

Orr Affidavit

Exhibit 34

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DEPARTMENT OF
WATER RESOURCES

Excerpted pages of the
State of Idaho Response to Federal Energy
Regulatory Commission Request
for Additional Information
(FERC Docket no. EL85-38-000)
(Jan. 30, 1987)

Fourth Orr Affidavit
Exhibit 2:

Excerpted Pages of
State of Idaho Response to Federal
Energy Regulatory Commission Request
for Additional Information
(FERC Docket No. EL85-38-000)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

CERTIFICATION

I herby certify that the attached 220 pages are
true and correct copies of a document on the file with the
Commission.

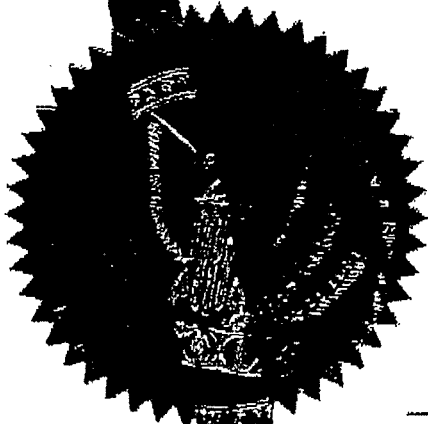
8-31-01
Date

Norma L. Anderson
Custodian

*I herby certify that the Custodian or his
designee, which signature appears above,
is the official custodian of the records of
the Federal Energy Regulatory Commission
which certification is made and was such
official custodian at the time of executing
the above certification.*

Kimberly D. Base

SECRETARY





ORIGINAL

OFFICE OF THE GOVERNOR
STATE CAPITOL
BOISE

CECIL D. ANDRUS
GOVERNOR

May 18, 1987

Mr. Richard T. Hunt, Director
Office of Hydropower Licensing
Federal Energy Regulatory Commission
325 North Capitol Street, N.E.
Washington, D.C. 20426

EL85-38-660

Dear Mr. Hunt:

Enclosed please find the State of Idaho's response
to your request for information of January 30, 1987.

Sincerely,

Cecil D. Andrus
Cecil D. Andrus
Governor

CDA:pcg

cc: Idaho Congressional Delegation w/enclosure
Service List w/enclosure

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MAY 20 1987

UNITED STATES OF AMERICA MAY 20 PM 1:35
FEDERAL ENERGY REGULATORY COMMISSION

IN THE MATTER OF PETITION FOR
DECLARATORY ORDER BY IDAHO
POWER COMPANY

DOCKET NO. E185-38-000

STATE OF IDAHO RESPONSE TO FEDERAL ENERGY REGULATORY
COMMISSION REQUEST FOR ADDITIONAL INFORMATION

On October 25, 1984, Idaho Power Company (IPCo) and the state of Idaho (Idaho) entered into an agreement (Exhibit 1) to settle a controversy that has existed for decades concerning the nature of hydropower water rights relative to additional upstream consumptive uses in the Snake River Basin. The controversy which had cast an ominous shadow over state water management policies, company operations and existing water rights seemed destined for a long and costly court battle with an uncertain outcome. The agreement resolved the issues to the satisfaction of all parties and for the benefit and well being of Idaho's citizens.

One of the terms of the agreement called for both parties to seek recognition by the Federal Energy Regulatory Commission (FERC) to protect IPCo from legal challenges. On November 27, 1984, IPCo petitioned FERC for a declaratory order recognizing the agreement. On December 21, 1984, Idaho intervened in the proceeding in support of IPCo's petition. On January 30, 1987, FERC requested additional information from IPCo and Idaho on the need for the agreement and the effect of implementing it. This document and the attached exhibits constitute Idaho's full and complete response to that request. IPCo is submitting a separate response to the questions addressed to the

company. The state and IPCo responses have been coordinated.

FERC is requested to expedite its review and approve the petition to allow the issue to be finally resolved.

Background

Idaho's Snake River, its tributaries and associated aquifer are the natural resource which more than any other factor has shaped and determined the location, nature and extent of economic development in southern Idaho. Competition for this valuable resource has existed since the early years of Idaho's development. A map is attached (Exhibit 2) showing the features significant to this discussion.

Irrigators were the first to divert and use significant quantities of the Snake River Basin's water resource. Early irrigation development first occurred in eastern Idaho where the river flows across the broad Snake River Plain making diversion of water relatively easy by means of low check dams and canal systems. The reliable natural flow during the summer month period was fully developed by the end of the 19th Century. Additional irrigation development on the Snake River Plain was encouraged by construction of upstream dams, most built and operated by the U.S. Bureau of Reclamation. The first irrigation storage reservoir completed was Jackson Lake Dam in 1906. Additional major irrigation reservoirs have since been constructed with a total storage capacity of 4,600,000 acre feet(A-F).

Below Milner Dam, located between Burley and Twin Falls, the river enters a deep canyon which made significant irrigation development below that point impractical by surface diversion methods.

Significant irrigation development did not occur in this reach of the Snake River and on lands overlying the Snake River Plain Aquifer until the 1950's when modern pumping equipment became available. During the period between the early upstream irrigation development and the recent period of irrigation development using pumping equipment, the river has been harnessed to produce electrical power at a number of dams. Most of these dams are located in the reach downstream from Milner Dam.

The Snake River regenerates itself below Milner Dam mainly through spring inflows fed by the Snake River Aquifer. It is primarily this spring flow which has furnished the summertime flows in the Snake River between Milner and Swan Falls thereby providing a reliable base flow for power generation. Surface irrigation on the plain has increased the flow of the springs.

The first hydropower development on the Snake River occurred at Swan Falls Dam south of Nampa. The power plant was expanded in stages to its present hydraulic capacity of 8400 cfs. Water rights priority dates for the facility range from 1903 to 1920. Nine other hydropower dams have been added in the reach below Milner Dam, culminating in the major three-dam Hells Canyon project on Idaho's western border downstream from Swan Falls Dam.

Because Idaho water law is governed by the "first in time is first in right" prior appropriation doctrine, the potential for large non-consumptive hydropower projects to appropriate all the water from the Snake River has been a concern to Idaho's citizens since the early 1900's. The entire river could be fully locked up by one large

downstream hydropower project if a hydropower right is allowed the same priority in time protection as other diversionary, consumptive rights. Water would not be left for development of cities, industries or agriculture. Recognizing this threat to future development, Idaho citizens amended the state's Constitution in 1928 to provide for hydropower rights to be treated differently to prevent a lock up of the needed water.

This same issue was addressed again in the 1960's when Idaho's political leaders agreed to allow the construction of the Hells Canyon project only after agreement that the use of water in the project would be subordinate to future upstream uses. State and federal licenses for the Hells Canyon project were issued with subordination conditions, preserving southern Idaho's future ability to develop all of its resources.

The present controversy arose from concerns about the dual impact of rapid development of irrigated lands using high lift pumping from the river below Milner Dam. Reduced river flows decreased hydropower production, while new irrigation was bringing about an increase in electric power demand. At this same time, the Pacific Northwest region was thought to be entering a period of power deficits. Legal action by rate payers was brought against IPCo. IPCo responded by asserting that its claimed water rights at Swan Falls (predating the 1928 constitutional amendment) were unsubordinated and fully protected under the appropriation doctrine. The state of Idaho argued that the Swan Falls water rights were not fully protected under several doctrines of law including forfeiture, abandonment and

estoppel. The only issue fully litigated was whether the Swan Falls FERC license was subordinated by IPCo's acceptance of subordination at the Hells Canyon project. In November 1982, the Idaho Supreme Court ruled that the Swan Falls license had not been impliedly subordinated by the subordination condition in the Hells Canyon project license.

IPCo and Idaho recognized the need for a balanced use of the water resources of the state, and were able to negotiate a settlement to the controversy. The alternative facing the parties was years of litigation with an uncertain result and enormous cost.

The Swan Falls Agreement protects the hydropower base but allows for new development when found to be in the public interest. It includes the following key provisions to provide for judicious management of Idaho's water:

1. The minimum stream flows in the Milner to Swan Falls Dam reach measured at Murphy gauging station below Swan Falls Dam were increased from 3300 cfs (year around) to 3900 cfs April 1 to October 31 and to 5600 cfs from November 1 to March 31. The increased minimum flows provide an assured base of protection for hydropower generation and other instream uses. This provision has been implemented by revision of the State Water Plan by the Idaho Water Resource Board and ratified by the Idaho legislature. Reference is made to Policy 5A of the Idaho State Water Plan (Exhibit 3).

2. New development which significantly reduces the flow available to hydropower rights will not be allowed unless found to be in the public interest. In evaluating the public interest, the effect on hydropower generation capability and cost of electricity must be

considered. This provision has been implemented by enactment of Sections 42-2020, C, and D of the Idaho Code (Exhibit 4) and Rule 5.3 of the Department of Water Resources rules and Regulations for Water Appropriation (Exhibit 5). Rule 5.3 provides for full consideration of all economic, social and environmental factors in evaluating an application to appropriate water.

3. The agreement recognizes the need to identify and quantify present uses of water in the Snake River and tributaries to facilitate management of the resource. This provision has been implemented by enactment of Section 42-1406A, Idaho Code providing for adjudication of the Snake River and tributaries including ground water. Pertinent sections of the Idaho adjudication statutes are included in Exhibit 6. The statutes provide for consideration of all federal reserved rights including those of Indian tribes and those resulting from reservations for federal agencies in accordance with the federal McCarran Amendment, 43 USC Section 666. The Snake River adjudication is set to begin July 1, 1987, and is expected to take 10 years and cost \$27 million. The cost is to be funded from claim filing fees.

The "legislative program" of Section 6 of the Swan Falls Agreement and all "conditions of effectiveness" of Section 13 of the agreement have been fully met with the exception of the FERC declaratory ruling. Failure or refusal of FERC to issue an acceptable declaratory ruling are grounds on which the agreement can become inoperative. Without the agreement Idaho, IPCo, a multitude of water right holders, and other interested citizens will again be forced to

litigate the amount and nature of IPCo's water rights in the Milner to Swan Falls reach. Litigation would again place in jeopardy water rights for some existing development, casting a shadow over property rights for the lengthy period of the litigation and could eliminate the established minimum stream flow protection. Further economic progress in Idaho would be stymied. Refusal of FERC to recognize the agreement would be contrary to traditional FERC policy as reflected by licenses issued for the Hell's Canyon project and C. J. Strike Dam.

FERC Question #1

In his letter dated March 18, 1983, the former Governor stated that restoring flows to meet the Swan Falls water right of 8,400 cfs would require the owners of about 200,000 acres of existing irrigated lands to stop diversions, and that at a low flow of 5,500 cfs about 60,000 acres developed since 1977 would go out of production. What is the current estimate of irrigated lands that would be adversely affected at minimum flows of 8,400 cfs, 5,500 cfs, and 3,900 cfs? Please identify the type of crops affected and the market value of the commodities produced on the affected lands.

Response to Question #1

Idaho has not conducted studies for the specific purpose of refining the earlier estimates of the number of acres potentially adversely affected by maintaining particular minimum stream flows at Swan Falls. Efforts have been focused on reaching and implementing an agreement. Studies and evaluations conducted in support of the agreement provided additional information on the impact of the particular minimum flows on existing irrigated land.

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1. Establishing a minimum average daily flow of 8400 cfs at Swan Falls Dam is not practical. Historically observed flows at Swan Falls Dam were much less than 8,400 cfs during the summer months of most years at the time Swan Falls Dam was built. Historical average monthly flows for the month of August for the Snake River near Murphy, the U.S. Geological Survey gauging station located just downstream from Swan Falls Dam, are shown on Figure 1 for the years 1914 to 1982. Average monthly flows for August were less than 7,000 cfs during dry years before 1920, gradually increased to about 8,000 cfs by the 1940's and 1950's and have gradually declined since.

Because the minimum flows established as a result of the Swan Falls Agreement are expressed as average daily flows, it is appropriate to compare these flows to historically observed average daily flows. Because of variability of flow, average daily flows are lower than are the corresponding average monthly flows. An analysis of flow records for Murphy gauging station and other upstream gauging stations for the period 1989 to 1981 is presented in the document entitled a "Review Of Flow At Swan Falls In Relation To Its Power Rights" included in Exhibit 6b. This analysis shows that minimum average daily flows at Murphy gauging station were less than 5,000 cfs at the time Swan Falls Dam was being constructed to its full hydraulic capacity, and have not exceeded 8,000 cfs during summer months of dry years to the present time.

2. Nearly 50 percent of the approximately 3.2 million acres of land irrigated above Swan Falls have water right priority dates junior to the Swan Falls hydropower rights. As noted in the previous

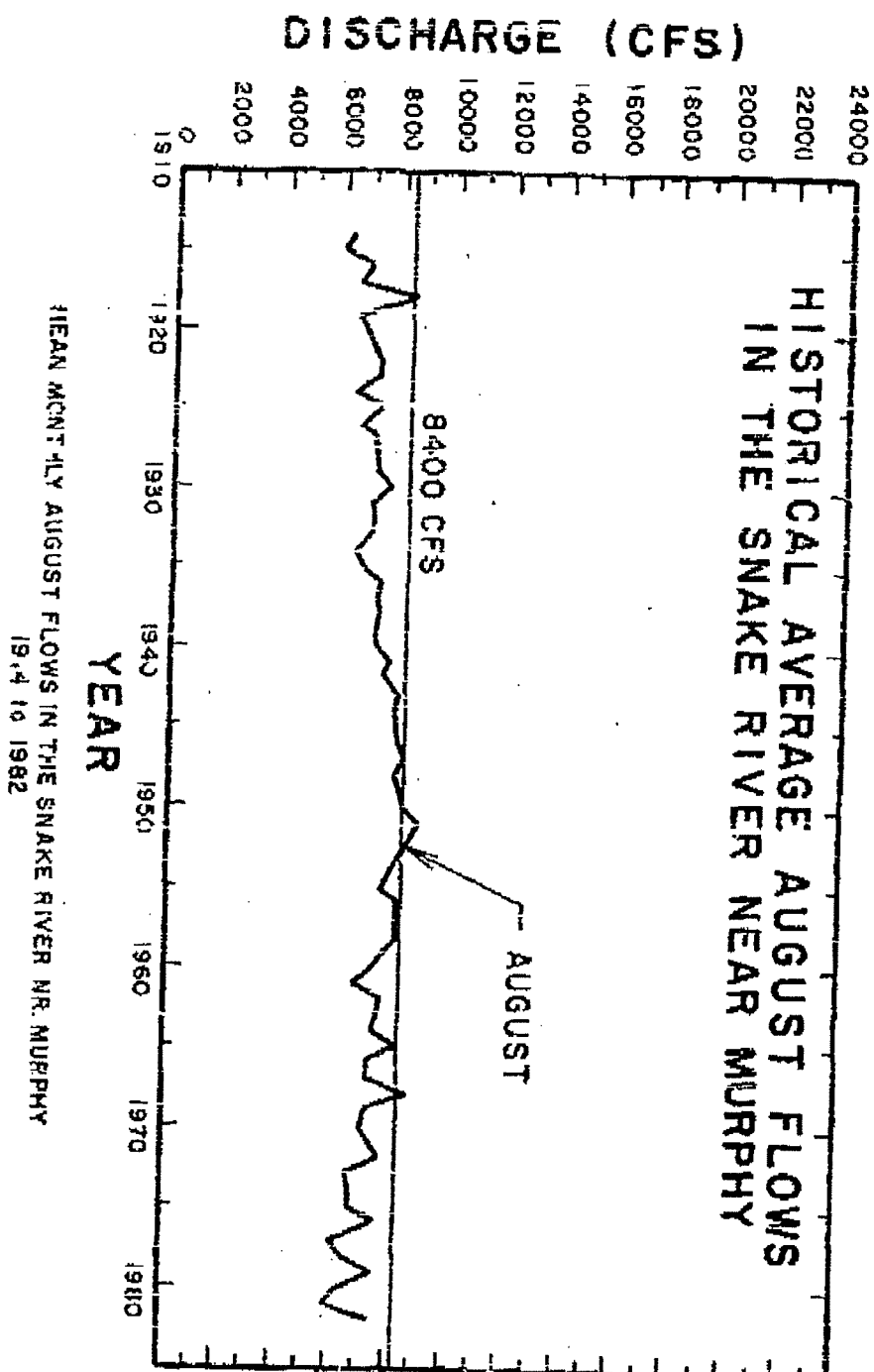


Figure 1

section, establishment of an assured flow of 8,400 cfs at Swan Falls will not occur even if the irrigation is stopped on all of the land having junior priority water rights.

The Senate Bill 1180 contract entered into between IPCo and Idaho at the same time as the Swan Falls Agreement was signed grandfathers all uses beneficially using water under valid water rights as of November 19, 1982, and all uses for which a substantial investment had been made by that date pursuant to a valid water right permit. The Senate Bill 1180 contract served to remove the legal cloud from most of the water rights which would have been found by the courts to have been grandfathered under legal doctrines such as forfeiture, adverse possession, waiver, and estoppel.

3. The amount of irrigation development adversely affected by establishment of any particular minimum stream flow rate at Swan Falls depends upon the location of the development, source of water supply and other factors specific to the land irrigated. Accurate determinations of the total acreage affected can only be determined upon completion of the basin wide adjudication of water rights slated to begin July 1987.

4. Establishment of a minimum daily average flow of 3,900 cfs at Swan Falls will not adversely affect any presently irrigated lands and will allow some additional development if it is determined to be in the public interest. Average monthly flows at Swan Falls during the summer months of dry years with present development are about 5,400 cfs. Because of the variability between average daily flows and average monthly flows, minimum daily flows that would occur

in dry years under existing levels of development are estimated at 4,500 cfs.

The above discussion demonstrates that the impact on existing irrigated lands is affected more by legal considerations than by the particular rate of minimum flow established at Swan Falls. The number of acres potentially affected by various minimum flow levels cannot be determined without going through the lengthy litigation which the Swan Fall Agreement is intended to avoid. The estimate of 200,000 acres given by former Governor Evans in his 1983 letter is, however, representative of the magnitude of existing irrigated land that might be adversely affected if the Swan Falls Agreement is not recognized. Using this "representative" estimate, an analysis of the impact of removing 200,000 acres of irrigation is presented in Exhibit 7. The analysis shows that removal of 200,000 acres from irrigation would reduce farm market receipts by nearly \$75 million per year and result in secondary impacts of \$128 million per year in other sectors, for a total decrease of \$203 million per year along with a net loss of 3660 jobs. Obviously, Idaho's economy cannot absorb this impact without major repercussions.

FERC Question #2

Provide information sufficient to indicate the potential, as predicted by the state of Idaho, for development of 450,000 additional acres of agricultural land in the Snake River Basin. The information must include the following:

- (a) a characterization of historical changes in the quantity of agricultural land that has been developed in the basin and an analysis of

- the impacts these changes have had on the flow regime of the river;
- (b) all data and calculations used to provide a basis for the predicted increase in agricultural development;
 - (c) the location of the land areas that would be developed and an evaluation of whether the soils in these areas could support the planned agricultural development; and
 - (d) an estimate of the type, quantity, and market value of crops that would be produced from these lands.

General Response To Question #2

Question #2 appears to be based upon information submitted to FERC by former Governor Evans in the letter of March 18, 1983. The 450,000 acres of development were based upon the minimum stream flow of 3300 cfs established at Murphy gauge just downstream from Swan Falls. The Swan Falls Agreement provided for increasing the minimum flow as described above. Policy 50 of the State Water Plan (Exhibit 3) has been revised to remove references to rates of development of irrigated land. Development for irrigation will occur as it is determined, pursuant to statute and rule, to be in the public interest.

The response to this question will be based upon a possible future development scenario prepared by the Swan Falls Technical Advisory Committee after the Idaho Supreme Court's Swan Falls decision. This committee, composed of state and federal agencies, IPCo and a private consulting firm, estimated that a reasonable acreage growth assumption above Swan Falls for the next approximate twenty year period would be 195,000 acres (Exhibit 8). The acreage estimate included 48,000 acres of new pumped diversions below Milner,

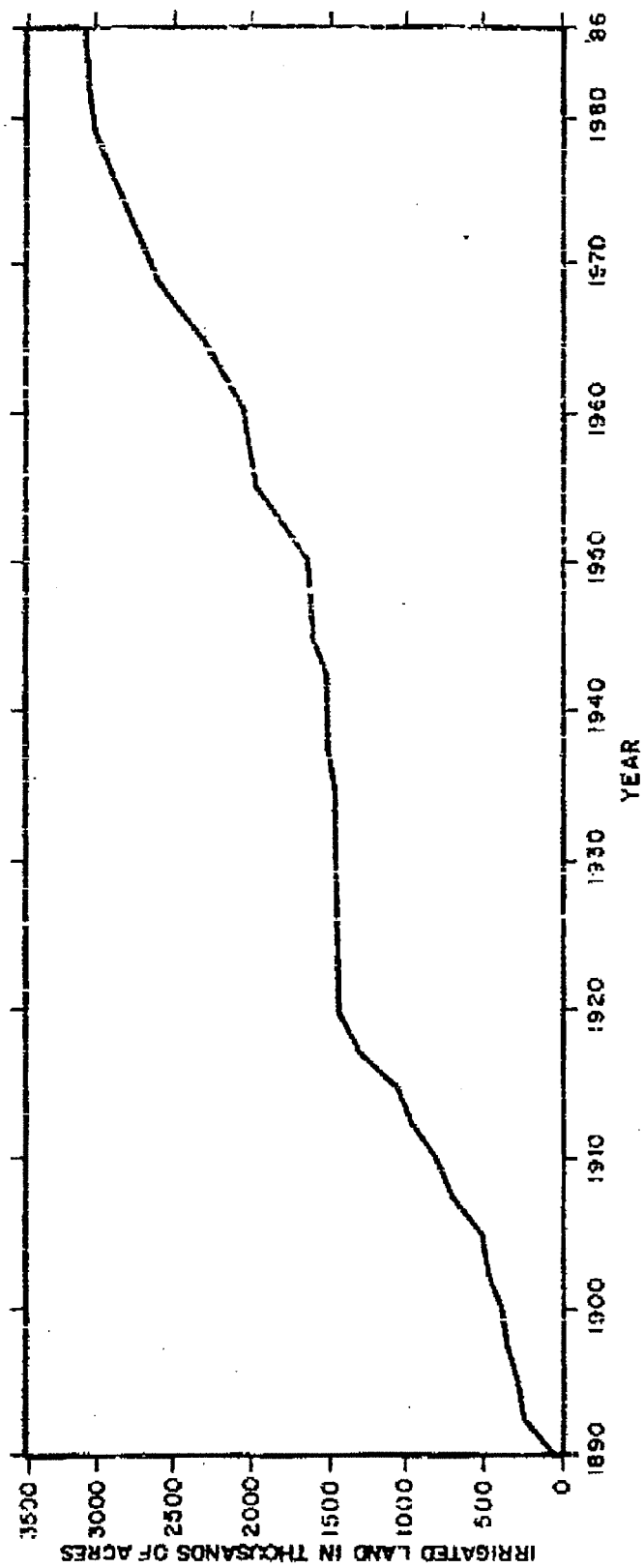
which is now precluded by the recently adopted water allocation rules and regulations (Exhibit 5, Rule 5.3.7.). For the purpose of this response, these 48,000 acres have been deleted so that the studies are based upon 125,000 acres of development using ground water and 22,000 acres using surface sources (principally storage) upstream from Milner Dam.

The Technical Advisory Committee predicted this level of development within a 20 year period. The current agricultural economic crisis suggests the committee's scenario should be viewed as potential development and not tied to a predicted term of years. Responses to questions 1 through 7 are based upon that premise.

Response to Question #2(a)

Figure 2 shows a history of irrigation growth in the Snake River Basin above Murphy. There has not been a systematic measurement program for documenting irrigated area. Figure 2 was compiled from several studies and estimates made at various times by several agencies including the U.S. Geological Survey, University of Idaho, U.S. Department of Agriculture and the Idaho Department of Water Resources. These estimates are not based on consistent definitions of "irrigated land" and are of varying degrees of precision. Nevertheless, Figure 2 does provide a good general representation of the growth rate.

The early years of development were primarily based on direct diversion of surface streamflows. Most of the development occurred in tributary valleys and along the Snake River far upstream from the



IRRIGATED ACREAGE, SNAKE RIVER BASIN UPSTREAM FROM SWAN FALLS

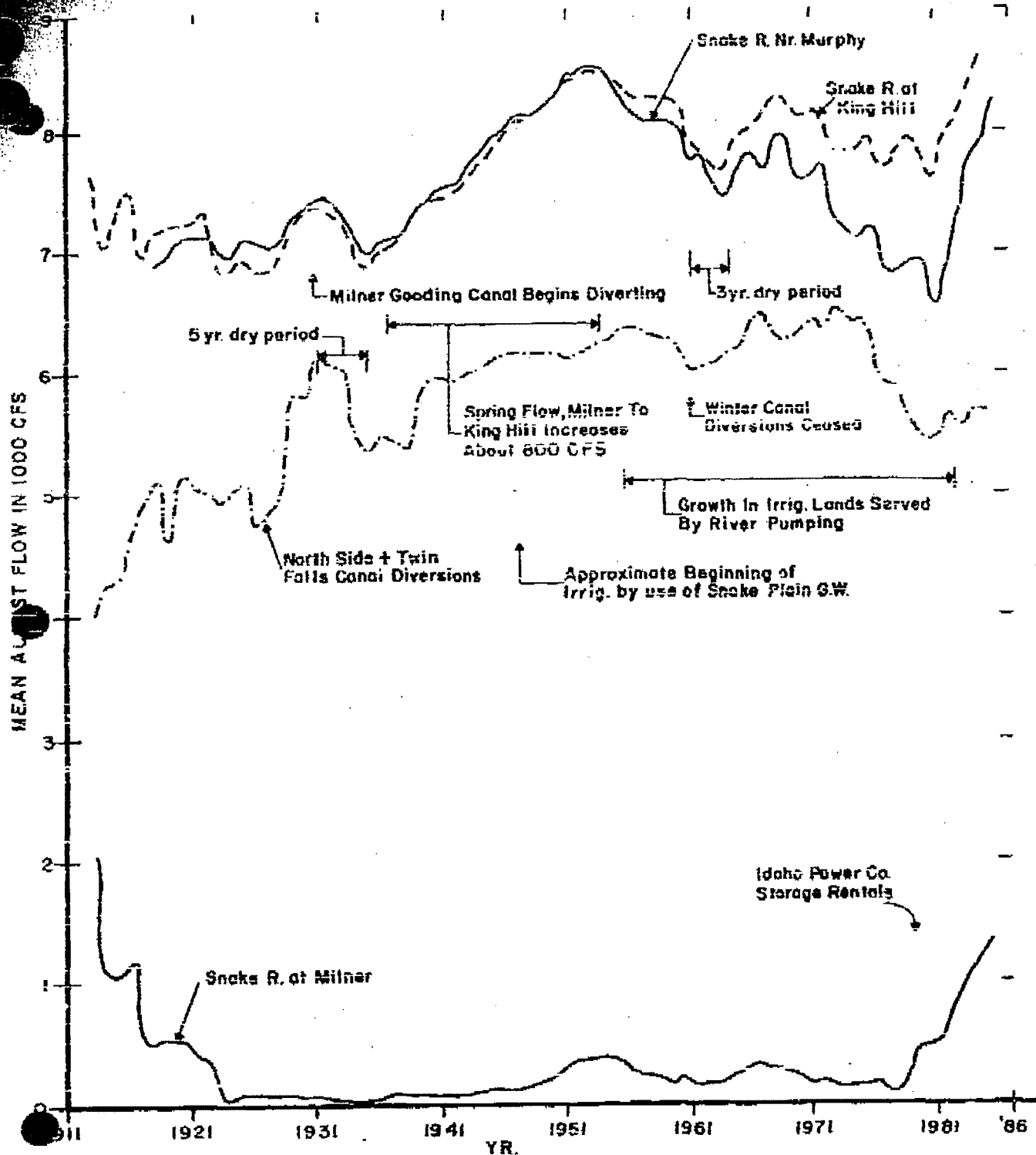
FIGURE 2

Murphy gage. Beginning about 1907, major diversion and storage projects at and above Milner Dam brought about a rapid increase in the rate of development in areas which could capture streamflow not previously developed. After 1920 the acreage leveled out, partly because summertime natural flows were nearly all committed.

Growth resumed in the late 1940's when some federal reclamation projects were built and with the advent of ground water pumping. Ground water has since been the major water source for sustaining growth of new irrigation.

In the mid-1960's a major new type of irrigation development began; that of pumping to the plateau lands from the Snake River in the canyon below Thousand Springs. In this area a large dependable water supply was available, and when combined with a vast area of good quality irrigable land, enabled the private construction of numerous projects. Most of these lands were made available to individuals by the federal government. Approximately 150,000 acres of newly irrigated land were developed by 1980. Increasing power costs, farm economic problems and changing federal land policies had virtually halted these projects by 1982 when the Idaho Supreme Court's Swan Falls decision was issued. In 1986 the Department of Water Resources adopted water right rules and regulations which contain a presumption (Rule 5.3.9 of Exhibit 5) that further direct diversion between Milner Dam and Swan Falls Dam is not in the public interest, thus effectively preventing additional projects in this area.

The impacts of irrigation growth on Snake River flow are complex because of the acreage locations and water sources. Figure 3



**TRENDS IN SUMMER FLOWS AND INDICATORS OF CAUSES
SNAKE RIVER NEAR MURPHY (SWAN FALLS)
AS ILLUSTRATED BY FIVE YEAR RUNNING AVERAGES OF AUGUST FLOWS**

FIGURE 3

has been prepared to provide an overview of some of these effects. All hydrographs on Figure 3 are five year running average of the mean August flows. A running five year average was chosen to eliminate year-to-year variations in order to show general trends. August was selected to show summertime effects at Murphy without the occasional wet year spills past Milner which occur in earlier months.

Flow of Snake River below Thousand Springs (at King Hill and near Murphy) began rising in the late 1920's, dipped back in the early 1930's, then resumed rising in the early 1950's. This rise was due primarily to two causes: increasing discharge from the springs and increasing irrigation return flow. Aquifer levels and outflows had been rising for a number of years in response to the earlier recharge from irrigated land overlying the Snake River Plain.

August flows near Murphy reflect this trend in ground-water discharge. As shown on Figure 3, the running average increased from about 7000 cfs in 1935 to 8500 cfs in 1953. Only about 300 cfs of this rise was water passing Milner.

Ground water flow began declining in the early 1950's and as a result, the flow at Murphy was also reduced. The decline in ground-water flow was apparently in response to the use of ground water for irrigation which was just beginning to occur. It appears to have been accelerated by the termination of winter diversions through the canals for farmstead domestic water supplies which first occurred in 1961. By the mid-1970's, summer diversions had also begun declining as illustrated on Figure 3 by the sum of the North Side and Twin Falls canals which divert out of Milner Dam.

Response to Question #2(b)

No estimates have been made to determine a rate of future agricultural development. While the agreement and resulting legislation provide a "cap" on the amount of development that can occur in any one year or four year period, the agreement specifically and deliberately avoids establishing a scheduled rate for agricultural development. Recent revisions of the State Water Plan recognize that factors outside the control of the state, such as federal policies, power rates, international trade agreements, and energy/oil prices will influence the need and feasibility for further development. The present economic climate for agriculture makes it unlikely that significant additional irrigation development will occur in the foreseeable future. Also the need for crops that are now in surplus is a factor in determining the public interest of allowing new irrigation development at this time.

The Swan Falls Agreement preserves the opportunity for making additional use of the Snake River water resource when such uses are in the public interest. Thus, development will not be forced to occur simply to meet a planned schedule but will only occur as needed and prudent when all factors are considered.

Response to Question #2(c)

Tables taken from the Idaho Water Resource Board Summary Report No. 1, "Potentially Irrigable Lands in Idaho", published in July, 1970, demonstrate that land suitable for irrigation far exceeds any potential water supply for such development (Exhibit 8).

The location of lands suitable for irrigation development above Swan Falls is shown on the map contained in Exhibit 8. While these lands have characteristics which are adaptable to irrigation, the actual location of lands developed will be determined as citizens submit proposals to appropriate water and these proposals are evaluated in compliance with state law. The criteria for making this evaluation are described in Rule 5 of Exhibit 5 which include a review of the economic viability of the project.

Response to Question #2(d)

An analysis of the type, quantity, and market value of crops that would typically be produced from newly developed irrigated lands is presented in Exhibit 9. This analysis is based upon 147,000 acres of irrigation development distributed on the Snake River Plain. The analysis shows that agricultural market receipts would exceed \$55 million per year with a total increase in overall income estimated to be \$149 million per year, and an increase in employment of 2691 jobs.

A crop rotation weighted more heavily to potatoes produces \$69 million dollars per year of agricultural market receipts and \$182 million increase in overall state income with an employment gain of 2624 jobs.

FERC Question #3

Provide information sufficient to characterize impacts to the flow regime of the Snake River and major tributaries associated with the increased agricultural development. The information must include the following:

- (a) estimates of changes in the mean, maximum and minimum monthly flows of the river and major tributaries at ten year intervals extending from the present until the full 450,000 acres of agricultural land is developed. These monthly flow estimates should be produced for the reaches of the river located in the Swan Falls, Milner, Hells Canyon, American Falls, Idaho Falls, and Lower Granite Lock and Dam areas; and
- (b) data sufficient to indicate changes in the recharge, discharge and retention times of the Snake River Plain Aquifer that would be associated with the increased agricultural development.

Response to Question #3(a)

An evaluation of the impact of developing 147,000 acres (as discussed in the general response to question 2) has been made using a river simulation model.

A brief description of the river simulation model and the base (1985 condition) study is contained in the open-file report included as Exhibit 10. Base study flow tables contained in the report are repeated herein expressed in mean monthly cfs units as tables 1-6 of Exhibit 11.

Tables 7-12 (Exhibit 11) show flows at the same sites after full development of the 147,000 additional acres. For the purpose of this study, the Snake Plain Aquifer outflow has been adjusted to equilibrium conditions following the new development. Due to the very large storage effects of the aquifer, equilibrium conditions would not be reached for many years after the new development occurred. Thus, actual flow reductions below the springs would be much less than the differences between tables 1-6 and corresponding tables 7-12 for a considerable period of time.

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A preliminary evaluation of the impact of the possible future condition scenario described under question 3(a) was made using a ground water model developed by the Idaho Department of Water Resources and the University of Idaho. Model results showed that ten years after installation of the new ground water withdrawals, aquifer outflows would be depleted by about thirty percent of the new depletion amount. By the twentieth year about sixty percent of the new depletion would be reflected in aquifer outflows.

Provide an assessment of impacts to the fish resources of the Snake River and major tributaries associated with the reduction in stream flow that would result from the subordination of water rights at the Swan Falls project. The assessment must include the following:

- IDAH0'S RESPONSE TO FERC -- page 21

Program of the Northwest Power Planning
Council.

Response to Question #A(a)

The reduction in flow in the river allowed by the Swan Falls Agreement will not cause a significant impact on fish habitat. The minimum daily average flow at the Murphy gauge was 4,530 cfs on June 28, 1981 which was 1230 cfs greater than the protected minimum flow rate existing at that time. Minimum flows have been increased by the state as a part of the Swan Falls Agreement to protect minimum flows of 3,900 and 5,600 cfs (Exhibit 3, Policy 5A). This does not mean that additional development cannot occur and still protect fish habitat.

The rating table for the Murphy gauge can be used to determine the change in stage of the river for changes in flow at that location. This stage change is indicative of the change in stage that would occur in the vicinity of the Deer Flat National Wildlife Refuge. The relative stage change diminishes as other large tributaries enter the river downstream from Swan Falls. Reducing the actual minimum daily average flow of 4,530 cfs the full amount to 3,900 cfs, would reduce a reduction in stage at the Murphy gauge of about 0.24 feet or less than three inches.

Since, under the terms of the agreement, 150 cfs of the flow at the Murphy gauge has been reserved by the state for BCHM uses, the reduction for other uses will be limited to 450 cfs using the same scenario as described above. The reservation of 150 cfs for BCHM (Exhibit 3, Policy 5C) is vital to southern Idaho but the actual

depletion of this flow is not likely to occur for many years. The depletion of the 450 cfs is also dependent on many factors outside of Idaho's control. Were it to occur, the reduction in stage at the Murphy gauge would be only about two inches below that of June 28, 1981. It must also be noted the agreement provides for minimum flows that produce a stage about three inches higher than the old minimum flow in the summer and over ten inches higher during the winter.

The minimal stage changes that can occur as a result of the Swan Falls Agreement from existing conditions will not significantly change the available fish habitat.

Instantaneous low flow rates are dependent upon the operation of upstream hydropower facilities. Operation of the hydropower facilities to comply with the established minimum flows will insure that minimum flow under the agreement will not be as low as observed in the past.

Response to Question #4(b)

There is no evidence to support any measureable impact on the Northwest Power Planning Council's (NWPPC) Salmon migration storage.

The average annual discharge of the Snake River at the Idaho border at Lewiston is almost 37 million acre feet. If the 600 cfs reduction discussed above is applied year around, the total depletion would be about 434,000 acre feet. This is only slightly more than one percent of the average annual discharge of the Snake River at Lewiston.

There is no reason to expect this small reduction, will be measurable in the NWPPC's Fish and Wildlife Program when considered in

total with flows in the Columbia River Basin. It is also important to consider that peak irrigation pumping does not occur during the April 15 to June 15 time period when flows are most needed to aid migration of anadromous fish smolts.

IPCo and Idaho are cooperators in providing the water flows needed for the NWPPC's water budget. IPCo has entered into an agreement this year with Bonneville Power Administration to provide releases from Brownlee Reservoir for the water budget. Dworshak Reservoir on the Clearwater River drainage in Idaho is also used to supply water. Idaho is involved in developing the Galloway Dam on the Weiser River drainage to provide flows for the budget. This statewide approach to assisting in the water budget allows full multi-purpose development of the state's water resources.

FERC Question #5

Provide an evaluation of the impacts to the water quality of the reservoirs located on the main stem of the Snake River and tributaries associated with the increased loading of nutrients and decreases in flow that would result from the development of additional agricultural lands in the basin. The evaluation should include a determination of the potential for formation of algae blooms in the reservoirs and the reduction in the dissolved concentration of reservoir discharges.

Response to Question #5

The partial subordination of IPCo's water rights at the Swan Falls project and the corresponding recognition on the FERC license will have no effect on the water quality of the upper Snake reservoirs. The subject hydropower water rights are natural flow

rights and do not affect the operation of upper Snake reservoirs.

Irrigation development of 147,000 acres as described in the response to question #2 is less than 5 percent of the irrigation development that now exists in the Snake River Basin above Swan Falls. Most new development will be from ground water sources with sprinkler or other efficient types of application methods. Runoff to surface sources will be minimal.

Algae bloom is directly related to available phosphate in the water. Significant steps are being taken to reduce nutrient loading in the Snake River. The Rock Creek project near Twin Falls is an example of the ongoing effort taking place to improve water quality in the Snake River. It is anticipated that water quality in the Snake River will continue to improve whether or not additional development takes place as a result of the Swan Falls Agreement.

The total change in the quantity of water is very small as described in question 4 above and will not result in a measurable change in downstream reservoir water quality. The year to year variations in water availability are far in excess of the average reduction that will occur under the Swan Falls Agreement.

FERC Question #6

Provide an assessment of the probable impacts of the flow reductions associated with subordination of water rights on recreational use of the free-flowing sections of the Snake River with particular emphasis on canoeing, floating, and whitewater boating.

Response to Question #6

Prior to the Swan Falls Agreement the established minimum flow rate for Swan Falls was 3,300 cfs average daily flow. The increased minimum flows established as a result of the agreement will provide additional protection for recreational uses.

An analysis of the impacts of a maximum 500 cfs reduction in flow at Swan Falls below the minimum average daily flow which occurred on June 28, 1981 demonstrates the flow reduction will not have a perceptible impact on recreational uses. With the establishment of the 3,900 cfs minimum flow at the Murphy gauge, flows in this reach of the river will be adequate to preserve existing recreational uses.

Also as described in responses to questions 4 and 5, the total hydraulic impact on the river will be small under the agreement. The fluctuations caused by operation of existing hydroelectric facilities are greater than the change in average flows that will result from the Swan Falls Agreement.

FERC Question #7

Provide an assessment of the impacts to nesting water fowl on Deer Flat National Wildlife Refuge that would occur as a result of the reductions in river flow. The assessment should address the effects of increased access by mammalian predators to the islands that would occur when river flows decrease.

Response to Question #7

No perceptible impact on the nesting water fowl at the Deer Flat National Wildlife Refuge are likely to occur as a result of the

reductions in flow below historical levels as a result of the Swan Falls Agreement. Idaho does not agree, however, that this is the proper forum to determine the merits or extent of river flow or any reserved water right that might protect water fowl in the refuge.

The Department of Interior has been invited to join other federal agencies in negotiating with Idaho to determine any reserved rights held by Interior in preparation of a McGarran Amendment, 43 U.S.C. Section 666, water right adjudication soon to be initiated in Idaho. Included as Exhibit 12 are copies of letters to Secretary Model dated May 24, 1985 and June 19, 1985 along with Secretary Model's reply dated July 22, 1985. The State has been actively working with other federal agencies and the Shoshone Bannock Tribes in efforts to identify and quantify federally reserved water rights through negotiations. The State continues to desire to negotiate with the Department of Interior to determine any reserved water rights held by that department.

The long-term effect of the Swan Falls Agreement will be an improvement in conditions at Deer Flat National Wildlife Refuge since the minimum flow at Murphy was increased from 3,300 cfs to 3,900 cfs during the summer and to 5,600 cfs during the winter.

The issues raised by questions 4 through 7 have been discussed with National Marine Fisheries Service and the U.S. Fish and Wildlife Service. Both agencies have entered into stipulated agreements with IPCo and Idaho requesting FERC to issue the requested order recognizing the Swan Falls Agreement upon the understanding that the agreement is not presented as a comprehensive plan under Section

10(a) of the Federal Power Act, (16 U.S.C. Section 803(a)). FERC is asked to take note of these stipulations filed in this proceeding.

Conclusion

The Swan Falls issue has been a long and costly episode in Idaho's history. The agreement entered into by Idaho and IPCo has been structured to recognize and preserve the valuable instream uses of water while providing a procedure for allowing development of every type to proceed when such development meets the public interest. FERC recognition of the agreement will allow IPCo and Idaho to implement the provisions of the agreement and reduce the possibility of further argument. FERC is urged to issue an order recognizing the agreement in accordance with the pending petition for declaratory order.

Dated this 18th day of May, 1987.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY That I have this day served the foregoing document, upon each person designated in the attached service list.

DATED at Boise, Idaho this 18th day of May, 1987.


PHILLIP J. RASSER
Deputy Attorney General
Department of Water Resources
Statehouse
Boise, Idaho 83720
(208) 334-4448

February 7, 1984

REVIEW OF FLOW AT SWAN FALLS
IN RELATION TO ITS POWER RIGHTS

Swan Falls rights were developed progressively as follows:

	<u>cfs</u>	<u>Accum cfs</u>
17 Jan 1900	1840	1840
18 Apr 1900	1460	3300
2 Apr 1907	2150	5450
9 Jul 1919	4000	5450 (hydraulic cap'y reported to be 8000 cfs or 8400 cfs)

Prior to July 1919 only 5450 cfs were required to satisfy the Swan Falls rights. Flow records for the Snake River near Murphy exist from September 1913. Between that time and July 1919 the lowest daily flow was 5440 cfs.

Records at King Hill began May 13, 1909. The lowest daily flow observed there between May 1909 and September 1913 was 4760 cfs on July 7-9 and August 15-16, 1910. During the summer of 1910 flow at King Hill varied between 4760 cfs and 5200 cfs for nearly two months. The Bruneau River which enters the Snake between King Hill and Swan Falls was flowing at less than 100 cfs. Swan Falls lowest flow was probably less than 4800 cfs on August 15 and 16 and probably ranged up to 5300 cfs between mid-July and mid-September.

There are insufficient data to estimate Swan Falls flow prior to July 1909. Data for Montgomery Ferry near Minidoka indicates the river was low enough in August 1908 that there was at least

a possibility that the flow at Swan Falls was less than 5450 cfs. There is virtually no chance that flows were ever less than 3300 cfs between 1900 and 1907.

In summary, prior to 1919 there probably were only two or three occasions when actual flow at Swan Falls was less than the rights which had been established at that time.

After 1919, when the Swan Falls rights increased to 8000 cfs or more, regulation by priorities would generally not have provided sufficient summertime flow to satisfy the total right. After 1919 there has been essentially no flow past Milner after mid-summer. An examination of WD-36 annual reports shows that by mid-summer priorities earlier than 1919 were being cut every year. Thus, the Swan Falls rights could not have called water from above Milner. Since actual flows were as much as 2000 cfs less than needed, regulation would not have resulted in meeting the Swan Falls rights.

Beginning about 1928 summertime flows at Swan Falls began to increase. This was apparently caused by increased aquifer discharge and return flow from irrigation. The Snake Plain aquifer began receiving more recharge resulting from completion of the Milner Gooding Canal in 1932 and from greater diversions as a result of completion of American Falls Reservoir in 1927. By the mid-1940's July flows at Swan Falls had increased to about 7800 cfs and August flows were over 8000 cfs. During this period regulation by priorities would not significantly have increased

flow because groundwater and river pumping was only just beginning. The rise continued into the early 1950's then reversed to a decline which continued to 1981. An upward trend since 1982 has resulted from Milner spills and water rented by Idaho Power Company for downstream generation.

The decline which began in the 1950's was caused by reduced groundwater recharge on the lower plain resulting from the winter water savings program, increasing groundwater withdrawals and pumped diversions from the river below Thousand Springs. Groundwater discharge (average annual) declined about 800 cfs in this period. Since about 1960 July flows at King Hill in years of no significant Milner spills have generally ranged between 6300 cfs and 7500 cfs and roughly 1000 cfs less at Swan Falls. Regulation of the river pumpers and groundwater users to satisfy the Swan Falls rights would probably not have resulted in raising the river flow to 8400 cfs. Summertime flow in the river appears to be as sensitive to change in management of the Milner canals as to the effect of groundwater withdrawals.