental costs for capacity and energy.

The revised analysis should also reflect the time of the year at which the bulk of the project's power generation would be available. The FR indicates that most of the power generation would occur during the summer months. Although this is the peak season in southern Idaho, it is the off-peak season for the Region as a whole and it is the "surplus" season for the Federal Columbia River Power System; that is, in most years during the summer months the Federal Columbia River Power System is capable of generating power in excess of Regional needs. This surplus power is (1) used to shut down thermal-electric power plants for scheduled maintenance or simply to save their variable operations and maintenance costs (principally fuel), (2) sold to southwest utilities over the North-South inter-tie lines at bargain prices, or (3) not generated (the water is released over the spillways of FCRPS dams in order to preserve flood control space in reservoirs). Thus, energy generated by this proposal during the surplus season could be valued at: (a) zero (0) during those years in which the FCRPS would be spilling water, (b) the equivalent marginal revenue obtainable per kilowatt via sales over the inter-tie lines constrained by the transmission capacity of those lines, or (c) the value of the savings which could be attributed to being able to extend the shut down of a thermal-electric power plant depending on the circumstances. Capacity for the proposed plant, during the surplus season, would have a non-zero value only in those years in which the FCRPS would have insufficient peaking capacity to meet firm (non-interruptible) peak loads during that portion of the year.

Finally, the revised cost/benefit analysis will need the following methodological improvements in order to present an accurate picture of the real costs and benefits associated with the proposal:

1. Include all general investigation costs and environmental mitigation costs in the calculation of the net present value of the investment. BPA's current stated policy is that these costs are project costs and, although they may not be subject to repayment out of project revenues, they should be considered explicitly in the decision making process.

2. Include interest during construction on all construction costs for the project and calculate these interest charges based upon the estimated flow of construction expenditures (see the chart following page 8-14 of the FR) and the current yields on long term Treasury Bonds (approximately 13% per year during 1981). As in item #1 this is to insure that the analysis of costs and benefits includes all of the real resource expenditures.

3. Do not annualize costs and benefits. Annualization has the potential to produce misleading results. Rather do a net present value analysis which calculates the net present value of the costs and benefits based on the years in which expenditures are actually made (regardless of the source of funds) and in which benefits are actually produced.

4. In calculating the net present value (see #3) use a range of interest rates which includes the current real interest rate on long term Treasury Bonds (one reasonable method of estimating this real interest rate is to subtract from the "current" rate (13%) the average annual increase in the GNP Implicit Price Deflator (the 1972-1980 average annual increase was 7.3%/year).

RESPONSE (continued)

1. *General investigation costs are excluded by law from the calculation of the net present value of the investment. Mitigation costs are not involved in the Anderson Ranch Powerplant Third Unit analysis.*

2. *Interest during construction was computed on construction costs and was based on the estimated flow of construction expenditures. It should be noted that higher interest rates actually discourage investments with long lives, such as conservation of public resources.*

3. *The internal rate of return analysis made for the Anderson Ranch study is based on the same concept as the suggested present value analysis.*

4. *The internal rate of return analysis used in the Anderson Ranch study tests a range of interest rates. The interest rate which must be used by Reclamation and other water resource agencies is determined by the U.S. Department of the Treasury for the Water Resources Council.*

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

In reply refer to: CE/BPA-SJ

January 28, 1982

NO RESPONSE NECESSARY

Mr. Robert N. Broadbent, Commissioner
Bureau of Reclamation
U.S. Department of the Interior
Washington, D.C. 20240

52

Dear Mr. Broadbent:

In regards to the Anderson Ranch Powerplant Third Unit Draft Environmental Impact Statement and Feasibility Report sent by your office for DOE review, we have no substantive comments to offer at this time.

Sincerely,

Anthony R. Morrell
Acting Environmental Manager

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83706

STATE MUSEUM

NO RESPONSE NECESSARY

October 27, 1981

Regional Director, Pacific NW Region
Bureau of Reclamation
Federal Building
550 West Fort Street
Boise, ID 83724

Dear Sir:

We received a copy of the draft environmental statement on the Anderson Ranch Power Plant Third Unit. The project will not affect archaeological or historic properties and thus we have no substantive comments.

Sincerely,

Thomas J. Green
State Archaeologist
State Historic Preservation Office

TJG/kmh

IDAHO DEPARTMENT of PARKS & RECREATION

Statehouse Mail, 2177 Warm Springs Ave., Boise, Idaho 83720 (208) 334-2154

Dale R. Christiansen, Director
Robert L. Meinen, Deputy Director

John V. Evans, Governor
File #630.36.41

November 4, 1981

Robert Adair
Bureau of Reclamation
Box 043, 550 West Fort St.
Boise, ID 83724

Dear Mr. Adair:

The Idaho Department of Parks and Recreation supports the proposed alternative (Plan B) for the Anderson Ranch Powerplant Third Unit. The development of additional campgrounds, improvement of launch ramps, land acquisition, construction of turnouts, barriers, restrooms along the South Fork of the Boise River, and improvement of the rainbow trout fishery should assure adequate opportunities for outdoor recreation as increases in demand for these facilities and resources occur during the next decade.

(a) As a general comment, we find inadequate consideration given to whitewater boating on the South Fork. Although a popular recreational activity, it is only briefly mentioned in the DEIS.

While voluminous consideration is given to the effects of flow fluctuations on fish and aquatic insect populations, we find no consideration given to its effect on river boating. Drastic changes in flow can also have as great an effect on the recreational boater as they do on the wading fisherman. Yet this area is left unexplored in the DEIS.

Fortunately, the proposed 1600 CFS irrigation season low is a good high water boating flow. It is unclear, however, whether this is happy coincidence or according to prior design. Generally speaking, optimal boating flows occur between 1200 and 1600 CFS. Below 1,000 CFS, rafting becomes difficult in the canyon section of the river. Kayaks can negotiate this section of river down to around 800 CFS.

Although we are generally supportive of the selected alternative, we would like to see the effects of this project on recreational river boating more fully explored.

RESPONSE

(a) In the course of project planning, careful consideration was given to how the powerplant addition and other potential plan elements might affect white-water boating on the South Fork Boise River. During plan formulation an overriding formulation goal became evident--any increase in power generation at Anderson Ranch Dam would be acceptable only if it could be accomplished without harming the South Fork downstream from Anderson Ranch Dam and particularly the high quality wild rainbow trout fishery in the river. The proposed river operation has been judged to be fully compatible with this objective, and it will at the same time enhance boating and stream fishability due to improved streamflows.

Float boating interests and others took part in plan formulation. The 1,600-cubic-foot-per-second maximum riverflow during the irrigation season was agreed upon because it was a good flow for boating and it satisfied the Boise River storage system operation for other functions. No specific plan elements had to be added for river boating. Options for developing boat put-in and take-out points were considered during plan formulation, but they were rejected because of the concern that they might encourage overuse of the South Fork, particularly by powerboaters. This could ultimately damage the environmental values the proposed plan is designed to protect.

The Bureau of Reclamation has considered and will continue to consider the needs of river boaters in its operation of Anderson Ranch Dam and Reservoir.

Our staff is available to assist you in the successful completion of the project. A representative will attend the public hearing November 19.

Sincerely,

DALE R. CHRISTIANSEN
DIRECTOR

John Barnes
Park/Recreation Planner

jm

STATE OF IDAHO

DEPARTMENT OF FISH AND GAME 600 SO. WALNUT ST. - P O. BOX BOISE, IDAHO 83707

NO RESPONSE NECESSARY

December 9, 1981

Mr. L.W. Lloyd, Regional Director
U.S. Bureau of Reclamation
Box 045 - 550 West Fort Street
Boise, ID 83724

Dear Bill:

56 Our Department has reviewed the draft environmental statement on the Anderson Ranch Powerplant Third Unit, Boise Project, Idaho.

The statement accurately reflects anticipated environmental impacts for the various alternatives and potential means of alleviating these impacts. We concur in the choice of Plan B as the proposed action. This plan adequately protects the very important fish and wildlife resources in the project area.

We feel the Bureau should be commended on the consideration given to fish and wildlife resources in the development of this project proposal.

Sincerely,

Kenneth D. Rance
for Jerry M. Conley
Director

cc: USFWS (Buechler)
Region 3
Region 4
Bur. Fisheries

John V. Evans, *Governor*
Daniel T. Emborg, *Administrator*

State Capitol Building
Boise, Idaho 83720

DIVISION OF ECONOMIC AND COMMUNITY AFFAIRS

NO RESPONSE NECESSARY

December 11, 1981

L. W. Lloyd
Regional Director
Bureau of Reclamation
Pacific Northwest Region
Federal Building & U.S. Courthouse
Box 043-550 West Fort Street
Boise, Idaho 83724

Dear Mr. Lloyd:

The Idaho State Clearinghouse has completed its review on the Feasibility Report and Environmental Impact Statement for Anderson Ranch Powerplant Third Unit, Boise Project, Idaho - SAI #00916250. The following agencies were contacted for their review and comment:

Ida-Ore Regional Planning and Development Association
Department of Fish and Game
Department of Health and Welfare/Division of Environment
Idaho Historical Society
Department of Parks and Recreation
Public Utilities Commission
Office of Energy
Department of Water Resources
Department of Transportation/Division of Highways

Ida-Ore Regional Planning and Development Association returned comments from the Elmore County Commissioners stating they were in agreement with the proposal. Copies of the comments are attached for your perusal. Comments have not been received from the other listed agencies; all comments received will be forwarded to your agency.

Thank you for letting us assist you with the Anderson Ranch project. If you have any questions, do not hesitate to contact myself or Lois Wade at 334-4718.

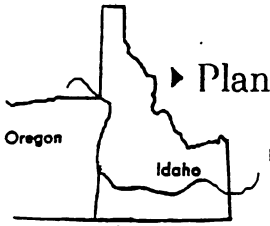
Sincerely,

Gloria Mabbutt

Gloria Mabbutt, Coordinator
Idaho State Clearinghouse

GM:lw
Enclosure

IDAHO
A Land For All Seasons



IDA-ORE *Enclosure to Economic and Community Affairs letter*

Planning and Development Association

P.O. BOX 311 WEISER, IDAHO 83672

(208) 549-2411

Rod Morgan
President

Executive Director

MEMBER COUNTIES
(Including Municipalities)

Ada
Adams
Boise
Canyon
Elmore
Gem
Owyhee
Payette
Valley
Washington
Harney
Malheur

October 2, 1981

State Clearinghouse
Division of Economic and Community Affairs
Room 108 State Capitol Building
Boise, Idaho 83720

RE: SAI #00916250 & 00916251 - ANDERSON RANCH POWERPLANT THIRD UNIT

The above mentioned A-95 has been reviewed by our Association staff and/or Board of Directors and the following interested agencies or people:

Elmore County Commissioners

The Association recommends:

_____ Project Consistent

_____ No Comment

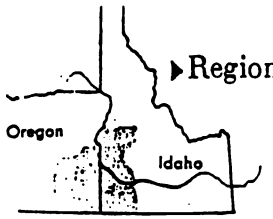
_____ ✓ Comments Attached.

Sincerely,

Rand Lindley
Associate Planner

RL:mlh
Enc.

NO RESPONSE NECESSARY



IDA-ORE Regional Planning and Development Association

Enclosure to Economic and Community Affairs Letter

P. O. BOX 311 WEISER, IDAHO 83672
(208) 549-2411

Rod Morgan, *President*
Executive Director

NO RESPONSE NECESSARY

MEMBER COUNTIES
(Including Municipalities)
Ada
Adams
Boise
Canyon
Elmore
Gem
Owyhee
Payette
Valley
Washington
Harney
Malheur

DATE: 9/22/81

TO: Elmore County Commissioners
Elmore County Courthouse
Mt. HOme, Idaho 83647

RE: SAI# 00916250 & 00916251 - ANDERSON RANCH POWERPLANT, THIRD UNIT

The attached material regards a project which may have impact in your area. Please review the material and comment on its necessity, environmental effect, usefulness, or any other matter you would like. We would like to have the comments within seven (7) days following receipt of this notice. If you need more time, please call collect and we will seek an extension. Your comments will be forwarded, no matter when we receive them.

Please send your comments to the above address to the attention of Rand Lindley.

Thank you.

COMMENTS: Elmore County Commissioners are in agreement with this proposal

NOTE: This comment says: "Elmore County Commissioners are in agreement with this proposal"

No comment: _____

Project recommended without comment: ✓

Reviewer's Signature: [illegible] Date: [illegible]

VICTOR ATIYEH
Governor

Water Resources Department
MILL CREEK OFFICE PARK
555 13th STREET N.E., SALEM, OREGON 97310 PHONE 378-3671

NO RESPONSE NECESSARY

October 20, 1981

Robert N. Broadbent
U.S. Department of the Interior
Bureau of Reclamation
Washington, D.C. 20240

The Water Resources Department has reviewed the Anderson Ranch Power Plant and Third Unit Feasibility Report and Environmental Statement and have no comments to offer.

60

Sincerely,

James E. Sexson
Director

JES:jt

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

NO RESPONSE NECESSARY

State Engineer's Office

BARRETT BUILDING CHEYENNE, WYOMING 82002

November 30, 1981

Mr. Robert A. Adair
U.S. Bureau of Reclamation
Box 043
550 West Fort Street
Boise, Idaho 83724

61

Dear Mr. Adair:

We have examined the Feasibility Report and the Draft Environmental Statement for the Anderson Ranch Powerplant Third Unit. Since the project is entirely in Idaho, and could in no way exert a claim on Wyoming water, we have no adverse comments to offer.

Thank you for the opportunity to examine this project material.

Sincerely,

Louis E. Allen

LOUIS E. ALLEN
Water Resources Engineer

LEA/ht

cc: George L. Christopulos
State Engineer

CAMAS COUNTY

Board of County Commissioners
Fairfield, Idaho 83327

Code 150

Phone 764-2242

13 Nev. 1981

Bureau Of Reclamation
550 West Fort St.
Boise, Idaho 83724

Dear Sirs:

The Camas County Commissioners at there regular meeting on 9 Nev 19 81 veteed to indorse the Anderson Ranch powerplant third unit. We feel development of power from this source is an ideal way to perceed. We do however question the need to acquire additional lands downstream from the present and proposed facility. Until better reasons and need is shown we appose the additional land acquation.

Respectfully,

Allen Bauscher, Chairman
Camas County Commissioners.

RESPONSE

The comments of the Camas County Commissioners regarding support for the proposed powerplant enlargement and questioning the need to acquire lands along the South Fork Boise River are noted. Camas County is immediately east of Elmore County, the county in which the proposed project is located. The South Fork land acquisition was included as part of the Anderson Ranch Powerplant Third Unit proposal because of strong support by fish and wildlife interests, the landowner, the Forest Service, and other agencies and interest groups.

The proposed acquisition of 641 acres for Forest Service management would (1) assure continued public access to these lands for fishing and other low intensity recreational uses, (2) preclude the possible future construction of developments along the river which would not be compatible with the high quality fishery and stream resources, and (3) enable the Forest Service to adopt a unified resource management plan for most of the lands along the South Fork from Anderson Ranch Dam downstream to Danskin Bridge. Current land uses along the South Fork would continue.

Senate Bill 306, now being considered by Congress to authorize construction of the Anderson Ranch Powerplant Third Unit, does not include funding for the acquisition of these lands, but the Senate Committee on Energy and Natural Resources urged the Federal agencies involved to accomplish the acquisition through a land exchange with the private landowner. This avenue is actively being pursued by the agencies and the landowner.

MAJOR INDUSTRY
1. Agriculture
2. Lumbering
3. Recreation

LAND USES

Forest	194,000 acres
Range	266,000 acres
Cropland	132,000 acres
Other	13,000 acres
Water	3,000 acres
Total	608,000 acres

ADA COUNTY

FISH & GAME LEAGUE

Member Idaho Wildlife Federation

BOISE, IDAHO

November 9, 1981

L.W. Lloyd, Regional Director
Pacific Northwest Region
Bureau of Reclamation
Box 043 - 550 West Fort St.
Boise, Idaho 83724

6220 Robertson Drive

Dear Mr. Lloyd:

63

We have reviewed the Draft Environmental Statement (DES) on the Anderson Ranch Powerplant Third Unit, Boise Project, Idaho. The Ada County Fish and Game League supports the development and submits the following comments:

1. The statement is presented in an understandable and interesting manner.

2. We commend you for involving the general public and a number of interested groups, including the Ada County Fish and Game League, in the planning process. In addition, contributions made by other Federal and State agencies lend credence to the statement.

3. The study of alternatives strengthens the selected plan.

4. The Ada County Fish and Game League supports resource development that fulfills the needs of society provided adverse environmental effects are minimal. This project falls within these parameters. A sizable block of energy will be produced and environmental aspects will actually be enhanced.

Please let us know if we can help to assure early construction of this project.

We appreciate the opportunity to submit the foregoing comments.

Ada County Fish and Game League

Wayne E. Peterson

Wayne E. Peterson, President

NO RESPONSE NECESSARY

BOISE VALLEY FLY FISHERMEN
OFFICE OF
P. O. BOX 311
BOISE, IDAHO 83701

REGIONAL DIRECTOR
BUREAU OF RECLAMATION
BOX 043
550 W. FORT STREET
BOISE ID 83702

NOVEMBER 19, 1981

ATT: CODE 150

We appreciate the opportunity to be actively involved in this process. The Water and Power Resources Service and Department of the Interior should be complimented on the public involvement and concern as it relates to the outstanding quality fishery below the Anderson Ranch Dam.

Our club has committed a tremendous amount of time and resources enhancing the South Fork fishery and are very concerned about its well-being in the future. The vast majority of our club members realize that new sources of energy are needed. We also realize unique high quality recreation resources must also be maintained and enhanced. We believe these two goals can be maintained with the river operation criteria as outlined in the E.I.S. and Feasibility report and hopefully prove power generation and quality stream fishing can co-exist.

Generally, we believe "Support Plan 3" will have net positive gains on the fishery at the South Fork. Not withstanding this fact, our club still has some concerns and proposed changes:

I.

VEHICULAR ACCESS & TURN-OUTS
(Page 2-11 and 2-12)

We agree and appreciate the chance to be involved in the planning implementation of these facilities. We request the following changes of Page 2-12 as it relates to these facilities.

A. "These studies would be accomplished through inter-agency and public participation at the preliminary plan development stage before construction". We would like to actually be involved in the detailed site analysis.

RESPONSE

I. VEHICULAR ACCESS AND TURNOUTS

A. The preliminary development of plans to construct or install roadside turnouts, barriers, and sanitation facilities along the South Fork Boise River was accomplished through the multiagency, public feasibility level planning effort. Facility siting and other details would be determined with interagency and public participation during the usual definite plan development stage, which would follow project authorization. The Boise Valley Fly Fishermen club would be encouraged to participate as in the past.

B. The number, design, and permitted uses of the roadside turnouts would be determined with interagency and public participation as an integral part of definite plan development. The proposed plan envisions only limited camping at selected turnouts and does not include permanent camping facilities with picnic tables or barbecue pits. The plan is not intended to promote camping or other intensive recreational use along the river.

C. Reclamation does not intend to allow the system of turnouts and barriers to impede the existing access of float boaters to the South Fork of the Boise River at Anderson Ranch Dam, Cow Creek Bridge, Indian Point, or Danskin Bridge. As stated above, the Boise Valley Fly Fishermen would be offered the opportunity to participate with the fishery agencies, the Forest Service, and other interested parties in the design of the turnout and barrier system.

At the same time, Reclamation has not included any improvements to these or other float boat access points as a part of this proposal. Early in the study it was suggested that minor improvements might be considered at the take-out points at Danskin Bridge and Neal Bridge, but these potential improvements were dropped at the request of the cooperating fish and wildlife agencies. Those agencies feared that improvements aimed at float boating might lead to increased powerboating and undesirable overuse of the South Fork.

II. LAND PURCHASE

The purchase of 641 acres of private land along the South Fork of the Boise River is included in the proposed Anderson Ranch Powerplant Third Unit plan because it was strongly supported by all the participants in the formulation of the plan. The concerns which the Boise Valley Fly Fishermen stated in its letter of October 7, 1980, (see Exhibit A) were carefully considered in the preparation of Reclamation's draft environmental statement and April 1981 feasibility report. The project cost estimate in the feasibility report and all other aspects of the present project evaluation therefore assume the inclusion of this land purchase.

B. "1. Construction of about 14 roadside turn-outs; each turn-out would have a capacity of 4 to 10 vehicles. The exact number of turn-outs may be greater or less depending on plan development and consultation with interested agencies and public interest groups. Limited camping would be allowed at selected turn-outs. Permanent camping facilites with picnic tables or bar-b-que pits will not be included." We agree that restricted access will help improve the riparian environment and turn-outs will be needed. We do not wish to promote camping along the river or establish intense camping facilities.

C. "4. Provide raft access near the Dam, Indian Point, Cow Creek Bridge, and Danskin Bridge." This is an ongoing and increasing use of this river and should be taken into consideration. This does not mean boat "ramps" but a means of reasonable access to get boats in and out of the river.

II.

LAND PURCHASE
(Page 2-11e)

We strongly support the acquisition of private lands along the South Fork. We question whether this will be accomplished. We will offer any resources we have available to bring this to fruition. If this acquisition cannot be accomplished through the authorization bill, we would like supplimental wording that places a land trade at the highest priority with the Department of the Interior and Bureau of Reclamation. You are referred to our comments in the attached letter dated October 7, 1980 which outlines our concerns about the land acquisition. (See Exhibit A) Any restriction of public access could force greater use of existing public access which, in our opinion, could degrade the fishing quality and environment. The private ownership encompasses almost three miles of prime river frontage. We have been very appreciative of the land owner's attitude on allowing public access on the suoject properties. Without acquisition of the 640 acres, much of the roadside turn-out facilities will not be possible.

III.

RIVER OPERATIONS
(Page 2-6 to 2-10)

River operations continues to be our major concern about this project because flow release fluctuations hold the key to the continued health of the South Fork fishery and fishability. We are satisfied with the proposed river operation criteria as outlined in the environmental

RESPONSE (continued)

Senate Bill 306 would authorize construction of the Anderson Ranch Powerplant Third Unit and other projects. The bill was passed by the Senate in September 1981 and is now being considered by the House of Representatives. As passed by the Senate, S. 306 does not include funds for the acquisition of the private lands along the South Fork Boise River. However, the Senate Committee on Energy and Natural Resources urged the Federal agencies involved to accomplish the acquisition through a land exchange with the private owner. This avenue is being actively pursued by the Forest Service, the Bureau of Land Management, and the landowner in cooperation with the Bureau of Reclamation. The Bureau of Reclamation will continue to actively support and assist in this proposed land exchange.

If for some reason S. 306 does not become law, Congress may choose to consider separate legislation for Anderson Ranch Powerplant Third Unit. If the land exchange has not been accomplished by that time, Congress could include funds for the land purchase if it wished to do so.

III. RIVER OPERATIONS

The first three paragraphs under "River Operations" are worthy of comment because they describe an actual situation in which flow problems occurred because of large variations in precipitation and runoff. The Bureau of Reclamation provides minimum flows below Anderson Ranch Dam of 300 cubic feet per second (September 16 through March 31) and 600 cubic feet per second (April 1 through September 15) to meet stream resource maintenance flow needs. These improved streamflows are met whenever water is available and such releases do not interfere with the reservoir operation for the authorized project functions of irrigation and flood control.

In the fall and winter of 1980-81, stream resource maintenance flow releases of 300 cubic feet per second were made from Anderson Ranch Reservoir. On March 2, 1981, however, releases had to be curtailed to about 120 cubic feet per second because of extremely unfavorable runoff forecasts and the reservoir drawdown caused by the sustained releases of 300 cubic feet per second earlier in the season. These low flows had to be continued for a 2-month period in order to meet existing storage rights in Anderson Ranch Reservoir in light of runoff forecasts which averaged only about 54 percent of normal for the March through June period. This required operation was discussed with the Idaho Department of Fish and Game at that time.

Subsequently, releases from Anderson Ranch Reservoir had to be increased significantly early in May because the reservoir had been nearly filled to meet irrigation storage rights when several storms and high runoff occurred in the watershed. In order to safely pass the high runoff, flood control releases had to be made from the reservoir.

statement and consider that criteria as a binding committment of the Bureau of Reclamation to operate the dam in that fashion. After several years of planning, and our club's involvement in this project, if the Bureau of Reclamation chooses to change these operation criteria, we would consider this a serious breach of promise. Frankly, many of our club membership believe that the future operation of the Anderson Ranch project will be different from that outlined in the environmental statement. It is up to the Bureau of Reclamation to prove these individuals wrong.

Much of this skepticism was reinforced just this year when flow releases were significantly different from the proposed operation criteria. Flows were drastically reduced during the spring spawning period to about 120 cfs. These releases would allow for very little spawning in the South Fork. Then flood releases spilling through the outlet works followed in the early summer months. Mid-summer releases were about 600 cfs rather than the 1600 cfs discussed in the environmental statement. These flows were not in accordance with the operation criteria. (See Exhibit B)

Your agency should be doing a better job of informing us and the public as to why these flow deviations occur. We have attached the U.S.G.S. flow gage records for most of this year which illustrates our concerns.

To help alleviate some of these problems, we request the following changes:

> A. (6) Other criteria, number 2 "...hydroelectic power production maybe maximized at Anderson Ranch, <u>but limited to the summer seasonal maximums unless during the flood season</u> if permitted by other reservoir space assignments."
>
> We feel this is more explicit and the intent is made clear that peaking above 1600 cfs would not occur even during a Level III Emergency, except during flood season. The paragraph following the above statement helps explain.
>
> B. We request the following to be added under "Other Operating Criteria" (2-9) "3. <u>Preparation of a River Operations Manual for employees involved in dam operation in compliance with the E.I.S., explaining all operations procedures. The manual will include the rationale of operation as it relates to the fish habitat. This document will be available for review by interested agencies and interest groups.</u>"

A plan is only a good as those who implement it. If the implementors are not educated in the rationale of operation or disregard the approved plan, substantial damage may take place no matter what mitigating measures are undertaken. The manual will also allow interested groups to review operations through available flow charts.

RESPONSE (continued)

Under both the present and proposed operations, summer irrigation releases are to be held to a maximum of about 1,600 cubic feet per second. From April 1 through September 15 the 600-cubic-foot-per-second minimum instream flow objective is also in effect whenever water is available. Therefore, summer releases can vary from 600 to 1,600 cubic feet per second depending on system reservoir operations and water availability, recognizing that larger releases are sometimes required for flood control. This range of acceptable flows is defined in the operation criteria presented in the draft environmental statement.

The above discussion necessarily omits considerable detail because of the complex nature of the operating decisions involved. Members of the Boise Valley Fly Fishermen and other individuals who have a special interest in this particular reach of stream are invited to raise their questions with Reclamation's Central Snake Projects office or the regional office in Boise in order to improve the mutual understanding of required reservoir and river operations and stream resource needs.

With regard to the specific comments in this section of the letter:

A. *The draft environmental statement contains explicit language restricting maximum powerplant releases in the event a level III emergency (power shortage) situation arises. Paragraph 3 under item 2 (draft environmental statement, page 2-9) states that "Under the proposed procedures, releases from the powerplant would be limited to the seasonal maximums discussed above (see 'River Operation') or, if in the flood control season, to the flood control release being made at that time." This language is designed to restrict use of the powerplant during a level III emergency and to protect the fishery resource of the South Fork. The language offered by the Boise Valley Fly Fishermen has the same effect as the above sentence from the draft environmental statement. For example, if a level III emergency situation were to occur during the irrigation season, powerplant releases would be limited to 1,600 cubic feet per second (or limited to the flood control release being made at that time). The powerplant would not be used for power peaking during the summer season.*

B. *With construction of the Anderson Ranch project, the Bureau of Reclamation would revise its standing operating procedures manual, which stipulates how Anderson Ranch Dam and Powerplant are to be operated. The manual would be modified to incorporate the operation criteria outlined in the environmental statement and to include the rationale of operation as it relates to the fish habitat. This manual would be available to the public.*

As time goes by, river operations may change due to convenience. We feel this document will help prevent this.

IV.

INSTALL 30 MW GENERATOR AT ANDERSON RANCH POWERPLANT
(Page 2-2)

A. We request a new section to be added on page 2-6 above b. "River Operations". This section would read:

Install automatically actuated fast operating by-pass valves to assure continuous minimum fish maintenance flows in the event of emergency generation system shutdown due to local rejection.

We have learned that generator load rejections automatically shut down the generators. When this occurs, wicket gates close and flow releases from the dam are shut off. This, of course, has disasterous consequences to fish and insect habitat in the river. Manual opening of the outlet works valves do not allow for quickly replacing the generator shut-off flows.

One such incident was witnessed by two Boise Valley Fly Fishermen on July 30, 1981. While fishing on the river above Anderson Bridge, the river flows suddenly dropped in the mid-afternoon. They felt that river flows dropped about 75% from the 615 cfs that was being released. They witnessed small trout and sculpin (4-6 inches) stranding in a side channel plus aquatic insect stranding. Flows remained in this condition for a period of about thirty minutes to one hour, then returned to about 600 cfs. Following the incident, Bureau of Reclamation officials were contacted and it was identified as a load rejection and complete generator shut-down, which resulted in zero flows from the dam. Outlet works valves were not activated by the dam tenders apparently because the annul system proceedures take too long to implement. Based on the attached U.S.G.S. gage records, we believe the same type of incident occurred on: (See Exhibit B)

December 7 at 0015, December 19 at 0015, January 22, 26, 27 and April 13 at 2330 during spawning season, July 30 at 1500, August 29 at 1545, and August 31 at 0130

It should be noted that the above flows were registered at 15 minute intervals and do not reflect instantaneous readings or the absolute minimum flows. The project superintendent indicated that complete generator shut-down occurred twice after the July 30 incident.

IV. *INSTALL 30-MW GENERATOR AT ANDERSON RANCH POWERPLANT*

The Boise Valley Fly Fishermen requested that automatically operated bypass valves be installed at Anderson Ranch Dam to assure continuous streamflows for fish in the event of emergency powerplant shutdowns. The Bureau of Reclamation recognizes that need. When water is being released through the dam's river outlets or over the spillway, a temporary shutoff of the power outlets is not critical. The problem occurs when water is being released only through the powerplant. When the powerplant unavoidably shuts down, it now takes 30 to 45 minutes to manually shift those releases to the river outlets.

Brief flow interruptions have occasionally occurred since the dam was built and will continue to occur with the existing manually operated equipment. Although flows may be completely shut off at the powerplant for a brief period, the effect diminishes a short distance downstream because of the inflows from tributary streams, the reduced velocity of the remaining water in the South Fork, and other factors. Even so, Reclamation supports the automation of the valves to more rapidly restore flows whether or not the proposed project is built. For that reason, this work item is included in Reclamation's planned operation and maintenance program, and it will be accomplished as soon as funds are made available.

V. *INSTALL FISH SCREENS* and VI. *PROVIDE SPAWNING GRAVELS*

If these proposals cannot be implemented for some reason, alternative fish enhancement measures would be evaluated in cooperation with the fish and wildlife agencies and interest groups. If acceptable alternative fish enhancement measures can be identified, they would be incorporated in the project plan provided they do not add to the total costs identified for fishery enhancement.

VII. *FUND A 5-YEAR SOUTH FORK BOISE RIVER STUDY*

The decision on when to begin the proposed 5-year study of fish and stream resources in the South Fork would be made cooperatively by the Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service, Reclamation, and others. Based on recent information on the South Fork fishery, it appears highly desirable to begin the 5-year study at least 1 year before the Third Unit goes on line in order to obtain up-to-date preproject data for comparison with postproject conditions.

RESPONSE (see above)

These zero flow events must be considered extremely detrimental to the fishery and a way must be found to immediately bypass the generator pass simultaneous maintenance through the dam when generator shut-downs occur. This condition needs to be rectified whether the third generator is installed or not.

V.

Install Fish Screens...
(Page 2-10)

We strongly support this proposal and appreciate the inclusions. We are concerned that the Department of Fish and Game may not agree or will not be able to maintain these structures, or private land owners may not permit this. Therefore, we would like the following added to C:

"If these screens cannot be installed, the funds allocated will be used for other enhancement projects after review by interested agencies and interest groups".

This will permit retention of the funds for similar enhancement projects:

VI.

Provide Spawning Gravels Near...
(Page 2-10)

We propose the similar language to V. above.

VII.

"3. Fund a Five Year South Fork..."
(Page 2-8)

We would request the following change in the second sentence of the second paragraph.

"This study would begin the year before the third generator goes..."

We believe that base information on the fishery should be collected just prior to the project coming on-line. This will provide a better comparison of the project impacts, if any, on the existing fishery at that time.

We hope you will take our comments and concerns into account as the final documents are prepared. The Boise Valley Fly Fishermen have worked hard to establish the fishery on the South Fork. This river holds a special place in our hearts. Its protection and enhancement are paramount. We believe the E.I.S., with the proposed changes and guaranteed implementation, will assure this golden resource for years to come. You can be assured we will be an active force in the future.

If there are any further things we may do, please feel free to contact us.

Erich Korte
President
Boise Valley Fly Fishermen

A

Exhibit A attached to BVFF letter of 11-19-81

BOISE VALLEY FLY FISHERMEN

OFFICE OF

P. O. BOX 311

BOISE, IDAHO 83701

October 7, 1980

Mr. L.W. Lloyd
Regional Director
Water and Power Resources Service
Box 043
550 West Fort St.
Boise, ID 83724

Dear Mr. Lloyd,

The Boise Valley Fly Fishermen (BVFF) have been actively concerned about the WPRS study on increasing power generation at Anderson Ranch Dam for several years. Of primary importance to our membership is the project's impact on the native rainbow fishery in the river below the dam. Without doubt this reach of the South Fork Boise has in the last few years developed into the finest native trout fishing offered in Southwest Idaho. Two components are responsible for the evolution of the South Fork fishery--superb aquatic habitat and sensible regulations that limit the angler kill of trout.

I am pleased to relate that WPRS has exhibited a public and biological sensitivity to the fishery values in the Anderson Ranch Powerplant Third Unit Feasibility Study. Under the guidence of Ron Golus, WPRS study coordinator for the project, three information briefings were held at monthly BVFF meetings during 1978 and 1979. We were grateful to Mr. Golus for these opportunities to express concerns and query WPRS planners. In our view, what started out chiefly as a peaking hydropower project has since developed into a proposal that recognizes the unique instream fish resources found in the river along with the need for habitat protection. The great majority of BVFF members are realistic about the need for new sources of energy in our region. We are particularly supportive of a project where power generation can be increased and environmental conditions improved.

Our club was asked to review the preliminary draft Environmental Report and submit comments. A study group of seven was established to review the document. After review, our group requests the following changes be made in the draft report:

1. Page 2-8, paragraph(4). Consult with Other Agencies Prior to Changing River Operations.

We would like at least one representative from BVFF or other public conservation group to participate in agency consultation regarding

RESPONSE (see response to "II. Land Purchase" above)

changes from those stream flow regimes described in the environmental report. We feel that BVFF deserves to be recognized as a principle public interest group on government regarding the South Fork fishery. This public representative would be a liaison to our general membership to define why and what flow changes were needed. We are convinced that operational characteristics of flow releases from the dam are the key to maintaining a healthy downstream fish population.

2. Page 2-10, paragraph(f). Construct or Install Roadside Turnouts, Barriers, and Sanitation Facilities along the South Fork Boise River.

We request that BVFF be consulted and involved in the postauthorization studies to design and locate roadside turnouts, barriers, and sanitation facilities. We are supportive of vehicle access control, but at this point think it is premature to speculate on the details of the plan. Fishermen pressure is going to increase dramatically in the next few years, and by the time project authorization would occur, recreational conditions/needs could be quite different on the river. Our club membership can be considered valuable consultants in recreational layout planning along the South Fork corridor.

One of our greatest fears is the continuing threat of subdivision development of the 641 privately owned acres lying between Anderson Ranch Dam and Cow Creek Bridge. This land is level, tree covered, and currently receives substantial camping use by the general public. Water and Power Resources Service plans to purchase this acreage and then transfer jurisdiction to the U.S. Forest Service sometime in the future when Congress authorizes the third generator project. Our concerns are that waiting five years for Congressional project authorization will be too late to prevent private exploitation of the 641 acres. We feel that it is of utmost importance for the Forest Service to have management of all the river frontage from the dam to Danskin Bridge so that the natural character of the river setting and public access can be assured. We have recently written Secretary of Interior, Cecil Andrus, asking that he explore opportunities for immediate federal purchase of the 641 acres (copy attached). A way must be found to purchase this acreage as soon as possible.

After three years of close following, I now view this project as having net positive gains for the fishery in the South Fork. I support Plan B. I again express the appreciation of the full BVFF membership for the effort that Ron Golus extended in soliciting our feelings on the study. This can be a future showcase project--where environmental enhancement and energy production went hand in hand.

Sincerely,

Robert C. Jaola, Ph.D.
President

Enclosure

cc: Mike Wolverton FFF Rocky Mt. Regional Council, Rt. 1 Murtaugh, ID 83344

Boise National Forest Supervisor

Jerry Conley, Director, Idaho Fish & Game

Exhibit B attached to
BVFF letter of 11-19-81
Sheet 1 of 10

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE
DATA PROCESSED 04-10-81

13190500
S FK BOISE RIVER AT ANDERSON RANCH DAM ID — USE RT ~~87~~ 8

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 — TEST DIFF 0.9 — PUNCH INT 15 MIN — STORE PARM 00060, STATISTIC 00003; PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT HR ADJ	DATUM AT CORR HR
2-09	2.93 (1145)	2.91 (1300)	2.91	2.91	307	-.07	0
2-10	2.94 (0100)	2.91 (2100)	2.93	2.93	312	-.07	
2-11	2.92 (0030)	2.87 (1515)	2.91	2.91	305	-.07	
2-12	2.95 (1200)	2.90 (0030)	2.93	2.93	311	-.07	
2-13	2.96 (1930)	2.91 (0015)	2.92	2.92	310	-.07	
2-14	2.93 (0145)	2.92 (0015)	2.92	2.92	310	-.07	
2-15	2.94 (0730)	2.92 (0015)	2.93	2.93	312	-.07	
2-16	2.95 (1930)	2.92 (0015)	2.93	2.93	312	-.07	
2-17	2.94 (0030)	2.90 (1230)	2.93	2.93	311	-.07	
2-18	2.95 (0715)	2.90 (1300)	2.91	2.91	306	-.07	
2-19	3.06 (1345)	2.90 (0015)	2.93	2.93	314	-.07	
2-20	2.93 (0230)	2.91 (0045)	2.92	2.92	307	-.08	
2-21	2.95 (0900)	2.92 (0030)	2.93	2.93	310	-.08	
2-22	2.96 (0645)	2.90 (0115)	2.93	2.93	309	-.08	
2-23	2.94 (1800)	2.92 (0015)	2.92	2.92	306	-.08	
2-24	2.95 (0715)	2.91 (0930)	2.92	2.92	307	-.08	
2-25	2.95 (0630)	2.92 (0015)	2.93	2.93	309	-.08	
2-26	2.93 (0015)	2.87 (0600)	2.92	2.92	305	-.08	
2-27	2.94 (0100)	2.91 (0745)	2.93	2.93	309	-.08	
2-28	2.93 (0015)	2.91 (1445)	2.92	2.92	304	-.08	
MONTH					309		
3-01	2.92 (0300)	2.91 (0015)	2.91	2.91	~~303~~	-.08	0

STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS

	1	2	3	4	5	6	7	8	9	10	11	12
AM												293
PM	291	291	291	291	292	292	292	292	292	292	292	292
AM	294	293	293	293	293	293	293	293	294	294	293	294
AM	292	293	293	294	294	294	293	293	295	295	295	295
PM	295	295	293	293	292	293	292	292	292	292	292	292
AM	291	290	292	292	292	294	296	294	294	294	294	294
PM	294	294	294	294	294	293	293	292	292	292	292	292
AM	292	292	293	293	293	293	292	292	293	292	292	292
PM	292	292	292	292	292	294	292	292	292	292	292	292
AM	294	294	294	294	294	294	294	292	292	291	291	291
PM	291	291	291	291	292	293	293	294	292	292	292	292
AM	293	292	292	292	293	294	294	294	294	294	293	293
PM	293	293	293	293	293	293	293	293	293	293	293	293
AM	292	291	291	291	291	287	289	292	293	292	292	293
PM	293	293	293	293	293	293	293	293	293	293	293	292
AM	294	294	294	293	292	292	292	291	292	292	292	293
PM	294	294	294	294	294	293	293	293	293	293	293	293
AM	292	292	292	292	292	292	292	292	292	292	292	292
PM	292	292	291	292	291	291	291	292	291	291	291	291
AM	291	291	292	292	292	292	291	291	291	291	291	291
PM	291											

TOTAL (CFS-DAY) = 8642

Bureau of Reclamation note:

Geological Survey data sheets for the entire water-year 10-1-80 through 9-30-82 were attached to the Boise Valley Fly Fishermen letter of 11-19-81. The data sheets for 2-9-81 through 8-27-81 are reproduced here to illustrate the discussion relating to "River Operations" on pages 2 and 3 of that Boise Valley Fly Fishermen letter. Column 6 ("mean discharge") on this sheet is discussed as flow releases from the reservoir, in cubic feet per second.

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500
S FK BOISE RIVER AT ANDERSON RANCH DAM ID
DATA PROCESSED 04-10-81
USE AT # 8

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR	STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
PERIOD	3.06	2.87																	

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS
A - SUCCESSIVE ADJUSTED PUNCH READINGS DIFFER BY MORE THAN THE SPECIFIED ALLOWABLE TEST DIFFERENCE
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
R - ONE OR MORE INPUT VALUE IS OUTSIDE THE RANGE OF THE RATING IN USE
W - SHIFT IS A VALUE WEIGHTED BY DISCHARGE WHERE SHIFT VARYS WITH STAGE DURING THE DAY
% - UNIT VALUES RECORD WRITTEN

	GHT	D
1	2.92	310
2	2.62	201
3	2.25	97
4	2.36	123
5	2.36	123
6	2.34	118
7	2.33	121
8	2.33	121
9	2.33	121
10	2.36	123
11	2.35	121
12	2.33	121
13	2.34	118
14	2.34	118
15	2.34	118
16	2.34	118
17	2.34	118
18	2.34	118
19	2.34	118
20	2.34	119
21	2.34	118
22	2.34	118
23	2.34	118
24	2.33	116
25	2.33	116

Used out flow from daily water Report
To obtain gage height from old Rating #7, No shift applied originally
and applied GHT on New Rating 8

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 05-20-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID USE RT ~~0~~ 8

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT HR ADJ	DATUM AT HR CORR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
3-25	2.37 (1200)	2.32 (1845)	2.34	2.34	~~1200~~ 116	-.09	0	AM												237
								PM	236	234	235	237	237	233	232	233	233	233	233	233
3-26	2.35 (0100)	2.31 (1730)	2.33	2.33	117	-.09		AM	235	234	234	233	233	234	234	234	234	233	234	234
								PM	233	233	233	233	233	231	231	231	232	232	232	231
3-27	2.33 (0215)	2.31 (0015)	2.32	2.32	113	-.09		AM	231	232	233	232	232	232	232	232	231	232	231	231
								PM	232	231	232	231	231	231	231	231	232	232	231	231
3-28	2.33 (0230)	2.31 (0015)	2.33	2.33	116	-.09		AM	231	232	233	233	233	233	233	232	232	232	233	233
								PM	233	233	233	233	233	232	233	233	233	232	232	232
3-29	2.33 (0230)	2.32 (0015)	2.32	2.32	115	-.09		AM	232	232	233	233	233	233	233	232	233	232	232	232
								PM	233	233	233	232	232	232	232	232	232	232	232	232
3-30	2.32 (0015)	2.29 (1415)	2.31	2.31	111	-.09		AM	232	232	231	230	230	230	230	230	230	230	230	230
								PM	230	230	229	230	230	232	232	232	232	232	232	232
3-31	2.33 (0145)	2.31 (0815)	2.32	2.32	115	-.09		AM	232	233	233	233	233	233	233	232	232	232	232	232
								PM	232	232	232	232	232	232	232	232	232	232	232	232
4-01	2.33 (0215)	2.32 (0015)	2.33	2.33	116	-.09		AM	232	232	233	232	232	232	232	233	233	233	233	233
								PM	233	233	233	233	233	233	233	233	233	233	233	233
4-02	2.33 (0015)	2.30 (1130)	2.31	2.31	113	-.09		AM	233	233	233	233	233	233	233	232	233	232	231	230
								PM	230	231	231	230	230	231	231	231	231	230	230	230
4-03	2.33 (0830)	2.30 (0015)	2.32	2.32	116	-.08		AM	230	230	230	230	230	230	232	232	233	232	233	233
								PM	233	233	233	233	232	232	232	232	232	232	232	232
4-04	2.33 (0215)	2.30 (1300)	2.31	2.31	115	-.08		AM	232	232	232	231	232	232	232	232	232	232	231	232
								PM	230	231	231	231	231	231	231	231	231	231	230	230
4-05	2.33 (2015)	2.30 (0015)	2.32	2.32	116	-.08		AM	231	231	231	231	231	231	231	231	231	232	232	232
								PM	232	232	232	232	232	232	232	232	233	233	233	232
4-06	2.33 (0315)	2.31 (1600)	2.32	2.32	117	-.08		AM	232	232	232	233	233	232	232	232	233	232	232	233
								PM	233	233	233	231	232	232	231	232	231	232	232	232
4-07	2.32 (0015)	2.29 (0845)	2.30	2.30	113	-.08		AM	232	232	232	232	231	230	230	230	229	229	229	229
								PM	229	229	230	230	229	232	231	231	230	230	230	230
4-08	2.31 (0030)	2.30 (0015)	2.31	2.31	114	-.08		AM	231	231	231	231	231	231	231	231	231	231	231	231
								PM	231	231	231	231	231	231	231	231	231	231	231	231
4-09	2.38 (1415)	2.31 (0015)	2.32	2.32	116	-.08		AM	231	231	231	231	231	231	231	231	231	231	231	233
								PM	234	237	233	231	231	231	231	231	231	231	231	232
4-10	2.32 (0015)	2.31 (0945)	2.32	2.32	116	-.08		AM	232	232	232	232	232	232	232	232	232	231	231	231
								PM	231	231	231	231	231	232	232	232	232	232	232	232
4-11	2.34 (0115)	2.30 (2115)	2.32	2.32	117	-.08		AM	233	234	233	233	233	233	234	233	232	232	233	233
								PM	233	231	231	232	232	231	231	232	231	231	231	231
4-12	2.34 (0945)	2.30 (2230)	2.31	2.31	115	-.08		AM	231	231	232	232	232	231	232	231	231	233	231	232
								PM	231	232	231	231	231	231	231	231	231	231	230	230
[illegible]	[illegible]	2.08 [illegible]			113	-.09		AM	231	231	231	231	231	231	231	231	231	240	221	229	210
	(1530)	(1145)						PM	223	227	233	246	229	229	229	229	229	230	230	231
4-14	2.33 (0500)	2.28 (2045)	2.31	2.31	114	-.08		AM	231	232	232	232	233	233	233	233	232	230	230	231
								PM	231	231	231	231	231	231	231	231	228	228	228	228
4-15	2.30 (0500)	2.23 (0815)	2.25	2.25	102	-.08		AM	228	229	229	229	230	230	230	224	223	223	223	223
								PM	223	224	224	224	224	224	224	224	224	224	224	224
4-16	2.31	2.24	2.28	2.28	107	-.08	0	AM	225	225	225	225	226	226	226	226	227	227	227	228

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 — DATA PROCESSED 05-20-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID — USE RT ~~7~~ 8

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 — TEST DIFF 0.9 — PUNCH INT 15 MIN — STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
	(2315)	(0015)						PM	228	228	229	229	229	229	229	229	230	230	230	231
4-17	2.37	2.27	2.31	2.31	114	-.08		AM	231	231	231	232	232	232	232	233	228	228	228	228
	(1715)	(1300)						PM	227	227	227	228	236	232	233	233	233	234	233	232
4-18	2.34	2.25	2.32	2.32	118	-.08		AM	232	233	233	233	233	233	233	234	233	233	233	232
	(0745)	(2400)						PM	232	232	232	232	232	233	233	232	232	232	230	225
4-19	2.34	2.25	2.32	2.32	119	-.07		AM	226	227	230	230	229	231	233	233	233	233	233	233
	(1245)	(0015)						PM	233	233	233	233	233	233	233	233	233	234	234	234
4-20	2.59	2.28	2.33	2.33	121	-.07		AM	234	234	235	235	235	232	232	231	230	229	231	230
	(1545)	(1815)						PM	231	231	234	248	235	229	228	228	229	233	235	235
4-21	2.39	2.31	2.36	2.36	128	-.07		AM	235	234	231	231	232	235	237	238	238	237	238	238
	(2115)	(0300)						PM	238	237	235	235	234	234	234	238	239	239	239	236
4-22	2.40	2.30	2.33	2.33	123	-.07		AM	236	236	238	240	240	240	234	232	231	230	230	230
	(0345)	(0930)						PM	230	230	231	230	230	230	230	230	232	236	237	237
4-23	2.39	2.32	2.36	2.36	128	-.07		AM	238	238	238	238	238	239	239	239	239	237	236	233
	(0515)	(1215)						PM	232	233	233	233	234	233	233	233	234	233	233	233
4-24	2.37	2.32	2.34	2.34	123	-.07		AM	233	233	233	233	233	234	232	233	233	233	233	233
	(2200)	(0415)						PM	233	233	233	233	233	233	233	234	236	237	237	237
4-25	2.37	2.32	2.34	2.34	124	-.07		AM	237	237	237	237	237	237	236	235	233	233	233	233
	(0015)	(1245)						PM	232	232	232	233	232	232	232	232	232	232	232	232
4-26	2.35	2.32	2.34	2.34	125	-.07		AM	232	233	235	235	235	235	234	234	235	234	234	235
	(0230)	(0015)						PM	235	235	235	235	235	234	235	234	235	234	234	234
4-27	2.36	2.34	2.35	2.35	126	-.07		AM	234	235	235	236	236	236	236	235	234	234	234	234
	(0315)	(0015)						PM	235	235	235	235	235	234	234	234	234	234	234	234
4-28	2.35	2.33	2.34	2.34	124	-.07		AM	234	234	234	234	234	234	235	234	234	234	235	234
	(0630)	(2245)						PM	234	234	234	234	234	234	234	234	234	234	233	233
4-29	2.35	2.33	2.34	2.34	124	-.07		AM	233	234	234	234	234	234	234	234	234	234	234	234
	(1545)	(0015)						PM	234	234	234	235	233	234	234	234	234	233	233	233
4-30	2.36	2.33	2.35	2.35	127	-.07		AM	234	235	235	236	236	236	235	236	236	236	236	236
	(0345)	(0015)						PM	236	236	235	235	235	235	235	235	235	234	234	235
MONTH					118			TOTAL (CFS-DAY) = 3544												
5-01	2.35	2.32	2.33	2.34	123	-.07		AM	235	234	234	234	233	234	234	234	234	233	233	233
	(0015)	(2345)						PM	234	234	234	233	233	233	234	233	233	233	233	232
5-02	2.34	2.33	2.33	2.33	123	-.07		AM	233	233	233	234	234	234	233	233	234	234	234	234
	(0330)	(0015)						PM	234	233	233	234	234	233	233	233	233	234	233	233
5-03	2.37	2.32	2.36	2.36	129	-.07		AM	233	234	235	235	235	236	236	236	236	236	237	237
	(1045)	(0015)						PM	237	237	237	237	237	237	236	236	236	237	236	236
5-04	2.84	2.34	2.58	2.60	198	-.07		AM	236	236	236	234	234	235	235	236	235	234	234	244
	(1515)	(0345)						PM	280	282	283	283	282	282	282	282	282	282	282	282
5-05	3.27	2.84	3.21	3.21	430	-.06		AM	305	326	323	322	323	323	323	324	323	322	322	322
	(0215)	(0015)						PM	322	321	321	322	321	321	321	323	324	323	323	323
5-06	3.69	3.23	3.32	3.32	478	-.06		AM	323	323	323	323	323	323	324	324	326	326	341	341
	(2400)	(0015)						PM	341	340	338	339	332	331	329	329	336	338	344	369
5-07	4.80	3.79	4.67	4.68	1420	-.06		AM	396	424	449	474	478	479	477	477	479	475	478	480
	(0845)	(0015)						PM	479	479	479	479	472	472	472	472	472	473	473	477
5-08	4.79	4.68	4.75	4.75	1480	-.06		AM	478	477	478	478	477	477	477	478	477	478	477	476

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 05-20-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID USE RT ~~A~~ B

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
	(0230)	(1845)						PM	476	477	474	472	470	471	468	471	470	471	471	477
5-09	4.78	4.70	4.75	4.75	1480	-.06 0		AM	477	478	477	478	476	476	476	476	476	476	475	475
	(0200)	(1530)						PM	475	475	475	470	470	470	471	474	475	473	474	477
5-10	4.77	4.72	4.75	4.75	1480	-.0[illegible]		AM	477	477	477	476	476	475	475	476	476	476	476	474
	(0100)	(1645)						PM	475	475	475	473	472	473	473	475	472	473	474	476
5-11	4.77	4.71	4.74	4.74	1470	-.[illegible]		AM	476	476	476	476	476	476	477	475	475	474	475	475
	(0015)	(1800)						PM	475	474	474	473	472	471	472	474	471	473	474	474
5-12	4.73	4.22	4.30	4.30	~~1080~~	-.06 0	+.07	AM	422	432	432	429	429	429	429	428	428	428	423	
	(0015)	(0100)						PM												
PERIOD	4.80	2.08									4709									
											4797									

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS
A - SUCCESSIVE ADJUSTED PUNCH READINGS DIFFER BY MORE THAN THE SPECIFIED ALLOWABLE TEST DIFFERENCE
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
R - ONE OR MORE INPUT VALUE IS OUTSIDE THE RANGE OF THE RATING IN USE
W - SHIFT IS A VALUE WEIGHTED BY DISCHARGE WHERE SHIFT VARYS WITH STAGE DURING THE DAY
% - UNIT VALUES RECORD WRITTEN

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 — DATA PROCESSED 09-17-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID — ~~BEGIN APR 87~~, RT 08 FROM 10-01-80

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 — TEST DIFF 0.9 — PUNCH INT 15 MIN — STORE PARM 00060, STATISTIC 00003; PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
5-12	4.25	4.21	4.26	~~4.24~~ 4.26	~~1070~~ Shift Q1080		0	AM												
	(1215)	(1645)						PM	425	425	425	425	421	421	421	421	421	421	421	421
5-13	4.27	4.18	4.23	4.23	1060			AM	422	422	422	422	422	422	422	418	419	419	427	426
	(1100)	(0800)						PM	425	426	425	425	424	423	424	424	424	424	423	424
5-14	4.26	4.20	4.24	4.24	1070			AM	426	425	426	426	426	426	426	425	426	425	426	425
	(0030)	(2245)						PM	424	425	426	425	424	425	421	421	423	423	420	422
5-15	4.82	4.22	4.73	4.73	1460			AM	423	423	479	476	476	478	482	480	479	479	478	479
	(0630)	(0015)						PM	479	480	479	479	477	477	477	477	477	477	477	478
5-16	4.79	4.73	4.77	4.77	1490			AM	478	477	479	479	478	478	479	478	474	474	476	476
	(0230)	(0845)						PM	477	476	477	477	475	476	475	476	476	475	475	475
5-17	4.76	4.72	4.74	4.74	1470			AM	475	475	474	474	474	473	472	472	473	473	473	473
	(0130)	(0530)						PM	475	475	475	475	476	476	476	475	476	475	475	476
5-18	4.81	4.72	4.76	4.76	1490			AM	477	478	476	476	478	477	477	480	479	472	476	473
	(0815)	(1000)						PM	475	475	474	475	476	477	477	477	477	478	477	477
5-19	4.79	4.73	4.76	4.76	1490			AM	476	477	477	477	477	477	478	479	474	473	473	476
	(0715)	(0945)						PM	475	475	475	476	476	478	477	477	477	476	477	476
5-20	4.77	4.21	4.30	4.30	1120			AM	476	477	427	427	428	427	427	429	421	422	422	421
	(0115)	(0900)						PM	422	424	421	421	422	422	422	427	426	427	426	426
5-21	5.46	4.23	4.44	4.46	1230			AM	426	426	425	425	425	423	424	424	423	487	489	433
	(2330)	(0545)						PM	424	426	426	425	425	424	424	427	462	489	529	544
5-22	5.86	5.43	5.71	5.71	2410			AM	543	586	585	585	583	580	580	578	577	577	580	579
	(0145)	(0100)						PM	579	579	578	578	557	558	558	558	558	557	556	558
5-23	5.70	5.45	5.59	5.59	2290			AM	559	558	555	556	545	557	557	558	558	557	556	557
	(1915)	(0500)						PM	556	558	557	557	557	560	569	569	565	565	564	564
5-24	5.67	5.63	5.66	5.66	2350			AM	566	565	566	566	567	566	566	566	566	565	564	565
	(0415)	(1045)						PM	566	566	566	565	565	566	566	566	566	566	566	566
5-25	6.36	5.65	5.92	5.92	2640			AM	565	566	566	565	565	565	565	575	573	575	578	593
	(2230)	(0015)						PM	594	606	607	607	611	610	610	610	626	633	635	635
5-26	6.45	5.66	6.21	6.22	2980			AM	640	645	645	645	644	645	644	644	644	644	643	642
	(0130)	(1730)						PM	644	644	644	644	573	566	567	566	567	566	566	567
5-27	5.69	5.66	5.67	5.67	2370			AM	568	567	566	569	569	569	569	568	566	566	567	567
	(0345)	(0245)						PM	567	568	568	567	567	567	567	566	567	567	567	569
5-28	5.78	5.66	5.68	5.68	2380			AM	569	570	570	570	567	567	567	567	566	567	567	567
	(2330)	(0630)						PM	567	567	567	566	566	569	569	568	569	569	570	573
5-29	5.98	5.71	5.78	5.78	2490			AM	572	572	572	572	572	572	573	573	572	573	572	572
	(1715)	(1230)						PM	572	577	576	576	596	597	591	589	587	587	588	587
5-30	6.40	5.84	6.20	6.20	2960			AM	586	586	585	585	587	586	586	588	638	638	638	637
	(1800)	(0330)						PM	637	639	639	638	639	640	639	638	638	638	638	638
5-31	6.40	6.36	6.38	6.38	3170			AM	638	639	638	638	639	639	639	638	639	639	638	638
	(1945)	(1830)						PM	637	638	637	637	637	637	637	637	638	637	636	636
MONTH					1542			TOTAL (CFS-DAY) = 47801												
6-01	6.39	6.36	6.38	6.38	3170			AM	637	638	637	638	638	638	637	638	637	638	638	638
	(0145)	(0830)						PM	638	638	637	637	638	638	637	636	637	637	637	636
6-02	6.38	6.34	6.36	6.36	3140			AM	637	636	636	635	637	636	636	636	635	636	636	635
	(0045)	(1330)						PM	636	635	635	635	635	636	636	635	635	636	635	635

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UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 09-17-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID BEGIN ~~RT=07~~, RT 08 FROM 10-01-80

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
6-03	6.38	6.34	6.36	6.36	3140			AM	637	638	637	637	637	638	635	635	634	636	635	634
	(0115)	(0730)						PM	635	635	635	636	636	636	635	635	636	636	634	635
6-04	6.37	5.83	6.19	6.20	2960			AM	636	636	635	636	636	635	636	637	636	636	635	635
	(0345)	(1745)						PM	636	636	635	634	584	584	583	584	584	587	587	587
6-05	5.87	5.38	5.50	5.50	2190			AM	586	586	584	585	586	586	587	586	532	533	531	531
	(0545)	(1915)						PM	531	532	531	531	531	531	531	530	530	531	531	531
6-06	5.58	5.30	5.41	5.41	2100			AM	533	531	531	531	531	531	531	532	532	532	531	543
	(2230)	(0630)						PM	543	547	544	544	545	553	553	553	556	556	556	556
6-07	5.66	5.53	5.57	5.57	2270			AM	557	558	556	556	557	565	565	565	558	559	558	557
	(0615)	(2000)						PM	558	558	558	558	558	558	554	553	554	554	554	554
6-08	6.22	5.48	5.74	5.75	2450			AM	542	543	543	543	542	542	542	543	540	541	540	552
	(1800)	(0830)						PM	557	577	589	607	613	622	621	621	621	621	621	621
6-09	6.47	5.53	6.05	6.05	2790			AM	621	621	622	621	623	638	647	647	647	647	601	600
	(0700)	(1615)						PM	599	599	599	560	576	576	571	570	571	571	570	571
6-10	6.06	5.70	5.93	5.93	2650			AM	570	570	580	581	581	582	590	590	589	589	590	590
	(1430)	(0030)						PM	589	590	606	606	606	606	605	605	605	605	605	605
6-11	7.34	5.97	6.51	6.53	3360			AM	606	598	598	597	598	598	597	598	598	647	647	647
	(1945)	(0215)						PM	647	648	647	647	679	689	711	734	734	734	733	733
6-12	7.33	7.05	7.27	7.27	4320			AM	733	733	732	733	732	733	733	732	732	732	733	732
	(0030)	(2300)						PM	732	732	731	731	731	731	720	708	709	709	705	705
6-13	7.06	4.72	5.30	5.37	2060			AM	705	669	662	621	621	620	606	491	476	475	474	474
	(0030)	(1345)						PM	473	472	474	475	482	476	475	474	473	482	485	483
6-14	5.21	4.82	4.92	4.92	1630			AM	484	484	483	484	484	484	483	484	484	487	484	484
	(2330)	(0015)						PM	492	490	491	491	491	497	499	509	509	509	520	520
6-15	5.21	4.72	4.95	4.95	1660			AM	520	520	520	521	516	516	516	516	515	513	512	503
	(0030)	(1300)						PM	472	472	473	472	472	473	473	473	473	473	472	474
6-16	4.77	4.71	4.73	4.73	1460			AM	473	474	474	474	474	475	475	476	475	473	473	472
	(1330)	(1815)						PM	476	477	474	473	473	472	471	471	473	472	471	471
6-17	4.75	4.70	4.73	4.73	1460			AM	473	474	473	475	474	472	473	473	473	472	473	472
	(0345)	(0015)						PM	472	472	472	473	471	475	474	474	474	475	473	471
6-18	4.76	4.71	4.73	4.73	1460			AM	472	473	475	474	472	472	472	473	473	473	473	473
	(1745)	(0015)						PM	474	474	473	473	473	476	473	474	474	472	472	471
6-19	4.76	4.51	4.73	4.73	1460			AM	472	475	474	474	474	473	473	473	474	474	451	473
	(1730)	(1100)						PM	474	473	473	474	474	476	475	473	473	473	472	472
6-20	4.75	4.71	4.73	4.73	1460			AM	473	473	473	473	473	474	473	475	475	474	473	474
	(0745)	(2400)						PM	473	473	474	473	474	472	473	474	473	473	474	471
6-21	4.75	4.71	4.73	4.73	1460			AM	472	472	472	473	472	472	473	473	473	474	474	474
	(1600)	(0015)						PM	474	474	474	475	475	475	475	473	472	473	472	472
6-22	4.76	4.72	4.73	4.73	1460			AM	473	473	473	475	473	474	475	474	475	475	474	473
	(0930)	(0015)						PM	473	473	472	472	475	475	475	472	472	473	472	472
6-23	4.75	4.70	4.73	4.73	1460			AM	474	475	475	474	470	472	472	473	473	473	473	473
	(0130)	(0500)						PM	472	474	473	474	473	473	475	473	473	474	473	473
6-24	4.76	4.22	4.54	4.55	1310			AM	471	423	422	424	424	425	425	424	424	423	459	473
	(1600)	(0230)						PM	475	475	475	476	470	470	470	473	474	474	473	473
6-25	4.70	4.16	4.25	4.25	1080			AM	470	420	423	423	423	423	423	423	425	425	418	425
	(0015)	(1900)						PM	424	423	424	423	418	417	416	421	421	421	421	421

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 09-17-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID BEGIN AT ~~07~~ AT 08 FROM 10-01-80

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
6-26	4.25	4.19	4.22	4.22	1050			AM	422	422	421	422	422	423	423	423	422	422	422	421
	(1400)	(1800)						PM	421	425	423	422	421	419	419	419	421	421	421	421
6-27	4.23	4.21	4.22	4.22	1050			AM	421	421	422	422	421	421	422	422	422	423	422	422
	(0930)	(0015)						PM	421	421	421	421	421	421	422	422	422	422	421	422
6-28	4.24	4.19	4.22	4.22	1050			AM	422	422	422	423	423	423	422	423	423	424	420	419
	(0815)	(1130)						PM	422	422	422	421	420	420	420	420	420	421	420	421
6-29	4.25	4.20	4.22	4.22	1050			AM	421	421	421	421	421	422	422	423	423	422	423	424
	(1500)	(0015)						PM	423	424	425	423	420	420	420	423	422	422	421	420
6-30	4.24	4.20	4.22	4.22	1050			AM	420	422	422	420	420	422	421	420	423	422	424	424
	(1045)	(0015)						PM	424	422	422	422	421	421	421	421	422	422	422	421
MONTH					1974			TOTAL (CFS-DAY) = 59210												
7-01	4.25	4.20	4.23	4.23	1060			AM	422	422	423	422	423	423	423	423	423	422	423	422
	(1130)	(0015)						PM	422	424	423	423	422	422	422	422	422	423	422	422
7-02	4.26	4.17	4.22	4.22	1050			AM	422	424	425	424	422	422	423	425	425	417	417	418
	(0915)	(0945)						PM	419	423	422	423	422	421	422	421	422	422	422	422
7-03	4.25	4.20	4.22	4.22	1060			AM	422	422	422	423	422	422	423	424	425	422	422	421
	(0815)	(1700)						PM	423	422	421	421	420	421	423	424	424	424	424	421
7-04	4.24	4.21	4.22	4.22	1060			AM	421	421	422	422	423	422	422	422	423	423	424	423
	(0915)	(0015)						PM	423	422	423	423	423	423	423	422	423	423	423	423
7-05	4.25	4.18	4.22	4.22	1060			AM	423	423	423	423	423	423	423	424	424	421	420	419
	(2400)	(1345)						PM	419	418	419	423	422	423	423	423	422	423	422	425
7-06	4.26	4.19	4.23	4.23	1060			AM	426	425	425	425	425	426	422	424	419	419	419	419
	(0045)	(0845)						PM	419	422	423	423	422	423	423	424	423	424	423	424
7-07	4.25	4.18	4.23	4.23	1060			AM	425	425	425	425	425	425	425	425	418	419	419	419
	(0030)	(0845)						PM	419	424	424	422	423	422	422	422	422	423	422	421
7-08	4.25	4.21	4.23	4.23	1060			AM	422	424	425	424	424	424	424	424	423	424	423	423
	(0300)	(0015)						PM	422	423	424	422	422	422	422	422	422	423	422	421
7-09	4.25	4.21	4.23	4.23	1060			AM	422	422	422	422	424	425	424	425	424	425	425	423
	(0600)	(0015)						PM	423	423	423	423	423	422	423	422	422	422	423	422
7-10	4.24	4.21	4.23	4.23	1060			AM	423	423	423	422	423	422	422	423	424	423	423	423
	(0830)	(1900)						PM	423	423	422	422	422	422	421	422	422	423	422	422
7-11	4.24	4.20	4.23	4.23	1060			AM	421	421	422	422	422	421	423	424	424	424	424	424
	(0800)	(0115)						PM	424	423	423	424	424	423	423	423	423	423	423	423
7-12	4.25	4.21	4.23	4.23	1060			AM	423	422	423	422	422	422	421	424	424	424	423	424
	(0045)	(0630)						PM	423	423	423	423	423	423	422	422	422	422	422	422
7-13	4.24	4.20	4.22	4.22	1060			AM	420	421	421	421	421	420	422	424	423	422	422	423
	(0800)	(0100)						PM	421	423	423	423	423	422	422	422	422	423	422	422
7-14	4.24	4.21	4.22	4.22	~~1060~~			AM	421	421	421	421	422	422	422	423	422			
	(0445)	(0045)						PM												
PERIOD	7.34	4.16																		

NOTE, SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS
A - SUCCESSIVE ADJUSTED PUNCH READINGS DIFFER BY MORE THAN THE SPECIFIED ALLOWABLE TEST DIFFERENCE

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 09-17-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID BEGIN RT ~~-.01~~ RT 08 FROM 10-01-80

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12
7-14	4.24 (1430)	4.22 (1030)	4.22	4.22	1060			AM										423	422	423
								PM	423	423	423	422	422	423	423	423	422	422	422	422
7-15	4.23 (0800)	4.20 (0145)	4.22	4.22	1050			AM	421	420	420	421	421	421	422	423	422	423	422	422
								PM	422	422	422	422	422	421	422	421	421	421	421	420
7-16	4.23 (0415)	4.20 (0045)	4.22	4.22	1050			AM	420	422	422	422	421	422	422	422	422	422	422	421
								PM	422	422	422	422	421	421	421	421	422	421	421	421
7-17	4.23 (0545)	4.20 (0215)	4.22	4.22	1050			AM	422	421	420	420	422	422	423	422	423	422	422	422
								PM	423	422	421	422	421	422	421	421	423	421	421	420
7-18	4.23 (0345)	4.20 (0015)	4.22	4.22	1050			AM	421	420	422	423	422	422	421	422	422	422	421	422
								PM	422	422	421	421	422	422	422	421	422	422	422	421
7-19	4.24 (0345)	4.21 (0015)	4.22	4.22	1060			AM	422	423	423	423	422	423	423	422	421	422	422	421
								PM	421	422	422	422	422	421	422	421	422	423	422	422
7-20	4.23 (0530)	4.20 (0730)	4.22	4.22	1050			AM	422	422	421	421	422	423	421	421	420	423	422	423
								PM	422	422	422	421	421	421	421	421	423	423	422	422
7-21	4.24 (0600)	4.19 (2015)	4.21	4.21	1050			AM	423	420	423	423	423	424	422	422	421	421	421	421
								PM	421	420	421	420	420	420	420	420	420	423	423	423
7-22	4.23 (0030)	3.99 (2045)	4.02	4.02	918			AM	423	404	405	402	401	401	400	400	401	400	400	400
								PM	400	400	400	400	400	400	400	400	399	400	399	399
7-23	4.01 (0030)	3.70 (0945)	3.73	3.73	733			AM	401	372	372	372	372	372	372	372	372	370	371	371
								PM	371	371	372	372	372	371	372	371	372	372	371	372
7-24	3.72 (0015)	3.49 (2030)	3.53	3.53	612			AM	371	352	352	352	352	352	353	353	353	353	353	353
								PM	353	353	352	353	353	352	352	351	349	350	350	350
7-25	3.53 (0900)	3.48 (2300)	3.51	3.51	597			AM	351	351	351	351	351	351	351	351	353	352	351	351
								PM	352	352	352	352	349	349	349	349	349	350	348	349
7-26	3.54 (2300)	3.49 (0015)	3.50	3.50	595			AM	349	350	349	349	349	349	350	350	350	350	350	350
								PM	350	350	350	349	351	351	351	353	353	353	354	353
7-27	3.66 (1015)	3.39 (1215)	3.53	3.53	610			AM	354	354	354	353	354	354	352	352	352	363	349	356
								PM	358	352	359	352	352	351	352	351	351	351	351	351
7-28	3.66 (0930)	3.48 (1715)	3.53	3.53	611			AM	352	352	351	351	352	352	351	352	352	364	356	365
								PM	358	356	352	352	349	348	351	350	352	352	352	352
7-29	3.68 (1245)	3.50 (2315)	3.54	3.54	615			AM	352	352	352	352	352	353	353	351	351	359	356	361
								PM	368	353	354	353	353	353	353	352	351	351	351	351
[illegible]					615			AM	351	351	351	351	351	351	351	351	369	358	351	349
	(1300)	(1500)						PM	370	357	(306)	356	353	358	358	358	358	358	357	354
7-31	3.56 (1100)	3.52 (1900)	3.54	3.54	614			AM	354	354	353	353	354	354	354	353	355	355	356	356
								PM	355	354	353	353	353	353	352	353	353	353	353	354
MONTH					926			TOTAL (CFS-DAY) = 28710												
8-01	3.55 (1445)	3.52 (1930)	3.54	3.54	613			AM	353	353	353	353	353	354	353	353	354	353	354	353
								PM	353	353	355	355	355	355	353	352	354	354	354	354
8-02	3.55 (0245)	3.53 (2245)	3.54	3.54	617			AM	354	354	355	355	354	354	354	354	354	355	354	355
								PM	354	355	354	354	354	354	354	354	354	354	353	354
8-03	3.69 (1245)	3.50 (1845)	3.54	3.54	617			AM	354	354	354	354	354	354	354	354	354	355	355	355
								PM	369	367	356	351	351	351	350	350	351	352	352	353
8-04	3.57 (1700)	3.50 (1530)	3.53	3.53	608			AM	352	352	352	352	352	352	352	353	352	352	352	352
								PM	351	351	351	350	357	356	357	356	353	353	353	353

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 16 DIST 16
PRIMARY COMPUTATION OF GAGE HEIGHTS AND DISCHARGE

13190500 DATA PROCESSED 09-17-81
S FK BOISE RIVER AT ANDERSON RANCH DAM ID BEGIN RT [illegible], RT 08 FROM 10-01-80

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1981 TEST DIFF 0.9 PUNCH INT 15 MIN STORE PARM 00060, STATISTIC 00003
PARM 00065, STATISTIC 00003

DATE	MAX GH (TIME)	MIN GH (TIME)	MEAN GH	EQUIV GH	MEAN DISCH	SHIFT AT ADJ HR	DATUM AT CORR HR		STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 1	2	3	4	5	6	7	8	9	10	11	12.
8-05	3.88	3.53	3.79	3.79	767			AM	353	373	374	374	374	374	374	374	375	375	375	387
	(1315)	(0015)						PM	387	384	384	385	386	385	386	386	386	386	385	386
8-06	4.79	3.84	4.64	4.65	1390			AM	385	402	423	443	476	479	476	476	477	476	476	478
	(0600)	(0115)						PM	476	476	476	474	472	473	476	476	477	477	477	476
8-07	4.79	4.76	4.77	4.77	1500			AM	476	477	477	477	477	476	478	477	477	478	477	477
	(1430)	(0015)						PM	477	478	478	477	477	477	476	476	477	477	476	476
8-08	4.79	4.76	4.77	4.77	1500			AM	477	477	477	477	477	477	477	476	478	478	477	477
	(1500)	(0015)						PM	477	478	479	478	478	479	477	477	477	477	477	477
8-09	4.78	4.75	4.77	4.77	1490			AM	478	477	478	477	477	477	477	477	478	476	476	476
	(0100)	(1930)						PM	476	476	476	476	476	476	476	476	476	476	476	476
8-10	4.80	4.75	4.77	4.77	1490			AM	476	477	476	477	477	476	477	476	477	476	477	476
	(2130)	(1530)						PM	476	476	477	476	475	478	478	478	479	480	479	477
8-11	4.79	4.74	4.77	4.77	1500			AM	478	479	477	477	478	478	477	477	478	477	477	477
	(0200)	(2315)						PM	477	478	477	477	477	477	476	477	477	476	475	477
8-12	4.79	4.76	4.77	4.77	1500			AM	477	476	476	477	477	477	477	477	477	478	478	477
	(2115)	(0130)						PM	477	477	477	477	477	476	478	478	478	477	478	478
8-13	4.80	4.77	4.78	4.78	1510			AM	479	479	479	480	479	479	479	480	478	478	478	478
	(0215)	(1215)						PM	478	479	477	478	478	478	477	478	478	478	477	477
8-14	4.79	4.77	4.78	4.78	1500			AM	478	478	478	477	479	478	478	478	478	479	478	478
	(0500)	(0015)						PM	477	478	478	478	477	478	478	477	478	477	477	477
8-15	4.82	4.77	4.79	4.79	1510			AM	478	477	477	477	477	478	482	479	480	480	480	480
	(0700)	(0015)						PM	479	479	479	479	479	479	480	479	480	479	479	480
8-16	4.84	4.77	4.80	4.80	1520			AM	483	483	484	484	482	482	482	480	478	478	478	478
	(0115)	(0815)						PM	478	478	478	478	479	479	479	479	480	478	480	481
8-17	4.81	4.26	4.33	4.34	1140			AM	478	479	448	427	427	426	426	427	427	426	426	427
	(0015)	(0415)						PM	427	427	426	426	427	427	428	428	427	428	426	426
8-18	4.26	4.03	4.06	4.06	943			AM	419	406	406	405	406	404	405	404	404	404	404	404
	(0015)	(2315)						PM	405	405	405	404	405	404	404	404	404	404	404	403
8-19	4.18	3.75	3.79	3.79	768			AM	404	394	380	378	376	376	376	376	377	376	376	376
	(0145)	(2315)						PM	376	377	377	377	376	376	376	376	376	376	376	376
8-20	3.76	3.48	3.56	3.56	627			AM	369	353	354	354	355	356	357	354	355	356	356	355
	(0015)	(0215)						PM	355	356	356	355	355	355	354	354	354	355	354	354
8-21	3.56	3.54	3.55	3.55	620			AM	355	355	355	355	355	355	355	355	355	354	355	355
	(0230)	(0945)						PM	355	355	355	355	355	355	354	354	355	354	354	355
8-22	3.56	3.54	3.55	3.55	623			AM	355	355	354	355	355	355	355	355	355	356	356	356
	(1000)	(0300)						PM	356	356	355	356	356	355	355	355	355	355	355	356
8-23	3.55	3.52	3.53	3.53	611			AM	354	354	354	354	354	354	353	354	351	353	353	352
	(0015)	(1145)						PM	352	352	352	353	353	354	353	353	353	353	353	353
8-24	3.69	3.53	3.56	3.56	625			AM	355	354	355	356	356	356	356	354	353	356	360	357
	(1045)	(0015)						PM	357	357	357	355	355	355	355	355	355	355	355	355
8-25	3.56	3.52	3.54	3.54	614			AM	355	355	355	355	355	355	356	355	355	355	355	353
	(0700)	(1915)						PM	353	353	353	353	353	353	353	352	353	352	353	352
8-26	3.55	3.51	3.53	3.53	610			AM	353	352	353	353	352	353	353	353	355	354	354	353
	(0830)	(0145)						PM	353	353	353	353	353	353	353	353	353	353	352	352
8-27	3.65	3.53	3.55	3.55	623			AM	354	359	356	356	356	356	355	355	355	356	355	356

CHAIRMAN ENERGY AND NATURAL RESOURCES COMMITTEE, I.C.A.
SUBCOMMITTEE ON ENERGY, I.W.F.

IDAHO CONSUMER AFFAIRS, INC.
AFFILIATE OF CONSUMER FEDERATION OF AMERICA
316 Fifteenth Avenue South, Nampa, Idaho 83651
OLD BOISE / [illegible]
TELEPHONE: 208 / [illegible]

December 11, 1981

Mr. Ron Golus,
Anderson Ranch Study Coordinator
Bureau of Reclamation
Federal Building
Box 043-550 West Fort Street
Boise, Idaho 83724

Dear Mr. Golus:

The Idaho Consumer Affairs, Inc. and the Idaho Wildlife Federation wishes to submit the following comments on the Anderson RanchDam Powerplant, Third Unit.

May we begin by stating,we thank the Bureau for conducting fair and impartial hearings regarding this project.

We support Plan B of this project, but would like to make a few additional recommendations for the Bureau of Reclamation to adopt when it is possible to do so.

1. Construct more than one, several if possible, campgrounds for overnight vehicle access and use around Anderson Ranch Reservoir, even if it means purchasing some private land suitable for the purpose in the Pine, Idaho area.

2. Purchase as much prive land or exchange federal land along the Boise River between Anderson Ranch Dam and Arrowrock Dam, as possible.

3. Construct some hiking trails along this Boise River reach, between these two dams, also around Anderson Ranch Reservoir, where reasonably feasible as to terrain and monetary costs.

Respectfully submitted,

Harold C. Miles

Harold C. Miles-Chairman
Energy and Natural Resources Committee
Idaho Consumer Affairs, Inc.

Subcommittee on Energy
Idaho Wildlife Federation

We Care About You

RESPONSE

1. *During project planning the Bureau of Reclamation, the Forest Service, and others evaluated the potential for developing additional vehicular access campgrounds at Anderson Ranch Reservoir and found the potential sites for such development extremely limited. A potential site, identified by the Forest Service as "Area F," or the "Pine School" site, was eliminated from detailed study because it is too far removed from the reservoir's water surface during most of the recreation season and the area is remote from the project's zone of influence. In consultation with the Forest Service, it was concluded that additional campground developments should be deferred for possible future Forest Service action.*

2. *The Bureau of Reclamation's project proposal includes the acquisition of private land between Anderson Ranch Dam and Danskin Bridge. In the early stages of project study, Reclamation considered acquiring lands for public access downstream between Danskin Bridge and Trail Creek. This potential element was eliminated from further study at the request of various agencies because the benefits of acquiring the access appeared to be outweighed by the costs. In addition, the landowner (who owns the lands both above and below Danskin Bridge) stated that the acquisition of lands in both areas would reduce his land base to the point that ranching would no longer be profitable. It is possible that the lands between Danskin Bridge and Trail Creek might become available at some time in the future. The Forest Service, the management agency in the area, would likely consider the acquisition of those lands if the opportunity arises.*

   The acquisition of lands below Trail Creek was excluded from the proposed plan because the lands are extremely inaccessible. These lands are now protected by that inaccessibility.

3. *Trail construction and related right-of-way acquisition between Danskin Bridge and Trail Creek downstream was eliminated as a potential plan element at the request of the Forest Service and the fish and wildlife agencies due to expected increases in vandalism and fire hazards on adjacent Forest Service and private land, negative wildlife impacts within the riparian zone, and lack of support from the landowner because public use in certain areas would interfere with his ranching operations. Supervision and maintenance of the trail would also be difficult. The Forest Service at some future time may wish to consider the construction of hiking trails.*