



United States Department of the Interior

BUREAU OF RECLAMATION

Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, Utah 84606-7317

IN REPLY REFER TO:

PRO-773
ENV-6.00

APR 16 2010

To Interested Persons, Organizations, and Agencies

Subject: Draft Environmental Assessment and Biological Assessment for the Green River Pumping Plant Project

The Draft Environmental Assessment (DEA) and Biological Assessment (BA) for the Green River Pumping Plant Project (GRPP) has been prepared and is now available to the public. This document was prepared by the Bureau of Reclamation, Provo Area Office (Reclamation). It is enclosed in CD format for your review and comment.

The DEA describes the effects of the Proposed Action for Reclamation to execute a temporary 5-year Water Service Contract with the Uintah Water Conservancy District (District) for a supply of up to 10,000 acre feet (af) per year of Colorado River Storage Project water available from Flaming Gorge Reservoir. Construction of the GRPP, located approximately 20 miles south of the USGS Jensen, Utah, stream gauge, would occur in order to deliver this water. The District has also indicated its intent to pursue a long-term Water Service Contract with Reclamation, and accordingly the DEA analyzes potential effects of water delivery and GRPP operation for the presumed 40-year period of a long-term contract, in addition to the 5-year temporary contract period. Effects ascribed to the No Action Alternative are also described. Under the No Action Alternative, Reclamation would not enter into a Water Service Contract with the District and diversion of water from the Green River would not occur.

This DEA also serves as a Biological Assessment (BA) for purposes of consulting with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1534), which is occurring concurrent with the DEA public comment period.

All comments received will be carefully reviewed and considered in preparing a final EA.

To view an electronic version of this DEA, go to Reclamation's Provo Area office web site at www.usbr.gov/uc/provo/index.html (under the section "Current Focus and click on the subject DEA).

In order to be considered during the preparation of the final EA, comments must be received by Monday, May 17, 2010. If you would like to receive a paper copy of the DEA or have any questions or concerns, please contact W. Russ Findlay using the following information:

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Thank you for participating in this environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce C. Barrett". The signature is written in a cursive style with a long horizontal stroke at the end.

Bruce C. Barrett
Area Manager

Enclosure

RECLAMATION

Managing Water in the West

Green River Pumping Project Draft Environmental Assessment and Biological Assessment PRO-EA-10-002

**Central Utah Project, Uintah Unit, Uintah County, Utah
Upper Colorado Region
Provo Area Office**



Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Green River Pumping Project Draft Environmental Assessment and Biological Assessment

Central Utah Project, Uintah Unit, Uintah County, Utah
Upper Colorado Region
Provo Area Office

prepared by

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Chapter 1 – Need for Proposed Action and Background

1.1 Introduction

The Uintah Water Conservancy District (District) located in Uintah County, Utah, has requested a temporary contract from the Bureau of Reclamation for water service from Flaming Gorge Reservoir, an initial unit of the Colorado River Storage Project. This temporary contract would be for up to 10,000 acre feet (af) per year (af/yr) of water for use at its new Green River Pumping Project (GRPP), for a period not to exceed 5 years. Section 9(e) of the Reclamation Project Act of August 4, 1939 (53 Stat. 1187), and Section 4 of the Colorado River Storage Project Act of April 11, 1956 (70 Stat. 105) grants Reclamation the authority to enter into the proposed contract.

The Water Service Contract would be for a maximum of 5 years. Water would be pumped from the Green River through a series of pipelines to supplement existing supplies from the Uinta and Whiterocks Rivers. To distribute this water, a new intake structure for the GRPP would be constructed on the Green River near Ouray National Wildlife Refuge, approximately 20 miles below the Jensen gauge near Jensen, Utah. Lands in the Ouray Park Irrigation Company (OPIC), Uintah River Irrigation Company (URIC), and Whiterocks Irrigation Company (WIC) would receive GRPP water. An overview map showing the GRPP facilities and lands to be served is shown in Figure 1.

The United States and the State of Utah are currently meeting to determine administrative policy and criteria requirements for the delivery and use of water from Flaming Gorge Reservoir. The potential contract resulting from this environmental assessment (EA) would be a temporary Water Service Contract to receive water from Flaming Gorge Reservoir until new policies and criteria are established. While the contract being considered for this analysis is only for a maximum of 5 years, the District has indicated its intent to request a long-term contract in the future. This long term contract would be for 40 years, the maximum contract term Reclamation may offer. Thus, the analysis presented here is for a 45 year period.

Reclamation has prepared this EA to comply with procedural requirements of the National Environmental Policy Act of 1969 (NEPA), Public Law 91-90, as amended, and the Council on Environmental Quality and Department of the Interior regulations implementing NEPA. This EA analyzes the potential impacts of the proposed action in comparison with a no action alternative. As required by

the NEPA implementing regulations, if potentially significant impacts to the human environment are identified, an environmental impact statement would be prepared. If no significant impacts are identified, Reclamation will issue a Finding of No Significant Impact (FONSI).

This EA describes the environmental effects of executing a temporary Water Service Contract between Reclamation and the Uintah Water Conservancy District (District) for up to 10,000 acre-feet per year of Colorado River Storage Project Water stored in Flaming Gorge Reservoir, for a period not to exceed 5 years. The potential effects of constructing the GRPP are analyzed as part of this proposed action, as well as the potential effects of use of this quantity of water through execution of a long term contract in the future. Under the No Action Alternative, Reclamation would not enter into a Water Service Contract with the District and diversion of water from the Green River would not occur.

This EA also serves as a Biological Assessment (BA) for the purposes of consulting with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1534).

1.2 Background

The District has identified a need for development of increased irrigation water in the western portion of Uintah County, Utah. Currently, irrigated lands served from the Uinta River Drainage are limited by a 1923 Federal Court Decree to 3.0 af/acre of water annually. Lands served from the Green River have a duty of 4.0 af/acre. A recent study (Conceptual Analysis of Uinta and Green River Water Development Projects, 2007) estimates a current shortage of over 45,000 af/yr for irrigated lands served from the Uinta River. In addition, the study estimates a potential for up to 7,700 acres of new lands in the Ouray Park/Leota Bench area that if served the 4.0 af/acre duty would increase the demand by another almost 31,000 af/yr. Therefore, a total of up to 76,000 af/yr of water would be required to bring all existing and potential new lands in western Uintah County to a full water duty.

The District has actively pursued water development in Uintah County to help satisfy water shortages such as those described above. Recently completed projects include: the West Side Combined Canals Salinity Project, the Moffat-Ouray Pipeline Salinity Project, Brough Pipeline Project, the Steinaker Reservoir water level increase, the Island Ditch Project, and several Green River water right segregation projects. In addition to these, the District assisted others in developing the Red Wash Dam and Reservoir and pursuing the Whiterocks Irrigation Company Storage Project. Thus, GRPP is one in a series of projects sponsored by the District to alleviate water shortages and improve water use in Uintah County.

1.3 Purpose of and Need for the Proposed Action

The proposed action is Reclamation’s execution of a temporary Water Service Contract with the District for up to 10,000 af of water per year for up to five years from Flaming Gorge Reservoir for use by the GRPP. The District’s purpose in entering into a contract is to assure a stable water supply to meet irrigation demands in western Uintah County. The District has a need to respond to water shortages in western Uintah County as discussed in Section 1.2 above.

1.4 Permits, Licenses, and Authorizations Required

Implementation of the Proposed Action could require a number of authorizations or permits from state and federal agencies whether or not the District enters into a Water Service Contract with Reclamation. The District would be responsible for obtaining all permits, licenses, and authorizations required for the Proposed Action. Potential authorizations or permits may include those listed in Table 1.1 and others not listed.

**Table 1.1
Permit and Authorizations Required**

Agency/Department	Purpose
Utah Division of Water Quality	Utah Pollution Discharge Elimination System (UPDES) permit required for dewatering.
Utah Division of Water Quality	Storm Water Permit under Section 402 of the Clean Water Act if water is to be discharged as a point source into the Green River.
State of Utah Department of Natural Resources. Division of Water Rights	Stream Alteration Permit required under Section 404 of the Clean Water Act and Utah statutory criteria of stream alteration described in the Utah Code.
U.S. Army Corps of Engineers	Permit under Section 404 of the Clean Water Act for construction activities in waters of the United States, and/or construction activities affecting wetlands.
Utah State Historic Preservation Office	Consultation pursuant to Section 106 of the National Historic Preservation Act, 16 USC 470.
State Sovereign Lands Easement	The State of Utah owns the river bed land between the high water lines of the Green River. An easement is required for construction activities upon state lands.

United States Fish and
Wildlife Service, Ouray
Wildlife Refuge

Special Use Permit to use existing road
across refuge lands to access pump station.
This permit would not be needed if the road
is aligned adjacent to the refuge property line
on private property.

1.5 Scope of Analysis and Content of this EA

The purpose of this EA is to determine whether or not Reclamation should enter into a Water Service Contract with the District for up to 10,000 af per year of Colorado River Storage Project water stored in Flaming Gorge Reservoir, for a period not to exceed five years. That determination includes consideration of whether there would be significant impacts to the human environment. In order to build the intake structure and pumping station, this EA must be completed and a FONSI issued for the proposed temporary Water Service Contract. Although the District has built some components of the project, the scope of analysis for construction impacts is limited to the proposed intake structure site on the Green River near Ouray National Wildlife Refuge. Analysis of operation impacts includes not only the operation of the intake structure and related pumping station, but also distribution of the water through the GRPP delivery system.

The Proposed Action is the execution of a temporary contract for a supply of up to 10,000 af per year of water for a period of up to five years. The capacity of the proposed GRPP is 10,000 af per year, and the District has stated its intent to pursue a long term (40 year) Water Service Contract for 10,000 af per year in the future. Because this EA also serves as a BA for Endangered Species Act (ESA) consultation purposes, and because the Service needs to analyze potential impacts of the proposed intake structure at its full capacity for forty years (the maximum possible term for a contract with Reclamation), the proposed action alternative presents the effects of operation at 10,000 af per year.

This EA consists of the following chapters:

- 1) Need for Proposed Action and Background
- 2) Proposed Action and No Action Alternative
- 3) Affected Environment and Environmental Effects
- 4) Environmental Commitments
- 5) Consultation and Coordination
- 6) Preparers
- 7) References
- 8) Figures
- 9) Appendix

1.6 Related Projects and Documents

1.6.1 Relationship to Water Delivery Projects

Related projects include the West Side Combined Canals Salinity Control Project (WSCCSP), the Moffat Ouray Salinity Control Project, and the Ouray Park Salinity Control Project. Construction on these projects began in 2000 and was completed in 2008. These projects combine several canals on the west side of Uintah County into one piped canal system. In their entirety, the projects piped over 50 miles of unlined canal and several miles of unlined laterals. These piped canals and laterals would be used to help deliver water developed by the GRPP, as described in Chapter 2, Section 2.3.3.

1.6.2 Operation of Flaming Gorge Dam Final Environmental Impact Statement and Record of Decision

The Operation of Flaming Gorge Dam Environmental Impact Statement (FGEIS) published in September 2005, analyzed and disclosed the effects of meeting flow and temperature recommendations proposed by the Upper Colorado River Endangered Fish Recovery Program. In February 2006, a Record of Decision was signed which implemented those flow and temperature recommendations.

This environmental assessment is tiered, as defined in 40 C.F.R. 1508.28, from the FGEIS.

1.6.3 Other Planning Activities

Given the multiple management agencies, tribes, state and local interests in the Green River below Flaming Gorge Dam, there are numerous related environmental impact statements, environmental assessments, and management plans or planning documents that involve the same geographic area as this environmental assessment.

Chapter 2 – Proposed Action and No Action Alternatives

2.1 Introduction

The Proposed Action analyzed in this EA is Reclamation's execution of a temporary Water Service Contract with the Uintah Water Conservancy District (District) to provide up to 10,000 af of water per year from Flaming Gorge Reservoir for a period not to exceed 5 years. Both the No Action and Proposed Action Alternatives are presented in this section of the report. Analyses include consideration of both an initial phase of operation in the amount of 8,500 af per year, and the full project phase of 10,000 af per year, which is the full capacity of the GRPP.

2.2 No Action Alternative

Under the no action alternative, Reclamation would not enter into a Water Service Contract with the District. Therefore, the proposed new intake structure would not be needed since diversion of water from the Green River would not occur.

2.3 Proposed Action

The District has requested a temporary Water Service Contract for water stored in Flaming Gorge Reservoir with Reclamation for up to 10,000 af of water per year, for a period not to exceed five years. The District has stated its intent to request, at some point in the future, a long term (40 year) Water Service Contract. Project water would be released by Reclamation from Flaming Gorge Reservoir. The proposed pump station site on the Green River is approximately 20 miles south of the USGS Jensen, Utah stream gauge (Figure 12). The 10,000 af per year total depletion was estimated as a future depletion for the State of Utah in the 1999 Upper Colorado River Commission's Official Depletion Schedule (UCRC Schedule). The UCRC Schedule was included in the modeling process for the Action Alternative of the FGEIS, although the site-specific diversion details were unknown at the time. The Proposed Action is tiered, as defined in 40 C.F.R. 1508.28, from the Action Alternative of the FGEIS.

As noted in Chapter 1, Section 1.6, the District has already begun construction of some GRPP components. Construction of the proposed intake structure on the Green River cannot proceed unless or until the proposed action is approved. Consultation with the U.S. Fish and Wildlife Service (Service) pursuant to

Section 7 of the Endangered Species Act is required because the proposed intake structure location lies in designated critical habitat for the razorback sucker (*Xyrauchen texanus*) and Colorado pikeminnow (*Ptychocheilus lucius*), and lies upstream of designated critical habitat for the bonytail (*Gila elegans*) and humpback chub (*Gila cypha*). Because the action area of the project includes downstream areas, impacts to all four species are considered.

Under the Proposed Action Alternative the existing Nielson Pump Station would be removed and that site would be re-contoured and re-seeded to natural conditions. The bank would be revegetated with appropriate riparian vegetation to ensure remediation efforts are protected.

2.3.1 Project Design

Pump Station

The pump station would be constructed on an approximately 0.6 acre site adjacent to the Green River as shown in Figure 2 and 3. The pump station would be composed of a deep sump and inlet structure, trash rack, stop logs, fish screens, 4 main pumps, pump manifold piping, electrical transformers, power transmission line, pipeline drain, parking area, electrical control building and a short section of pipeline. The layout of the pumping plant with greater detail on the inlet and sump, pumps, trash rack, stop logs, fish screens, etc, is shown in Figure 4. The fish screens for the water intake would be 26 feet in horizontal width.

The Green River is a very dynamic stream that has required unique designs and detailed engineering to minimize impacts to the river and the surrounding environment. In order to stabilize the river bank at the site of the pumping plant, approximately 150 feet of permanent sheet piles spaced approximately evenly upstream and downstream of the facility would be installed to a depth of more than 50 feet below ground surface (approximately 15 feet below the river channel invert). The sheet piles would prevent further erosion of the bank and encroachment on the proposed intake structure. It is also anticipated that the flow velocity across the sheet piles would increase, thereby reducing the risk of sediment accumulation near the structure. Temporary sheet piles or an alternate, equally protective, measure would be provided during construction to allow excavations to disturb less land and isolate the construction activities from the river. Further upstream embankment protection would be provided by a rip-rap armoring system. The bank protection plan is shown in Figures 2 and 3. Downstream bank and backwater conditions would be monitored into the future by the District and additional protection would be added at District cost if erosion caused by the project is occurring.

The station would include a trash rack, stop logs and traveling fish screens. The trash rack would be oriented vertically, with horizontal bars, to minimize entrapment or build up of floating debris that occurs primarily during early

season high river flows, and to prevent the debris from entering the intake. The trash rack would also serve as a deterrent for fish entering and becoming entrapped in the intake. Greater detail of the trash rack is shown in Figure 5. Nominal opening size of the trash rack would be 1 inch. Any required cleaning or clearing of the trash rack would be performed manually.

Stop logs provide a method for isolating portions of the structure for cleaning, maintenance or repairs. The aluminum or fiberglass logs would be installed into vertical slots or brackets and removed using lifting equipment installed at the station.

The fish screens would be designed with 3/32" mesh openings and a minimum approach velocity (according to Service requirements) to minimize take of juvenile fish during pumping operations. Approach velocity is measured at 3-inches in front of (into the river) the trash rack and Service standards limit approach velocities to no greater than 0.33 feet per second (fps). The Proposed Action has received a minor variance from the Service for the 0.33 fps limit based on research into swimming speeds of the juvenile fish (described later). The limit may be slightly exceeded for short periods of time if the actions outlined in the Environmental Commitments section of this EA are strictly followed.

The screens would be installed at 22.5 degrees from vertical in order to help collect and convey any trapped material. The traveling continuous stainless steel mesh screen would be motor-driven and automatically cleaned via high pressure spray. Debris and fish removed from the screens would be sluiced back into the river, downstream from the station. The pressure of the cleaning spray can be adjusted to minimize fish injury. This process would assure that any fish which may actually find their way to the screens would not be trapped in the area in front of the screens or permanently removed from the river. Since the screened material would be returned downstream of the station, the fish would be unlikely to re-enter the facility.

Three 900-hp vertical turbine pumps would lift water from the Green River via the intake structure and pump it into a pipeline transmission system. A fourth pump, if installed in the future, would be used for redundancy purposes only. The station would be capable of pumping rates of from 20 to 53 cfs, depending on the number of pumps (one to three) in operation. Depending on budget constraints, either two or three of these pumps would be installed initially, with the remaining pump(s) added as required and as funds are available.

An all-weather gravel road and parking area would be constructed to provide reliable access to the station for inspection, operation, maintenance, repair, etc. Much of the road and all of the parking area and pump site would be raised to an elevation of between 4681.0 to 4682.0 feet, which is about one to two feet above the maximum expected water surface occurring during the 100-yr return interval flood event. As shown on Figure 2, this finish elevation is about four feet above

the existing ground surface elevation of 4677.5 feet. The pump building and control building finish floor elevations are at 4682.3 feet.

The pump station has been designed to accommodate the relocation of an existing private pump located about 400 feet (upstream) of the pump station. This private pump station (Nielson Pump Station) has a water right to divert up to 1,440 af/yr (1,236 af/yr proof submitted to the Utah Division of Water Rights) at a peak monthly flow rate of about 6.0 cfs from the Green River to serve the full irrigation demands of about 360 acres of land adjacent to the Green River. As shown in the photos in Figure 6, there has been significant bank erosion at the original site since the pump was installed. This has undercut the bank to the point that the pump facilities are being supported by a crane. The existing pump and intake would be removed from this site by simply lifting the pipe and intake out of the water without the need to enter the river or disturb the bank. Currently, this water is diverted from the Green River without adequate screening for endangered fish. The current intake screen consists of a 36-inch diameter cylinder screen about 14-inch deep on the end of the 12-inch intake pipeline. The screen mesh size is 1/8-inch for the purpose of keeping debris from entering the pump and plugging irrigation lines and sprinkler nozzles. There is no screen cleaning mechanism.

The existing pump will be relocated and installed at the GRPP site as shown in Figure 4 (top, center). It will draw water downstream from the trash racks and fish screens and pump to the agricultural fields. The new turbine pumps will not be used for this purpose. This existing pumping requirement is separate from GRPP water needs.

Pipeline and Pond

A 42" diameter HDPE pipeline will convey flows of up to 53 cfs from the Green River pumping station approximately three miles to the Valley View Pond. An additional approximately 1400 feet of 42-inch HDPE pipe will be installed to convey water from Valley View Pond to the existing Ouray Park Pipeline. Interconnections will also be provided from the existing Ouray Park Pipeline at the Ouray Park Inlet Pond to the inlets to two other irrigation laterals. Four separate meters will measure flows at various points on the pipeline to determine correct deliveries to locations along the alignment. A plan view of the pipeline and pond is shown in Figure 7.

Valley View Pond will be constructed to a capacity of 30 af with an average depth of about 7 feet and a surface area of about 5.5 acres (approximately 390 feet by 600 feet). The pond will be lined with clay to minimize seepage. The 4984-foot elevation (above mean sea level) maximum water surface elevation of the pond is lower than the existing ground surface elevation to eliminate potential overtopping and failure of the structure. The pond freeboard will be constructed to elevation 4987 feet which is three feet above the maximum water surface elevation and two to three feet above the existing ground surface elevation. The

entire pond area will be enclosed by a 6-foot fence. Water will enter the pond from the Green River Pipeline and exit through the “Connection Pipeline” that transports water from the pond to the existing Ouray Park Pipeline. A plan view of the Pond is shown in Figure 8.

2.3.2 Project Construction

Pump Station

A construction contract for the pipeline and pond was awarded to Western States Contracting in September 2009 with completion expected in the spring of 2010. Construction of the pump station is scheduled for spring 2010 with a completion in the spring of 2011.

The pump station would be constructed on a 0.6 acre site adjacent to the Green River as shown in Figure 2. Photos of the site are shown in Figure 9. It is estimated that less than 0.5 acres of wetland would be permanently impacted by construction of the pump station. Construction activities that have the potential to affect the Green River would occur after peak river flows estimated to be June 1. The existing Nielson Pump Station will be relocated to the GRPP site as explained in Section 2.3.1.

During construction, Green River flows must be separated from the construction area using Best Management Practice Guidelines provided by the Service. These guidelines require, among other things, installation of a non-erodible coffer dam around the construction site and removal of fish within the cofferdam-enclosed river section area prior to construction and removal (see Fisheries section of environmental commitments). The District would need to provide a detailed final design of the cofferdam to the Army Corps of Engineers and the State Of Utah prior to the issuance of the 404 and Stream Alteration Permit needed for this work. The Utah Division of Wildlife Resources (UDWR) would need to accomplish the fish removal. The District must give the UDWR a 30-day’s prior notice in order to remove the fish when needed. All disturbed areas outside of the pumping plant, and parking area would be re-contoured and re-seeded to natural conditions.

A three-quarter mile long 16-foot wide permanent access road would be constructed from the existing county road to the pump station as shown in Figure 10. Construction activities would be confined to the existing 26-foot wide permanent road easement. The majority of lands within this corridor have been previously disturbed either by farming operations or road construction. New areas disturbed by GRPP will be re-vegetated to restore to native conditions.

A small portion of the access road (approximately 1,300 lineal feet for a total of 0.46 acres) runs in an existing roadway that slices diagonally across the south end of a parcel owned by the Ouray National Wildlife Refuge as shown in Figure 10. This existing roadway will be re-graded and new gravel surfacing applied to suit

all weather access requirements. However, the existing alignment and width will remain unchanged.

Pipeline and Pond

As stated above, construction of the pipeline and pond is under way with completion expected in the spring of 2010. Construction of the pipeline requires a temporary 100-foot wide easement (less than 100 feet in some areas) along the full length of the pipeline and a permanent 50-foot easement for operation and maintenance. Temporary staging areas are provided adjacent to the county road at pipeline station 30+00 and on both sides of the county road between pipeline stations 111+00 and 122+00, as shown on Figure 11. Clay material for lining the pond is hauled in from approved sources. For the most part, the pipeline is being constructed across previously undisturbed lands. All disturbed areas will be re-vegetated to restore to native conditions.

2.3.3 Project Operation

The GRPP would be integrated into the operation of the existing Ouray Park Pipeline and WSCCSP. The Ouray Park Pipeline currently serves the Lower Cottonwood service area. Under GRPP operation, water would be pumped from the Green River to the pond and flow by gravity to the Ouray Park Pipeline and to irrigated lands in the Cottonwood and Pelican Lake service areas. WSCCSP facilities would convey the Uintah River water that currently serves these lands to lands serviced by URIC and OPIC. Therefore, upon completion of GRPP, the operation of GRPP, the Ouray Park Canal, and the WSCCSP would be combined since successful exchanges of water are dependent on facilities from all three projects. A location map showing GRPP, Ouray Park Canal, and WSCCSP facilities, and the irrigation company service areas are shown in Figure 13

2.3.3.1 Water Supply

Water for the GRPP would be provided by Reclamation from Flaming Gorge Reservoir under terms of a Water Service Contract between the District and Reclamation. The Water Service Contract would grant the District the right to use up to 10,000 af of Colorado River Storage Project water per year from Flaming Gorge Reservoir for commercial agriculture purposes for a term of 5 years. The District has indicated its intent to seek a long term Water Service Contract for up to 10,000 af per year, for the maximum allowable contract period of 40 years.

Water would be released from Flaming Gorge Dam in accordance with the provisions of the FGEIS Record of Decision (ROD) and at the request of the District consistent with terms of the Water Service Contract. Reclamation can only release this water from Flaming Gorge Dam and cannot be responsible for losses or diversions of the water by others. Delivery of water within the river is a matter for the State Engineer's office. The maximum flow released for the GRPP at any time would be 53 cfs or approximately 1 to 2.5 percent of the average Green River flow of between 2,000 cfs and 5,000 cfs during June through August.

Review of the hydrology modeling performed for the FGEIS shows that flow and temperature recommendations implemented in accordance with the ROD would continue to be met while releasing water under the terms of the proposed 5 year Water Service Contract. Water quantities to be diverted are so small as to be insignificant relative to river stage.

2.3.3.2 Water Demand

As previously stated, water would be pumped through GRPP facilities from the Green River to OPIC lands in the Cottonwood and Pelican Lake areas (see Figure 13). Under GRPP operation, water that has historically been delivered to OPIC lands in the Cottonwood and Pelican Lake areas from the Uinta and Whiterocks Rivers would be delivered by exchange to the URIC service area and upper portions of OPIC's Brough and Cottonwood service areas. Also, the water that has historically been delivered from the high mountain lakes by the Whiterocks River to the Cottonwood service area would be delivered by exchange to the WIC service area. Therefore, GRPP would provide water directly to OPIC lands in the Cottonwood and Pelican Lake areas and by exchange to upper portions of OPIC's Brough and Cottonwood lands, URIC lands, and WIC lands.

The Proposed Project will be analyzed in two phases. The first (Initial Phase) is for delivery of up to 8,500 af per year to meet current requests for project water. The second (Full Project) phase is for delivery of up to 10,000 af per year to meet anticipated future requests for additional water. Current water subscriptions and average-year deliveries to each service area for the two phases are shown in Table 2.1. It is expected that additional requests received during the review of this EA will bring the initial phase up to the full capacity of 10,000 af per year soon after plant startup, therefore the temporary Water Service Contract is proposed to be for up to 10,000 af per year. Should these requests not in fact be made, the proposed Water Service Contract might be amended or rewritten to specify an upper limit of 8,500 af per year. Tables and analyses in this EA cover both possibilities.

**Table 2.1
Estimated Project Water Demand**

Service Area	Current Subscription (acre-feet)	Initial Phase (acre-feet)	Full Project (acre-feet)
Lower Cottonwood	2,132	2,200	2,400
Pump to Pond	1,071	1,100	1,400
Brough	2,274	2,300	2,685
Upper Cottonwood	647	650	750
Pelican Lake	179	200	515
URIC	1,497	1,550	1,750
Whiterocks	500	500	500
Total	8,300	8,500	10,000

Since GRPP deliveries consist of both “full service” water (to replace all existing water to OPIC’s Lower Cottonwood service area) and “supplemental service” water (additional late season water to all shareholders), the monthly distribution pattern would be a combination of the two. The estimated GRPP water distribution pattern in two-week increments is shown in Table 2.2. Data and assumptions used to estimate the distribution pattern is shown in Appendix A.

**Table 2.2
Monthly Distribution Pattern**

Period	Distribution (Percent)	Initial Phase (acre-feet)	Full Project (acre-feet)
April 15-30	2.8	238	280
May 1-15	4.6	391	460
May 16-31	6.5	553	650
June 1-15	8.6	731	860
June 16-30	10.0	850	1,000
July 1-15	10.8	918	1,080
July 16-31	11.3	960	1,130
Aug 1-15	11.3	960	1,130
Aug 16-31	10.6	901	1,060
Sept 1-15	9.4	799	940
Sept 16-30	8.0	680	800
Oct 1-15	6.1	519	610
Total	100.0	8,500	10,000

Water deliveries to project participants shown in Table 2.1 would vary from year to year based on fluctuating hydrologic cycles. Typically, wet-year water deliveries would be less than average-year deliveries due to a reduced need for water. Also, dry-year deliveries are typically less than average-year deliveries due to a lack of water available to deliver. However, because GRPP would receive storage water from Flaming Gorge Reservoir under a Water Service Contract with Reclamation, the analysis assumes that there would be no reduction of water availability in dry years. Therefore, GRPP deliveries are expected to be constant during dry to average years and be reduced in wet years due to a lack of demand. Direct flow and storage water available from the Whiterocks and Uinta Rivers will be used prior to a call on GRPP supplies.

Estimated Project deliveries for the various hydrologic conditions are shown in Table 2.3 for the two phases of the GRPP. These numbers vary from year to year based on the annual water supply available from the Uinta River measured at the Uinta River near Neola USGS gaging station. Greater detail on how the numbers are estimated is shown in Appendix A.

Table 2.3
Estimated Annual Water Demand Distribution
(Based on 1930 to 2000 flow record)

Water Year	River Flow¹	8,500 af/yr Scenario	10,000 af/yr Scenario
Dry	10%	8500	10,000
Average	50%	8500	10,000
Moderately Wet	60%	8,000	9,400
	70%	6,500	7,600
Wet	80%	4,400	5,200
	90%	0 - 2,400	0 - 2,800

¹ River flow percentages indicate the ranking the specific year is within the 1930 to 2000 historic flow range. For example, a dry year is the 10% year of the record, meaning flows during 10% of the years of record were equal to or less than the dry year.

2.3.3.3 Pumping Plant and Pond Operations Analysis

The pumping plant and pond system are designed to provide the flexibility to meet full irrigation demands while limiting pumping during peak power rate hours, minimizing pumping during times of greatest endangered fish larvae flow in the Green River, and limiting pump motor startup times to between 12:00 midnight and 4:00 am to minimize “flicker” impacts to neighboring power customers. The 30 acre-foot pond would store almost 7 hours of full three-pump capacity. The pump station is designed with three pumps for normal operation and a fourth for redundancy purposes. The three pumps can be turned on and off individually to meet the variable irrigation demands. This section describes the operations model used to analyze different pumping scenarios, the data and assumptions used in the model, and the results of the model. Additional data and backup tables are included in Appendix B.

Operations Model

A pumping plant and pond operations model was developed to analyze different operating scenarios and develop the most efficient operating plan. The model tracks pumping volume, irrigation demands, and pond operation for the entire operational period from April 15 to October 15 of each year. These hydrological variables are tracked hourly for typical operations each month, in order to determine how many pumps are operated at a time and how many hours a day (for each month) pumping operations would need to take place to meet demand. The hourly operations are then compared to the “blackout” hours requested by the District and the Service. The District’s blackout hours are those with peak electrical power rates (avoided to reduce costs) and the Service’s blackout hours are hours in which larval endangered fish are most abundant in the water column (avoided to reduce impacts to endangered fish).

The pump station is designed with three operating pumps and a fourth pump (if installed in the future) for use as a backup in the event one of the three pumps fails or is down for maintenance. The District intends to install all three pumps in the same construction contract. However, if construction bids exceed the project budget and the District is unable to secure additional funds, installation of the third pump may need to wait. Under this scenario, the pump station would be operated with two pumps during this interim period until the third is installed. Therefore, the following three operating scenarios are evaluated in the model:

1. Initial Phase (8,500 af/yr) Two pump scenario
2. Initial Phase (8,500 af/yr) Three pump scenario
3. Full Project (10,000 af/yr) Three-pump scenario

Operating Criteria

The purpose of the GRPP is to develop water for the supplemental irrigation of lands in western Uintah County in the most cost effective manner possible. Since energy costs make up the largest component of operating costs, every effort will be made to reduce energy costs. The project will also be operated to minimize impacts to the endangered fishes of the Green River. As such, the project will be operated according to the following rules and priorities:

1. Pump water at times and in the amounts necessary to meet project irrigation demands;
2. Start motors during early morning hours (12:00 am to 4:00 am) to avoid power “flicker” impacts to local power users;
3. Minimize pumping during peak power rate hours;
4. Minimize pumping during fish blackout hours; and
5. Operate with the least number of pumps at a time.

The GRPP would also operate conjunctively with the Uinta River System in order to maximize the use of existing direct flow and storage on the Uinta and Whiterocks Rivers and minimize the amount of water pumped from the Green River. Pumped Green River water, due in large part to its higher cost, would be the last source of water called upon by the irrigators.

A Supervisory Control and Data Acquisition (SCADA) system would be utilized to optimize the operation of the pump station and pond and to maximize the use of existing water rights on the Uinta and Whiterocks Rivers. This SCADA system would be tied to and become a part of the existing WSCCSP SCADA system. Storage and flow data from the Uinta and Whiterocks Rivers system would be transmitted to the SCADA system for use in operating the GRPP. Also, additional real-time larvae drift data would be provided by the Service to help optimize operations for the mutual benefit of Green River endangered fish and the water users. In summary, the SCADA system would allow remote operation of the pump station based on the real-time data provided from throughout the system.

Peak Power Rate Hours

Peak power rate hours used in the model were taken from a rate sheet provided by Moon Lake Electric Association, Inc, titled “Electric Service Schedule LP, Large Power Service”, effective July 1, 2000. Hours of peak power rates are shown in Table 2.4. A copy of the rate sheet is attached as Appendix C.

**Table 2.4
Peak Power Rate Hours**

Month	Hours of Peak Power Rates
April	7 am – 11 am 6 pm – 11 pm
May	7 pm – 11 pm
June	7 pm – 11 pm
July	2 pm – 11 pm
August	2 pm – 11 pm
September	7 am – 11 am 6 pm – 10 pm
October	7 am – 11 am 6 pm – 10 pm

Endangered Fish Larvae Flow Hours

Endangered larval fish are very small (<0.5 inches total length) and incapable of directed swimming from the time of hatching through the first 2-4 weeks of their life. Depending on the water year, larval fish may be present in the Green, Colorado, Gunnison, and Yampa Rivers from as early as April 1 to as late as August 31 (earlier in dry years; later in wet years). Larval endangered fish are the most susceptible to entrainment into pump intake structures because of their lack of swimming ability. The most effective way to minimize entrainment is for pumps to be turned off. However, this also has the largest impact on project operations.

Therefore, the Service asked researchers to determine what time of day larval fish are most abundant in the water column. Recent data analysis by the Colorado State University Larval Fish Lab indicated that the highest abundance of larval fish was found at midnight, by nearly an order of magnitude. As a result, the Service has requested that, if possible, pumps not operate during the midnight hours (10 pm to 2 am).

In an effort to minimize impacts to project operations, the Service has agreed to only request the pumps be turned off when the larval drift of Colorado pikeminnow and razorback sucker is known to be occurring (rather than a blanket period throughout the summer). Larval drift occurrence is provided by ongoing monitoring efforts conducted by the Upper Colorado River Endangered Fish Recovery Program (UCRRP), of which Reclamation is a partner. Each year on or before April 1, the District will request to be informed of the beginning and end of both the Colorado pikeminnow and razorback sucker larval drift periods. The

Service or the UCRRP will then provide this data to the District as soon as it is known.

Larval drift periods for the two species are highly variable in initiation date and duration. The periods may overlap, but most likely will not. Therefore, it is in the best interest of both the District and the Service to operate under real-time data. The District will operate the GRPP pumps to minimize pumping during larvae drift periods according to the operating criteria described above.

Model Results

Model results for each of the three scenarios are shown in Tables 2.5 through 2.7. The full model output is included in Appendix B. The tables show the anticipated hours the pumps would be operated during each two-week time increment from April 15 through October 15. The tables also indicate the number of pumps that would be operated during peak and off-peak hours and those blackout hours (peak power and fish larvae) that would be affected.

Table 2.5

Green River Pumping Plant																								
Pump Operation Hours																								
Initial Phase (8,500 af/yr) - Two Pump Option																								
Date	AM												PM											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
April 15-30																								
May 1-15																								
May 16-31																								
June 1-15																								
June 16-30																								
July 1-15																								
July 16-31																								
Aug 1-15																								
Aug 16-31																								
Sep 1-15																								
Sep 16-30																								
Oct 1-15																								

	Fish Blackout Hours		Two Pumps
	Peak Power Hours		One Pump
	Peak Power & Fish Blackout Hour		

Table 2.6

Green River Pumping Plant

Pump Operation Hours

Initial Phase (8,500 af/yr) - Three Pump Option

Date	AM												PM											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
April 15-30																								
May 1-15																								
May 16-31																								
June 1-15																								
June 16-30																								
July 1-15																								
July 16-31																								
Aug 1-15																								
Aug 16-31																								
Sep 1-15																								
Sep 16-30																								
Oct 1-15																								

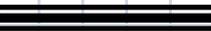
	Fish Blackout Hours		Three Pumps
	Peak Power Hours		Two Pumps
	Peak Power & Fish Blackout Hour		One Pump

Table 2.7

Green River Pumping Plant																								
Pump Operation Hours																								
Full Phase (10,000 af/yr) - Three Pump Option																								
Date	AM												PM											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
April 15-30																								
May 1-15																								
May 16-31																								
June 1-15																								
June 16-30																								
July 1-15																								
July 16-31																								
Aug 1-15																								
Aug 16-31																								
Sep 1-15																								
Sep 16-30																								
Oct 1-15																								

	Fish Blackout Hours		Peak Power Hours		Peak Power & Fish Blackout Hour		Three Pumps		Two Pumps		One Pump
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2.3.3.4 Intake Approach Velocities Analysis

As stated in Section 2.3.1 (Project Design), the fish screens are designed to comply with Service standards for minimizing take of juvenile fish during pumping operations. Current Service standards follow the 1997 National Marine Fisheries Service’s ‘Fish Screening for Anadromous Salmonids’ which require fish screen mesh openings of no greater than 3/32-inch and approach velocities of no greater than 0.33 feet per second (fps). However, the primary concern of the Service is to have project approach velocities below the “sustained swimming speed” of juvenile Green River endangered fish, allowing these juvenile fish to escape the current created by the project.

Because reducing approach velocities for a project of this size has large economic impacts, the Service investigated whether allowing a minor variance above 0.33 fps would be possible. Therefore, the Service investigated swimming speeds of juvenile Green River endangered fish to determine the impact of allowing this variance. Research into swimming speeds was only available for Colorado

pikeminnow (Childs and Clarkson, 1996). However, for fish at this size, swimming speeds of other desert fish were considered to be similar. Swimming speeds of juvenile pikeminnow are affected by water temperature and size of the fish. Estimates are shown in Table 2.8 for fish approximately 20 mm in size.

Table 2.8
Juvenile Colorado Pikeminnow Swim Speed
(Data based on Childs and Clarkson, 1996)

Water Temperature (Centigrade)	Mean FV ¹ (50) Fps	Mean Sustained Speed ² fps	Low CI Sustained Speed ³ fps
10	0.436	0.349	0.325
14	0.482	0.386	0.362
20	0.571	0.457	0.433

¹ Mean FV(50) is the mean velocity at which half of fish fail to maintain swimming over a period of thirty minutes

² Mean Sustained speed is computed at 80% of the mean FV(50)

³ Low CI Sustained speed is computed as 80 % of the lower bounds of the 95% confidence interval around the mean FV(50)

Approach velocity varies with the cross sectional area of the water on the screens and the flow rate pumped. Approach velocity is computed as the flow rate pumped (20 cfs for one pump, 37 cfs for two pumps or 53 cfs for three pumps) divided by the intake area measured at 3-inches in front of the trash rack. The cross sectional area against the intake screens is reduced during dry years because the water surface elevation is below the top level of the intake screens. The velocity through this smaller screen area increases in order to deliver the required flow rate.

Estimated approach velocities for the April 15 through October 15 irrigation season for each of the three operation scenarios are shown in Tables 2.9 through 2.11. These approach velocities were computed for four different Green River flow hydrologic conditions: an extreme dry year (2% exceedence) a dry year (10% exceedence), an average year (50% exceedence) and a wet year (90% exceedence). The tables show the minimum and maximum approach velocities for each hydrologic condition and the number of hours per day each pump is operated. Exceedence of the 0.33 fps threshold only occurs when the third pump is operating. Additional tables and backup data are included as Appendix D.

Table 2.9

Green River Pumping Plant												
Initial Phase (8,500 af/yr) - Two Pumps												
Intake Approach Velocities												
Units: feet per second (fps)												
Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	10			10
May 1-15	0.106	0.115	0.093	0.110	0.070	0.085	0.056	0.067	16			16
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		11		11
June 1-15	0.183	0.222	0.170	0.201	0.120	0.128	0.096	0.108		16		16
June 16-30	0.224	0.278	0.204	0.254	0.129	0.157	0.102	0.124		19		19
July 1-15	0.268	0.296	0.254	0.275	0.165	0.205	0.123	0.146		21		21
July 16-31	0.296	0.305	0.276	0.291	0.207	0.234	0.149	0.191		20		20
Aug 1-15	0.299	0.304	0.290	0.298	0.239	0.248	0.176	0.201		20		20
Aug 16-31	0.302	0.306	0.295	0.300	0.242	0.256	0.194	0.214	9	13		22
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	15	9		24
Sept 16-30	0.293	0.311	0.200	0.297	0.248	0.258	0.200	0.217	20	4		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	19			19
Indicates exceedence of 0.33 fps threshold during third pump operation												

Table 2.10

Green River Pumping Plant												
Initial Phase (8,500 af/yr) - Three Pumps												
Intake Approach Velocities												
Units: feet per second (fps)												
Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	10			10
May 1-15	0.106	0.115	0.093	0.110	0.070	0.085	0.056	0.067	16			16
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		11		11
June 1-15	0.183	0.222	0.170	0.201	0.120	0.128	0.096	0.108		16		16
June 16-30	0.224	0.278	0.204	0.254	0.129	0.157	0.102	0.124		19		19
July 1-15	0.383	0.425	0.364	0.394	0.236	0.293	0.176	0.209	8		12	20
July 16-31	0.425	0.437	0.395	0.416	0.296	0.336	0.214	0.273	8		12	20
Aug 1-15	0.428	0.435	0.416	0.426	0.342	0.355	0.252	0.288	8		12	20
Aug 16-31	0.302	0.306	0.295	0.300	0.242	0.256	0.194	0.214	9	13		22
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	15	9		24
Sept 16-30	0.293	0.311	0.279	0.297	0.248	0.258	0.200	0.217	20	4		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	19			19
Indicates exceedence of 0.33 fps threshold during third pump operation												

Table 2.11

Green River Pumping Plant												
Full Project (10,000 af/yr) - Three Pumps												
Intake Approach Velocities												
Units: feet per second (fps)												
Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	12			
May 1-15	0.196	0.213	0.172	0.203	0.130	0.158	0.104	0.124		11		
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		14		
June 1-15	0.263	0.319	0.243	0.288	0.172	0.183	0.137	0.154		13	4	17
June 16-30	0.320	0.398	0.293	0.364	0.185	0.225	0.146	0.177			16	16
July 1-15	0.383	0.425	0.364	0.394	0.236	0.293	0.176	0.209	10		12	22
July 16-31	0.425	0.437	0.395	0.416	0.296	0.336	0.214	0.273	10		12	22
Aug 1-15	0.428	0.435	0.416	0.426	0.342	0.355	0.252	0.288	10		12	22
Aug 16-31	0.432	0.438	0.423	0.430	0.346	0.367	0.277	0.307	9		12	21
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	8	16		24
Sept 16-30	0.293	0.311	0.279	0.297	0.248	0.258	0.200	0.217	15	9		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	24			24
Indicates exceedence of 0.33 fps threshold during third pump operation												

As noted in Tables 2.10 and 2.11, approach velocities exceed the 0.33 fps threshold when three pumps are operating during the peak water demand months of June through August of average to dry water years. Comparing fish swim speeds to approach velocities, however, indicate that these approach velocities are less than estimated swimming speeds for endangered fish during these times with only a few exceptions. The estimated swimming speeds for these times were calculated based on size of fish and expected water temperature in the Green River, because fish swim faster as they grow and in warmer water up to thermal niche boundaries. It should be noted that Childs and Clarkson (1996) did not investigate swimming speeds of juvenile fish above water temperatures of 20C. Without empirical data that allows extrapolation of swimming speeds above 20C, swim speeds are capped at 0.433fps (swimming speed seen at 20C). It is expected that swim speeds continue to improve above 20C because other research has demonstrated that larval and juvenile fish have water temperature tolerance limits up to 30C and have been characterized as having an optimal thermal niche of 25C (references in Lamarra 2007). Therefore, it is expected that juvenile fish swim speeds continue to rise as water temperatures increase above 20C which would eliminate all remaining instances of approach velocity exceedences shown in Table 2.12.

Table 2.12**Green River Pumping Plant**

Three Pump Operation - Green River 2% MDF

Swim Speed/Intake Approach Velocity Comparison

Day	June			July			August		
	Average	Swim	Intake	Average	Swim	Intake	Average	Swim	Intake
	Temp	Speed	Vel (2%)	Temp	Speed	Vel (2%)	Temp	Speed	Vel (2%)
	Deg C	(fps)	(fps)	Deg C	(fps)	(fps)	Deg C	(fps)	(fps)
1	16.32	0.388	0.263	22.20	0.433	0.383	23.90	0.433	0.431
2	16.59	0.391	0.267	22.36	0.433	0.385	23.80	0.433	0.430
3	16.68	0.392	0.268	22.30	0.433	0.391	23.74	0.433	0.428
4	16.72	0.393	0.273	22.52	0.433	0.402	23.59	0.433	0.428
5	16.89	0.395	0.277	22.59	0.433	0.406	23.65	0.433	0.428
6	16.91	0.395	0.281	22.80	0.433	0.410	23.60	0.433	0.428
7	16.88	0.395	0.283	22.80	0.433	0.414	23.53	0.433	0.430
8	16.92	0.395	0.291	23.23	0.433	0.417	23.50	0.433	0.430
9	16.99	0.396	0.293	23.06	0.433	0.418	23.56	0.433	0.430
10	17.12	0.397	0.291	23.17	0.433	0.418	23.22	0.433	0.432
11	17.47	0.402	0.295	23.54	0.433	0.421	23.31	0.433	0.432
12	17.63	0.404	0.301	23.54	0.433	0.422	23.35	0.433	0.432
13	17.73	0.405	0.308	23.70	0.433	0.422	23.45	0.433	0.434
14	17.93	0.407	0.314	23.82	0.433	0.425	23.27	0.433	0.434
15	18.27	0.411	0.319	23.81	0.433	0.425	23.04	0.433	0.435
16	18.44	0.414	0.320	23.78	0.433	0.426	22.79	0.433	0.304
17	18.52	0.415	0.325	23.79	0.433	0.425	22.75	0.433	0.302
18	18.70	0.417	0.333	23.93	0.433	0.425	22.66	0.433	0.303
19	18.99	0.421	0.343	24.28	0.433	0.428	22.63	0.433	0.303
20	19.38	0.426	0.348	24.29	0.433	0.431	22.80	0.433	0.303
21	19.66	0.429	0.355	24.53	0.433	0.434	22.81	0.433	0.303
22	20.06	0.433	0.357	24.58	0.433	0.437	22.71	0.433	0.304
23	20.41	0.433	0.357	24.19	0.433	0.426	22.57	0.433	0.305
24	20.65	0.433	0.362	24.24	0.433	0.437	22.56	0.433	0.304
25	20.84	0.433	0.365	24.29	0.433	0.437	22.53	0.433	0.305
26	20.90	0.433	0.369	24.05	0.433	0.437	22.44	0.433	0.306
27	20.99	0.433	0.370	24.01	0.433	0.430	22.02	0.433	0.306
28	21.41	0.433	0.392	24.12	0.433	0.428	22.11	0.433	0.306
29	21.85	0.433	0.398	24.34	0.433	0.429	22.37	0.433	0.304
30	22.10	0.433	0.377	24.29	0.433	0.431	22.24	0.433	0.305
31				24.05	0.433	0.431	21.85	0.433	0.302
Notes:									
1. Temperatures taken from Green River at Ouray Refuge USGS Gage (1991 to 2009 average)									

2. Swimming speeds are calculated based on a regression fit to data points from "Temperature Effects of Swimming Performance of Larvae and Juvenile Colorado Squawfish; Implications for Survival and Species Recovery (Childs and Clarkson, 1986). The regression uses temperature data from the Ouray gage.
3. Intake Velocity for 2% Mean Daily Flow (MDF) Green River at the Jensen Gage
4. Shaded areas indicate swim speed exceedence

2.3.3.5 Green River Elevation Analysis

Water would be released from Flaming Gorge Dam at the request of the District consistent with terms of the GRPP Water Service Agreement and the flow recommendations and other Reclamation operating criteria for Flaming Gorge Reservoir. The maximum flow diverted by the GRPP at any time would be 53 cfs or approximately 1 to 2.5 percent of the average Green River flow (2,000 cfs to 5,000 cfs) during June through August. Impacts to the Green River water surface elevation would be negligible. Computation tables to show maximum Green River elevation changes as a result of GRPP operation are attached as Appendix E.

Chapter 3 – Affected Environment and Environmental Effects

3.1 Introduction

This chapter describes the environment affected by the Proposed Action. These impacts are discussed under the following randomly ordered resource issues: recreation; water rights; water resources; water quality; public safety, access, and transportation; visual resources; socioeconomics; cultural resources; paleontological resources; wetlands and vegetation; wildlife resources; and threatened, endangered, and sensitive species. The present condition or characteristics of each resource is discussed first, followed by a discussion of the predicted impacts caused by the Proposed Action. The environmental effects are summarized in Table 3.1 at the end of this chapter.

3.2 Affected Environment

3.2.1 Recreation

The closest recreation area to the GRPP is Pelican Lake, over two miles to the west. This rather small BLM facility has its visitors coming from the west and north, with no reason to even drive by the proposed site within, mainly, private land holdings. The Green River within the proposed project area receives some rafting activity.

3.2.2 Water Rights

Water deliveries for the GRPP would either occur solely from project water releases from Flaming Gorge reservoir or would occur under a combination of project water releases and water rights held by UWCD. Project Water releases from Flaming Gorge are made under Application to Appropriate No. A30414, Water Right No. (41-2963). This appropriation allows Reclamation to store water in Flaming Gorge reservoir under an August 7, 1958 priority date and use that water for the authorized uses of the 1956 Colorado River Storage Project Action.

The UWCD water right that may be used in conjunction with the project water is a segregated portions of the Flaming Gorge water right, Application to Appropriate No. A30414. This appropriation originally included both the storage of water in Flaming Gorge Reservoir and the beneficial use thereof for the “Ultimate Phase” of the Central Utah Project. After the “Ultimate Phase” was deauthorized, Reclamation assigned this portion of the appropriation to the Utah

Board of Water Resources under a March 12, 1996 agreement. This agreement reserved for the United States the right to divert, store, and use water from Flaming Gorge Reservoir under Water Right No. 41-2963 (A30414) and further specified “The State of Utah agrees that if it stores water in or benefits directly from Colorado River Storage Project Facilities, the State of Utah will enter into a Water Service Contract with the United States.”

The Utah Board of Water Resources has segregated and transferred to the District Water Right No. 41-3487 (A30414db) for 8,400 af and Water Right No. 41-3523 (A30414do) for 43,400 af from the “Ultimate Phase” water right. On August 11, 2009 the District segregated 8,500 af (Water Right No. 43-12263) off of Water Right No. 41-3523 and filed Change Application No. a35811 to move this water to the GRPP. This change application was advertised by the State Engineer in August 2009 and wasn’t protested.

The GRPP would develop up to 10,000 af/year of irrigation water within the Colorado River basin. Depending on the location, crops, irrigation methods, and other factors this irrigation water could deplete up to anywhere between 60 to 100% of the 10,000 af annually. Depletion to the Colorado River for the 8,500 af/yr initial phase development was estimated to be approximately 6,500 af/yr. Depletion for the 10,000 af/yr full development phase is estimated at 7,500 af/yr. This depletion would be accounted as part of Utah’s 23% share of the water available to the upper basin states under of the Upper Basin Colorado River Compact. According to current hydrological studies, it is estimated that on average 1.369 million af of annual depletion would be available to Utah.

Water diversions under Flaming Gorge reservoir and the GRPP would be regulated by underlying water right priority dates to protect neighboring water users on the Green River and in the Colorado River Basin. To protect the downstream water users (or keep Utah within it allocated compact allotment) the GRPP diversions would be cut off when there was insufficient water to satisfy all senior water rights senior to the priority date of the segregated “Ultimate Phase” right. To protect local water users on the Green River, the diversions could be cut off when they interfered with water rights that were senior to the priority of the change application that moved water to the pumping plant.

Under the Proposed Action, a Water Service Contract would be enacted that would allow the GRPP and its water rights to benefit from the stored water in the Flaming Gorge reservoir. The Water Service Contract could provide project water that is stored in Flaming Gorge Reservoir to the GRPP when the UWCD water rights are out of priority or in conflict with instream flow requirements.

3.2.3 Water Resources

This analysis is tiered from the FGEIS Section 3.3 (page 49) Water Resources and Hydrology along with the Hydrologic Modeling section contained in Appendix 2. Water would be released from Flaming Gorge Dam in accordance with the provisions of the ROD and at the request of the District consistent with terms of

the Water Service Contract. Compliance with the ROD includes “maintaining all authorized purposes of the Flaming Gorge Unit of the Colorado River Storage Project (CRSP), including those related to the development of water resources in accordance with the Colorado River Compact.” The Proposed Action Alternative is the first Water Service Contract issued under Water Right No. 41-2963 (A30414) as part of Utah’s portion of its Compact Apportionment and is in compliance with the ROD.

3.2.4 Water Quality

The water in the project area is of good quality for agricultural and irrigation purposes and is primarily a calcium / sodium sulfate water. This is indicative of waters that flow through marine shale derived soils. In the project area the total dissolved solids (TDS) or salts are less in the Green River waters than those found in the Uinta River. Also due to the geology of the area, marine shale derived soils, there are measurable amounts of arsenic, boron and selenium in the water; however, those levels are not high enough to be of concern for agricultural purposes.

The constituents in the Green River water below the project area (Green River near Ouray) are not significantly greater than the water found above the project area (Green River near Jensen). This data is from fairly sporadic data at the Ouray USGS gauge, but it appears that there is not a great amount of salt returning to the Green River in any return flow from these irrigated lands.

The existing Nielson Pump Station would be removed and that site would be re-contoured and re-seeded to natural conditions. The station currently is in poor habitat condition with mostly weed species present in the area. The facility itself has experienced erosional degradation and is in jeopardy of failure.

3.2.5 Public Safety, Access, and Transportation

The nearest major town to the project site is Vernal City located about 35 miles to the north-east of the site. Roosevelt City is about 35 miles to the north-west. The town of Ouray is about 8 miles south of the site and the town of Randlett is about 8 miles to the west. Primary access to the site is on U.S. Hwy 40 either from Roosevelt or Vernal to the intersection of U.S. Hwy 40 and Utah Hwy 88, then approximately 8 miles south on Hwy 88, then approximately 2 miles on a county paved road and the remaining approximately two miles on a gravel road.

During construction, it is estimated that approximately 10 to 15 vehicles per day would travel to the site. The majority of these vehicle trips would be for transporting contractor employees to the site. Some concrete trucks and large equipment transport vehicles would deliver construction materials to the site. Upon completion of construction, vehicle trips are expected to be reduced to no more than two per day for operation and maintenance purposes.

3.2.6 Visual Resources

The visual resource of the area would be of a rural setting with an abundance of irrigated crops, fences, and dirt access roads for farm equipment. The river corridor appears in a general natural state, with a gentle flow and appropriate riparian vegetation.

3.2.7 Socioeconomics

The proposed Green River Pumping Plant would provide a needed water supply to customers of the Uintah Water Conservancy District. In the short term, up to 10,000 acre-feet of water from Flaming Gorge has been requested to temporarily meet the needs of the District. It is the intent of the District to negotiate a long-term contract for 40 years with the United States in the amount of 10,000 acre-feet. This water will be used for supplemental irrigation of pasture grasses, alfalfa, and grains.

3.2.8 Cultural Resources

Cultural resources are defined as physical or other expressions of human activity or occupation. Such resources include culturally significant landscapes, prehistoric and historic archaeological sites as well as isolated artifacts or features, traditional cultural properties, Native American and other sacred places, and artifacts and documents of cultural and historic significance.

Section 106 of the National Historic Preservation Act (NHPA) of 1966, mandates that Reclamation take into account the potential effects of a proposed Federal undertaking on historic properties. Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

The affected environment for cultural resources is identified as the APE (area of potential effects), in compliance with the regulations to Section 106 of the NHPA (36 CFR 800.16). The APE is defined as the geographic area within which Federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this proposed action includes the area of potential ground disturbance associated with the proposed pump station.

3.2.8.1 Cultural Resources Status

A Class I literature review and a Class III cultural resource inventory were completed for the APE, defined in the action alternative and analyzed for the proposed action, by Reclamation's Provo Area Office archeologist in October, 2009. A total of 1.8 acres were inventoried during the Class III inventory to determine if the proposed action would affect cultural resources. No cultural resources were identified as a result of the inventory.

In compliance with 36 CFR 800.4(d) (1) and 36 CFR 800.11(d), a copy of the cultural resource inventory report and a determination of no historic properties affected have been submitted to the Utah State Historic Preservation Office (SHPO) and Native American tribes which may attach religious or cultural significance to historic properties possibly affected by the proposed action for consultation.

3.2.9 Paleontological Resources

A paleontological file search was conducted in January 2010 for the project APE by the Utah Geological Survey (UGS). Martha Hayden, Paleontological Assistant with the UGS, was consulted regarding the potential for encountering previously documented and presently unknown paleontological resources in the vicinity of the project APE. The UGS reply dated January 26, 2010, stated that there are no previously recorded paleontological localities in the project area. Quaternary and Recent alluvial deposits that are exposed in the project APE have a low potential for yielding significant fossil localities. There may also be exposures of the Eocene Uinta Formation that have the potential for yielding significant vertebrate fossil localities.

3.2.10 Wetlands and Vegetation

The proposed pumping station exists entirely within the riparian area adjacent to the Green River. Vegetation consists mostly of tamarisk (*Tamarix ramosissima*), Russian olive (*Elaeagnus angustifolia*) cottonwood (*Populus Angustifolia*), and willow (*Salix spp*) with a weedy understory of Canada thistle (*Cirsium arvense*), whitetop (*Cardaria draba*), kochia (*Kochia scoparia*), cocklebur (*Xanthium strumarium*), and povertyweed (*Monolepis nuttalliana*). Other species comprising the understory include horsetail (*Equisetum arvense*), scouringrush (*Equisetum hyemale*), and saltgrass (*Distichlis spicata*).

Vegetation at the Nielson Station is similar to the proposed pump station location. The Nielson station would be removed and re-vegetated with native species under the Proposed Action.

A wetland delineation study was completed in the proposed pumping station location and a total of 1.68 acres of wetlands are within the project area. Located within the banks of the Green River, these wetlands have drainage connections to the Green River and therefore would be jurisdictional in nature and regulated by the US Army Corps of Engineers (USACE) under Section 404 of the CWA. According to the USACE Colorado West Regulatory Branch, the proposed action (except for the temporary cofferdam) would be exempted under the Farm or Stock Pond or Irrigation Ditch Construction or Maintenance and by the Farm, Forest or Temporary Mining Roads exemptions under Section 404 of the CWA.

3.2.11 Wildlife Resources

Wildlife resources within the general area of the Proposed Project include fish, big game, smaller mammals, raptors, water birds, and upland game birds, with a variety of other birds, reptiles, and amphibians. These are discussed below.

Fish

Twelve native fish species have been reported from reaches of the mainstem of the Green River between Flaming Gorge Dam and the Colorado River confluence and from lower portions of the river's tributaries. This assemblage of fishes includes warm-water species that prefer or require large-river habitats like the razorback sucker and Colorado pikeminnow (These are endangered species discussed in section 3.2.12 below), species that prefer cool- or cold-water streams or smaller river channels (e.g., Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*), mountain whitefish (*Prosopium williamsoni*), and mottled sculpin (*Cottus bairdii*)), and species with more generalized habitat requirements (e.g., roundtail chub (*Gila robusta*), speckled dace (*Rhinichthys osculus*), and bluehead sucker (*Catostomus discobolus*)).

Nonnative fishes dominate fish communities of the Colorado River Basin. Twenty-five nonnative fish species are found from the Green River between Flaming Gorge Dam and the Colorado River confluence. The red shiner (*Cyprinella lutrensis*), common carp (*Cyprinus carpio*), sand shiner (*Notropis stramineus*), fathead minnow (*Pimephales promelas*), channel catfish (*Ictalurus punctatus*), and smallmouth bass (*Micropterus dolomieu*) are widespread and common. Northern pike (*Esox lucius*) and green sunfish (*Lepomis cyanellus*) are present as well. Salmonids are abundant in the tailwaters of Flaming Gorge Dam.

Big Game

This area provides big game habitat for both summer and winter use areas for mule deer (*Odocoileus hemionus*) and elk (*Cervus elaphus nelsoni*). Deer and elk are seen wintering in the general area. Moose (*Alces alces*) are occasionally observed along the river and stream drainages. Mountain lion (*Felis concolor*) and black bear (*Ursus americanus*) are rare in the area.

Smaller Mammals

Other mammals common within the area include yellow-bellied marmot (*Marmota flaviventris*), badger (*Taxidea taxus*), least chipmunk (*Eutamias minimus*), golden-mantled ground squirrel (*Spermophilus lateralis*), meadow vole (*Microtus montanus*), northern pocket gopher (*Thomomys talpoides*), deer mouse (*Peromyscus maniculatus*), porcupine (*Erethizon dorsatum*), coyote (*Canis latrans*), raccoons (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). Furbearers such as beaver (*Castor canadensis*), mink (*Mustela vison*), and muskrat (*Ondatra zibethicus*) use the wetland and riparian habitats and embankments of the river.

Raptors

Birds of prey, or raptors, have been observed within or adjacent to the project area. Cottonwood trees along rivers provide nesting habitat for raptors such as the golden eagle (*Aquila chrysaetos*), and red-tailed hawk (*Buteo jamaicensis*) and roosting sites for the great horned owl (*Bubo virginianus*). Golden eagles likely roost in the vicinity of the Proposed Project. Winter months are the best time to

view bald eagles in the area. Other raptors observed in the area are the American kestrel (*Falco sparverius*), sharp-shinned hawk (*Accipiter striatus*), northern harrier (*Circus cyaneus*), and turkey vulture (*Cathartes aura*).

Water Birds

Numerous water birds occur in the project area such as waterfowl, shore birds, and other wading birds typically associated with wetlands and open water. The area provides important forage and cover sites for waterfowl and wading birds.

Waterfowl species common to the project area include Canada goose (*Branta Canadensis*), mallard (*Anas platyrhynchos*), common merganser (*Mergus merganser*), gadwall (*Anus strepera*), green-winged teal (*Anus crecca*), and redhead (*Anthya Americana*). In addition to these species, American widgeon (*Anus Americana*), common goldeneye (*Bucephala clangula*), and American coot (*Fulica americana*) are common during migration or winter. Great blue heron (*Ardea herodias*), spotted sandpiper (*Actitis macularia*), and killdeer (*Charadrius vociferous*) forage along shoreline and riparian habitats during the breeding season.

Other birds using this area include the pied-billed grebe (*Podilymbus podiceps*), eared grebe (*Podiceps nigricollis*), western grebe (*Aechmophorus occidentalis*), Clark's grebes (*Aechmophorus clarkia*), double-crested cormorant (*Phalacrocorax auritus*), snowy egret (*Egretta thula*), black-crowned night-heron (*Nycticorax nycticorax*), white-faced ibis (*Plegadis chihi*), American bittern (*Botaurus lentiginosus*), northern pintail (*Anus acuta*), ruddy duck (*Oxyura jamaicensis*), Virginia rail (*Rallus limicola*), black-necked stilt (*Himantopus mexicanus*), American avocet (*Recurvirostra Americana*), Wilson's phalarope (*Phalaropus tricolor*), Forster's tern (*Sterna forsteri*), black tern (*Chlidonias niger*), greater yellowlegs (*Tringa melanoleuca*), lesser yellowlegs (*Tringa flavipes*), cinnamon teal (*Anus cyanoptera*), and willet (*Catoptrophorus semipalmatus*). During migration, these species of birds and many others visit the Ouray National Wildlife Refuge and other wetlands, along with occasional flocks of sandhill cranes (*Grus canadensis*).

Upland Game Birds

Upland game birds occurring in the project area include the ring-necked pheasant (*Phasianus colchicus*), and mourning dove (*Zenaida macroura*). California quail (*Lophortyx californicus*) may also use the area.

Other Birds

The most common birds are songbirds and similar species associated with terrestrial habitats. These species include sparrows, warblers, thrushes, vireos, swallows, blackbirds, woodpeckers, and hummingbirds. Another group of birds frequently observed are the corvids, including jays (*Cyanocitta spp.*), the black-billed magpie (*Pica pica*), and the common raven (*Corvus corax*).

Reptiles and Amphibians

A number of reptiles occur in the general area including the wandering garter snake (*Thamnophis elegans*), Great Basin gopher snake (*Pituophis catenifer*), and Great Basin rattlesnake (*Crotalus viridis*). The tiger salamander (*Ambystoma*

tigrinum), boreal chorus frog (*Pseudacris triseriata*), and leopard frog (*Rana pipiens*), may also occur in the area.

3.2.12 Threatened, Endangered, and Sensitive Species

Federal agencies are required to ensure that any action federally authorized, funded, or carried out would not adversely affect a federally listed threatened or endangered species. The four Colorado River endangered fish species listed below occur in the area of the Proposed Project.

Threatened (T), Endangered (E), and Candidate (C) species in Uintah County include:

<u>Status</u>	<u>Common Name</u>	<u>Biological Name</u>
<u>Fish</u>		
E	bonytail	<i>Gila elegans</i>
E	Colorado pikeminnow	<i>Ptychocheilus lucius</i>
E	humpback chub	<i>Gila cypha</i>
E	razorback sucker	<i>Xyrauchen texanus</i>
<u>Animal</u>		
E ¹	black-footed Ferret	<i>Mustela nigripes</i>
T	Canada lynx	<i>Lynx canadensis</i>
T	Mexican spotted owl	<i>Strix occidentalis</i>
C	yellow billed cuckoo	<i>Coccyzus americanus</i>
<u>Plant</u>		
T	clay reed-mustard	<i>Schoenocrambe argillacea</i>
E	shrubby reed-mustard	<i>Schoenocrambe suffrutescens</i>
T	Uinta Basin hookless cactus	<i>Sclerocactus glaucuc</i>
T	Pariette cactus	<i>Scler cactus brivispinus</i>
T	Ute ladies'-tresses	<i>Spiranthes diluvialis</i>
C	White River penstemon	<i>Penstemon scariosus var albifuvis</i>

¹ Experimental

River reaches that have been designated as critical habitat for the bonytail in the Green River extend from the confluence with the Yampa River downstream to the boundary of Dinosaur National Monument and Desolation and Gray Canyons. In addition, critical habitat has been designated in the Yampa River from the upstream boundary of Dinosaur National Monument to its confluence with the Green River.

Critical habitat designated for Colorado pikeminnow in the Green River system includes the Yampa River from Craig, Colorado, downstream to the Green River; the Green River downstream of the Yampa River to the confluence with the

Colorado River; and the White River from Rio Blanco Reservoir downstream to the Green River.

Critical habitat for humpback chub in the Green River system includes the Yampa River within Dinosaur National Monument, Green River from its confluence with the Yampa River downstream to the southern boundary of Dinosaur National Monument, and the Green River within Desolation and Gray Canyons.

River reaches of critical habitat for razorback sucker in the Green River system include the lower Yampa River from the mouth of Cross Mountain Canyon to the confluence with the Green River), the Green River between the confluences of the Yampa and Colorado Rivers, the lower 18 miles of the White River, and the lower 2.5 miles of the Duchesne River.

The GRPP would be located downstream of both nursery and spawning habitat of federally listed Colorado River Endangered species. Therefore, fish less than 60 mm in length (such as age 1 fish) are expected to be present. Entrainment of all life stages of these endangered species are a concern with water pumps in this section of the river. However, the primary concern with pumps are young-of-year and larval fish age classes.

The black-footed ferret, Canada lynx and Mexican spotted owl exist within Uintah County but are not known to occur in the project area.

The Western Yellow-billed Cuckoo is known to occur along the riparian corridor of the Green River. A currently existing population of nesting cuckoos exists on the opposite side (southeast) of the river from the proposed GRPP. Historically, these birds nested on both sides of the river in the vicinity of the project.

None of the plant species listed above are known to occur in the project area.

The bald eagle is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. It is a winter resident of the area. This species roosts primarily in forested canyons or tall cottonwoods along streams and reservoirs. There are no known nesting pairs at or near the project area.

The following is a list of species of special concern, as defined by the State of Utah that may occur within the project area and are managed under Conservation Agreements.

Common Name	Biological Name
Colorado River Cutthroat Trout	<i>Oncorhynchus clarkii pleuriticus</i>
Bluehead sucker	<i>Catostomus discobolus</i>
Flannelmouth sucker	<i>Catostomus latipinnis</i>
Roundtail chub	<i>Gila robusta</i>
Northern goshawk	<i>Accipiter gentilis</i>

The fish species listed above have similar concerns as the Colorado River endangered fish species discussed above; namely, the entrainment of young-of-year and larval fish age classes.

Leopard frog (*Rana pipiens*) has been petitioned for listing under the ESA and may occur in the project area.

Colorado River Endangered Species Recovery Implementation Program

The purpose of the Colorado River Recovery Implementation Program (Recovery Program) is to recover Colorado River endangered fish while also providing for future water development for human use.

To help accomplish this, Recovery Program managers have developed an agreement clarifying how the Service will apply section 7 of the Endangered Species Act to water development projects in the upper Colorado River Basin. Section 7 of the Endangered Species Act requires Federal agencies to consult with the Service on actions that are likely to jeopardize the continued existence of endangered or threatened species or result in destruction or adverse modification of their critical habitat.

Since 1988, this approach has allowed the Service to issue favorable biological opinions on some 600 water projects in Colorado, Utah, and Wyoming with a potential to use more than 618,000 af of water.

Under this agreement, as long as sufficient progress is being made toward endangered fish recovery, the Service will issue favorable biological opinions on water depletions of less than 4,500 af of water. When reviewing projects that deplete more than 4,500 af of water per year, the Service determines on a case-by-case basis reasonable and prudent measures (RPMs) to minimize impacts from proposed projects. These RPMs are issued within biological opinions.

3.3 Environmental Effects

The proposed action is a Water Service Contract between Reclamation and the District for up to 10,000 af per year, for a period not to exceed 5 years. However, the District intends to request a 40 year Water Service Contract for up to 10,000 af per year. Therefore, environmental effects from this project at full capacity for 45 years must be analyzed.

Also, even though the full 10,000 af/yr water supply may not be delivered every year, wet and dry years included (see Table 3), the environmental effects will be analyzed as if it were delivered each year.

3.3.1 Recreation

3.3.1.1 No Action Alternative

The No Action Alternative would have no effect on recreational resources.

3.3.1.2 Proposed Action Alternative

The construction impacts of this project will not adversely impact recreation. The amount of water extracted from the Green River each year (up to 10,000 af) will not be noticed by recreationists.

3.3.2 Water Rights

3.3.2.1 No Action Alternative

Under the No Action Alternative, the GRPP would not be built and there would be no diversion of Green River water. This would have no effect on water rights.

3.3.2.2 Proposed Action Alternative

Under the Proposed Action, the GRPP would be able to call for and use stored Flaming Gorge Reservoir water when its water rights were being curtailed. The stored water available to the GRPP would protect the senior water rights and would not affect instream flow obligations in the Green River.

GRPP diversions will be regulated by the Utah State Engineer in accordance with the priority dates of the pumping plant's water rights and change applications to ensure that senior water rights are protected.

3.3.3 Water Resources

3.3.3.1 No Action Alternative

The no Action Alternative would have no effect on water resources in the Green River.

3.3.3.2 Proposed Action Alternative

There is sufficient unsubscribed water in Flaming Gorge Reservoir to meet the District's request. Also, the District has sufficient water rights to cover the request. The current site-specific project of 10,000 af per year equates to a maximum of 53 cfs being diverted out of the Green River at any time. This amount of diversion is within USGS gauge error of $\pm 5\%$ as measured at the Jensen, Utah USGS stream gauge. Flaming Gorge operations under the FGEIS ROD currently release enough water and the amount of diversion and depletion is of such a small amount that the Proposed Action would have no effect on water resources.

The Proposed Action Alternative would improve the agricultural water supply to lands in the project area. The additional water, up to one acre-foot per acre GRPP supply, would eliminate shortages in all years except moderate to extreme dry years.

The proposed project would have no effect on operations under the FGEIS ROD.

3.3.4 Water Quality

3.3.4.1 No Action Alternative

The No Action Alternative would have no effects on water quality.

3.3.4.2 Proposed Action Alternative

Some increased sediment / turbidity would be seen during the construction of the pumping plant and removal of the old pump site, but this would be of short term with minor impact to the river system.

There would be some increased sediment and therefore turbidity issues when the sheet piles and coffer dam are installed into the river around the new pump site. This would be temporary, during the installation and then removal of the coffer dam and temporary sheet piles, and most likely cause a minimal amount of increased sediment entering into the river system with no long term effect .

The removal, revegetation, and rehabilitation of the Nielson Station would eliminate the potential for possible leaks of contaminants into the Green River and reduce the erosion that is currently occurring.

Bank hardening caused by the installation of the sheet piles to protect the proposed GRPP has the potential for altering erosion patterns of the Green River immediately downstream of the pump site. The need for additional bank protection downstream of the pump site will be monitored by the District and installed at a later date if needed.

With the use of heavy equipment there is always a possibility of fuel spillage when refueling, so refueling shall be done outside of any riverine or riparian areas and be done in a contained area. Hydraulic oil may potentially be spilled also, however, the equipment and work being done should be isolated from the Green River, so that if there is any spillage from equipment it would easily be contained and cleaned up. Moving electrical transformers may also potentially allow for spillage of the oil inside the transformer, but again any spillage should be away from the river, allowing for an isolated event which could be cleaned up with minimal environmental contamination.

The addition of water from the Green River to supplement the water from the Uinta River would not have any negative impact to the project. The water in the Green River to be used contains less total dissolved salts, less dissolved arsenic, boron and selenium than the water presently found in the Uinta River at Randlett. Water from this project would be delivered to sprinkler irrigation systems and pipelines that significantly reduce salt concentrations in return flows.

3.3.5 Public Safety, Access, and Transportation

3.3.5.1 No Action Alternative

The No Action Alternative would have no impact on public safety, access, and transportation.

3.3.5.2 Proposed Action Alternative

The Proposed Action Alternative would have minor short-term effects during construction, but no long-term effects on public safety, access, and transportation would be realized.

3.3.6 Visual Resources

3.3.6.1 No Action Alternative

The No Action Alternative would have no impact on visual resources.

3.3.6.2 Proposed Action Alternative

There appears to be no popular or well-used key observation points to the project site from surrounding areas, except from the Green River itself. The impacts to the visual environment from the No Action Alternative will be noticeable by boaters and other water recreationalists. The existing old pump plant will be removed and area contoured and seeded to help mitigate this action. Down river several hundred yards and adjacent to the river the new pumping facility will feature two low-level structures with a gravel turn around and access, all fenced in to minimize un-necessary impacts. The contrast to the natural lines, textures, colors and forms will be medium; but within allowable measures for the area. The Bureau of Land Management has developed a color wheel that would be used to determine a color scheme for project facilities that would blend with the natural surroundings of the area.

3.3.7 Socioeconomics

3.3.7.1 No Action Alternative

Under the No Action Alternative there would be no adverse effects to socioeconomics. However, the District would need to find another method of getting water to the intended service area.

3.3.7.2 Proposed Action Alternative

Under the Proposed Action Alternative the water supply to the intended area would be strengthened to help ensure a constant and regular source of water for irrigation in the event of drought or other shortages. We would also expect to see new lands go into production which, previously, were unable to receive water due to a more constrained water supply. It is anticipated that there will not be a significant effect from the construction.

3.3.8 Cultural Resources

3.3.8.1 No Action Alternative

Under the No Action Alternative there would be no adverse affects to cultural resources. There would be no need for ground disturbance for the pump station. The existing conditions would remain intact and would not be affected.

3.3.8.2 Proposed Action Alternative

Class I and Class III cultural resource inventories for the APE resulted in the identification of no cultural resources. No sites will be impacted by the proposed action. Reclamation submitted a determination of no historic properties affected for the proposed project to the SHPO and received concurrence in a letter dated January 25, 2010.

3.3.9 Paleontological Resources

3.3.9.1 No Action Alternative

Under the No Action Alternative there would be no adverse effects to paleontology. There would be no need for ground disturbance for the pump station. The existing conditions would remain intact and would not be affected

3.3.9.2 Proposed Action Alternative

Under the Action Alternative there would be ground disturbing activities which have the potential to disturb subsurface fossil material. Unless fossils are discovered as a result of construction activities, however, the Action Alternative would have no effect on paleontological resources.

3.3.10 Wetlands and Vegetation

3.3.10.1 No Action Alternative

The No Action Alternative would have no negative effect on wetlands and vegetation. However, the Nielson Pumping Station would not be rehabilitated with its associated beneficial effects for the area.

3.3.10.2 Proposed Action Alternative

The U.S. Army Corps of Engineers has determined that the project is exempt from regulation under section 404 of the Clean Water Act. The access road qualifies for the Farm and Forest Road Exemption as long as all Best Management Practices are followed. The pipeline is exempt under the irrigation exemption. Therefore, a Department of the Army permit is not required for completion of this project. The District has obtained a stream alteration permit for the project.

The removal, revegetation, and rehabilitation of the Nielson Station would eliminate the potential for possible leaks of contaminants into the Green River from the crane and its fuelling and reduce the erosion that is currently occurring at this site. Costs for this rehabilitation would be paid by the District.

There is a possibility that bank hardening activities associated with the proposed project would have negative impacts to the river downstream by increasing flow energies. The project proponent would monitor the river below the project and mitigate for any erosion caused by the project.

Under the Proposed Action approximately 1/2 acre of wetlands would be lost due to the construction of the new GRPP. These areas would be mitigated by the decommissioning and restoration of the Neilson Pumping Plant. There would be no net loss of wetlands and vegetation.

3.3.11 Wildlife Resources

3.3.11.1 No Action Alternative

The No Action Alternative would have no negative effects on wildlife. However, the Nielson Pumping Station would not be rehabilitated with its beneficial effects to wildlife habitat in the area.

3.3.11.2 Proposed Action Alternative

Under the Proposed Action there would be no long term detrimental effects to wildlife.

During construction, temporary and minor negative impacts would occur. Initial construction activity would cause stress to some wildlife species from noise, dust, displacement, and temporary loss of habitat, until construction was completed.

In regards to the Green River fishery, appropriate measures, as stated in the environmental commitments section of this EA, would be taken to prevent, to the extent possible, construction related sediments from entering the river either during or after construction. These actions would insure that no significant effects would occur to this fishery.

Golden eagles are occasionally present in the project area and may be temporarily displaced by construction activities (noise and habitat disturbance). Cottonwood trees and dead snags should be avoided during construction. However, loss of several trees may occur. This could displace eagles. These effects would be short term or very limited in extent and would have no significant negative effects, since these birds would be able to use abundant similar roost sites or other habitat elements in the immediate vicinity of the project. A survey of Golden eagle nests would be conducted prior to any tree removing activities. This survey would be conducted by a biologist. This would be done in order to avoid any negative impacts to these birds to the extent possible.

A survey of ground nesting birds would be conducted prior to any ground disturbing activities. This survey would be conducted by a biologist. This would be done in order to avoid any negative impacts to these birds to the extent possible.

In order to avoid impacts to neotropical migratory birds as well as the yellow-billed cuckoo and other species, the Service requests that noise from the pumps be orientated away from bird habitat, towards the river and the access road. The tree sides of the pumping station directed toward riparian/bird habitat are the critical areas needing wall structures. The extent of disturbance associated by this project would leave a large area of suitable habitat unaffected, allowing use by these birds and other species to occur in these adjacent areas.

3.3.12 Threatened, Endangered, and Sensitive Species

3.3.12.1 No Action Alternative

The No Action Alternative would have on effects on Threatened, Endangered, and Sensitive Species.

3.3.12.2 Proposed Action Alternative

Colorado River Endangered Fish

The Proposed Project (with actions to reduce possible adverse effects listed below) may affect and would likely adversely affect Colorado River Endangered fish (i.e. Bonytail, Colorado pikeminnow, humpback chub, and razorback sucker) and their designated critical habitat. Larva of these fish species may be entrained in the intake system of the proposed pumps. In order to minimize and mitigate these impacts, pumps would be operated outside peak larval drift times to the extent possible. These times are from 10:00 pm to 2:00 am each day from April 1 to August 31.

The Pump Plant and Pond Operation Analysis described in Section 2.3.3 indicate that the pumping plant can operate to meet the Service's recommended fish blackout hours 78% of the time for the 10,000 af/yr, full project scenario. During the interim operation for the 8,500 af/yr scenario, project operation would meet the Service's recommendation 72% of the time for the two-pump scenario and 94% of the time for the three-pump scenario. These estimates assume the worst case operation with the full demand being pumped each year (wet years, average years, and dry years), whereas actual water pumped is expected to be reduced during wet years as shown in Table 2.3. This could reduce the impact by as much as one-half. Also, a cooperative, real-time operation with input from the Service as described in the operating criteria section could further reduce or even eliminate pumping during fish blackout hours for the two three-pump options.

Juveniles of these fish may also be entrained in the intake system. To avoid these impacts the Service has recommended that fish screens designed with 3/32 inch mesh openings be incorporated into the design of the intake system. Also, approach velocities to fish screens should not exceed 0.33 feet per second (fps), except under the agreed upon variance timings.

If in the future, the proposed project is determined to be responsible for presently unforeseen impacts, the District would be required to reinitiate Section 7

consultation with the Service. These could include, but are not limited to new construction activities not described here and water diversions greater than the 10,000 acre-feet scope of project.

Construction activities associated with the installation of pump station (including the cofferdam) would be limited to times of low water levels in the Green River. This is intended to reduce impacts to fish and other riverine species. Other BMPs discussed throughout this document and listed in the environmental commitments section also apply.

By the later part of August irrigation needs are reduced and the pump station would likely operate with 2 pumps instead of 3. Intake velocities during this time would be reduced as well.

Actions to Reduce Potential Adverse Effects to Listed Species

Since the designed pumping plant may exceed maximum intake flow velocities (required by the Service) under certain extreme scenarios, a variance to these requirements must be issued by the Service. The Service would issue the required variance as the following actions are met. These actions must be taken to minimize impacts to endangered Colorado River fish.

1. The pumps would be shut off during the midnight period (10pm to 2am) during the expected periods of larval drift (defined below) for both razorback sucker and Colorado pikeminnow, to the most practical amount consistent with the operating criteria defined in Section 2.3.3.3. Larval fish density in the water column is densest during these times. Therefore, this action would reduce the entrainment of larval fish into the pump system, thus minimizing impacts to larval fish.

- a. **Expected periods of larval drift:** The timing and length of larval drift periods are highly variable. Newly hatched razorback sucker larvae are generally captured during the ascending limb of the hydrograph from mid-April to June, while Colorado pikeminnow reproduction generally occurs after the peak runoff during June to August, when water temperatures exceed 16°C. We expect that the two larval drift periods will be distinct periods, but there may be overlap.

- b. **Communication of larval fish activity:** The District will send a letter to both the Upper Colorado River Endangered Fish Recovery Program and the Utah Ecological Services Office of the Service every April requesting to be informed when the larval drift periods begin and end. The Service would then provide the District with yearly data indicating the projected day when the larval drift begins and ends, so that the District only has to turn pumps off when larval fish are expected to be present. To acquire this information, the District would contact the Service at the respective addresses and phone numbers below:

Upper Colorado River Endangered Fish Recovery Program
P.O. Box 25486, DFC
Lakewood, CO 80225
(303) 969-7322

US Fish and Wildlife Service
Utah Ecological Services Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119
(801) 975-3330

2. As part of project operation, the actual approach velocity at the structure would be measured using up-to-date scientific methodology. The purpose of actual approach velocity measuring is to assist the Service in determining potential impacts from similar projects proposed in the future and thus would have no impact on operations of the GRPP. An appropriate method for this measurement is described in Carter et al. 2003. This would allow the Service to determine if design criteria were adequate to keep the approach velocities in the engineered, predicted range.

- a. **Timing of monitoring events:** The Service is interested in approach velocities during full project operation at various levels of flows in the Green River. Therefore the project facility needs to be operating at full operational capacity (at the highest level of expected project diversion) during all required monitoring events.

The Service requires that three monitoring events take place so that a comparison of approach velocities at various Green River flows can be made.

- The first monitoring event would need to take place during the first year after construction and after peak flows have subsided, most likely in August.

If operational capacity of the structure is increased during the life of the project, such as adding a pump or increasing the diverted amount, another monitoring event would need to take place.

- A second monitoring event would need to take place if the flow of the Green River falls below 5000 cubic feet per second (cfs), as measured at the USGS Green River at Ouray, Utah gauge, during project operations.
- A third monitoring event would need to take place if the flow of the Green River falls below 2000 cfs at the Ouray gauge during project operations.

- b. Participation:** The exact timing of the monitoring events should be mutually agreed upon by the District and the Service. In addition, the Service would like to be notified of these monitoring events and be allowed to participate.
- c. Techniques:** The Service provided the District with a scientific paper describing how these monitoring events were conducted in Washington State for similar purposes (Pacific Northwest National Laboratory 2003). The District would perform similar techniques or would contact the Service to get prior approval for differing techniques.

Other Listed Species

The black-footed ferret, Canada lynx and Mexican spotted owl are not known to occur in the project area and would not be affected by the Proposed Action

Western yellow-billed cuckoo are known to exist in the vicinity of the area affected by the Proposed Action. The Proposed Action would not impact current cuckoo nesting behavior or habitat. Even though no cuckoo nesting occurs near the project area, the Service has requested that construction activities associated with this project be halted during their nesting season (April 1 to July 31). This would minimize any impacts to these birds. Also, all possible cottonwood trees should be left unaltered during construction. Since cottonwood trees have been removed from the riparian zone or replaced by exotic species over time, the planting of these trees would help improve nesting habitat conditions for these birds. These trees should be planted in areas not affected by noise created by the GRPP.

No threatened, endangered, or candidate plant species would be effected by the Proposed Action.

Bald eagles are winter residents of this area and may be displaced by construction activities (noise and habitat disturbance). Cottonwood trees and dead snags should be avoided during construction. However, loss of several trees may occur. This could displace eagles. These effects would be short term or very limited in extent and would have no significant negative effects, since these birds would be able to use abundant similar roost sites or other habitat elements in the immediate vicinity of the project. All winter construction activities occurring within ½ mile of any bald eagle roost site would be restricted to hours between 9:00 a.m. and 4:00 p.m., from November 1st to March 31st and into April, if necessary, until all bald eagles have left the area.

Fish species managed under conservation agreements (i.e. Colorado River cutthroat trout, bluehead sucker, flannelmouth sucker, and roundtail chub) may be temporarily disturbed within areas where construction activities affect riparian or riverine habitats. These species would likely move to areas unaffected by the

Proposed Action, either upstream or downstream. Sedimentation of the river below constriction areas would disturb spawning and feeding beds temporarily until flushing flows restore these habitats.

Northern goshawk may use habitats within the area of disturbance. The extent of disturbance associated by this project would leave large areas of suitable habitat unaffected, allowing any possible use by these birds to occur in these adjacent areas. Therefore, affects to them would be negligible.

The removal, revegetation, and rehabilitation of the Nielson Pumping Station would improve habitat conditions for many species of wildlife in this area. This would also eliminate the potential for possible leaks of contaminants into the Green River and reduce the erosion that is currently occurring, thus improving riverine habitat conditions for endangered and other fish species. The removal of this station would eliminate the hazard this station poses for entrainment of larval and young-of-year (YOY) endangered fish species.

3.4 Summary of Environmental Effects

Table 3.1 summarizes environmental effects under the No Action Alternative and the Proposed Action Alternative.

Table 3.1
Summary of Environmental Effects
Alternatives

Resource Issue	No Action Alternative	Proposed Action Alternative
Recreation	No Effect	No Effect
Water Rights	No Effect	No Effect
Water Resources	No Effect	No Effect
Water Quality	No Effect	No Effect
Public Safety, Access, and Transportation	No Effect	Minor short term effects during construction
Visual Resources	No Effect	No Effect
Socioeconomics	No Effect	No Effect
Cultural Resources	No Effect	Potential effects to subsurface cultural material during construction.
Paleontological Resources	No Effect	Potential effects to subsurface fossils during construction
Wetlands and Vegetation	No Effect	Minor, short term effects, Long term effects would be mitigated
Wildlife Resources	No Effect	Minor, short term effects
Threatened and Endangered Species	No Effect	Adverse effects likely, mitigation efforts would minimize these effects

3.5 Indian Trust Assets

Indian Trust Assets (ITA's) are legal interests in property held in trust by the United States for Indian tribes or individuals. The Department of the Interior's policy is to recognize and fulfill its legal obligations to identify, protect and

conserve the trust resources of federally recognized Indian tribes and tribal members, and to consult with tribes on a government-to-government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal safety (please refer to Departmental manual, 512 DM 2). Under this policy, as well as Reclamation's ITA policy, Reclamation is committed to carrying out its activities in a manner which avoids adverse impacts to ITAs when possible, and to mitigate or compensate for such impacts when it cannot. All impacts to ITAs, even those considered nonsignificant, must be discussed in the trust analyses in NEPA compliance documents and appropriate compensation or mitigation must be implemented.

Trust assets may include lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. Impacts to ITA's are evaluated by assessing how the action affects the use and quality of ITAs. Any action that adversely affects the use, value, quality or enjoyment of an ITA is considered to have an adverse impact to the resources. There are no known ITA's in the project area vicinity, and no ITA concerns were identified by potentially affected tribes during the tribal consultation process.

3.6 Environmental Justice

Executive Order 12898 established environmental justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by federal actions. The GRPP is located in Uintah County. The estimated Uintah County population for 2009 was 31,536. Statistics for the year 2000, the most recent census data, shows a county population of 25,224 consisting of 2371 individuals (9.4%) living below poverty level and 3585 (14.2%) belonging to various minority groups with 2190 (7.6%) belonging to the American Indian group. (US Census Bureau).

Implementation of the Proposed Action would not disproportionately (unequally) affect any low-income or minority communities within the project area. The reason for this is that the Proposed Action would not involve major facility construction, population relocation, health hazards, hazardous waste, or substantial economic impacts. This alternative would therefore have no adverse human health or environmental effects on minority and low-income populations as defined by environmental justice policies and directives.

Chapter 4 – Environmental Commitments

The following environmental commitments would be implemented as an integral part of the Proposed Action.

1. **Standard Reclamation Management Practices** - Standard Reclamation management practices would be applied during construction activities to minimize environmental effects and would be implemented by construction forces or included in construction specifications. Such practices or specifications include sections in the present report on public safety, dust abatement, air pollution, noise abatement, water pollution abatement, waste material disposal, erosion control, archaeological and historical resources, vegetation, and wildlife. Excavated material and construction debris may not be wasted in any stream or river channel or placed in flowing waters. This includes material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at an upland site well away from any channel. Construction materials, bedding material, excavation material, etc. may not be stockpiled in riparian or water channel areas. Silt fencing would be appropriately installed and left in place until after revegetation becomes established, at which time the silt fence can then be carefully removed. Machinery must be fueled and properly cleaned of dirt, weeds, organisms, or any other possibly contaminating substances offsite prior to construction.
2. **Additional Analyses** - If the proposed action were to change significantly from that described in this EA because of additional or new information, or if other spoil, or work areas beyond those outlined in this analysis are required outside the defined project construction area, additional environmental analyses may be necessary.
3. **State Stream Alteration Permit** - The District would obtain a State Stream Alteration Permit from the Department of Natural Resources. Conditions and requirements of this Permit would be strictly adhered to by the District.
4. **Utah Pollutant Discharge Elimination System Permit** - A Utah Pollutant Discharge Elimination System Permit would be required from the State of Utah before any discharges of water, if such water is to be discharged as a point source into the Green River. Appropriate measures would be taken to ensure that construction related sediments would not enter the stream either during or after construction. Settlement ponds and intercepting ditches for capturing sediments would be constructed and the sediment and other

contents collected would be hauled off the site for appropriate disposal upon completion of the project.

5. Water Quality Certification and Storm Water Discharge Permit - Under authority of the Clean Water Act, construction would require from the Utah Division of Water Quality a Section 401 Water Quality Certification and a Section 402 Storm Water Discharge Permit. Whenever the project proponent causes the water turbidity in an adjacent surface water to increase 10 NTU's or more, the Utah Division of Water Quality shall be notified.
6. Cultural Resources - Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land, he/she must provide immediate telephone notification of the discovery to Reclamation's Provo Area Office archaeologist. Work would stop until the proper authorities are able to assess the situation onsite. This action would promptly be followed by written confirmation to the responsible Federal agency official, with respect to Federal lands. The Utah SHPO and interested Native American tribal representatives would be promptly notified. Consultation would begin immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10); and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).
7. Paleontological Resources--Should vertebrate fossils be encountered by the proponent during ground disturbing actions, construction must be suspended until a qualified paleontologist can be contacted to assess the find.
8. Previously Disturbed Areas - Construction activities should be confined to previously disturbed areas where possible for such activities as work, staging, and storage; waste areas; and vehicle and equipment parking areas. Vegetation disturbance should be minimized as much as possible.
9. Public Access - Construction sites would be closed to public access. Temporary fencing, along with signs, would be installed to prevent public access. Reclamation would coordinate with landowners or those holding special permits and other authorized parties regarding access to or through the project area.
10. Disturbed Areas - All disturbed areas resulting from the project would be smoothed, shaped, contoured, and rehabilitated to as near their pre-project construction condition as practicable. After completion of the construction and restoration activities, disturbed areas would be seeded at appropriate times with weed-free, native seed mixes having a variety of appropriate species (especially woody species where feasible) to help hold the soil around structures, prevent excessive erosion, and to help maintain other riverine and riparian functions. The composition of seed mixes would be

coordinated with wildlife habitat specialists. Weed control on all disturbed areas would be required. Successful revegetation efforts must be monitored and reported to Reclamation along with photos of the completed project.

11. Fisheries –

- a. Construction activities should avoid, to the extent feasible, fish habitat such as backwaters and side channels;
- b. Best Management practices should be used to minimize sedimentation, temporary erosion of stream banks, and needless damage or alteration to the streambed, and ensure construction related byproducts do not enter the riverine ecosystem that would cause negative impacts to aquatic organisms;
 - (1) Construction activities should be timed to reduce impacts to seasonal fish movements, spawning activity, and rearing activity (April 1 through August 31) depending on the water year;
 - (2) The construction contractor will contact the UDWR to complete a fish survey and clearance immediately prior to and following:
 - Construction of the proposed cofferdam,
 - Removal of the cofferdam, and
 - Any other occasions when activities occur in the river or in the exposed river channel (e.g., when and if repairs need to be made to the cofferdam).
 - (3) The contractor will be responsible for reporting any observed take of fish (stressed or dying) immediately to the USFWS Utah Field Office. After placement of the cofferdam, a report will be submitted to the Utah Field Office that summarizes activities.
 - (4) The construction contractor will coordinate with the UDWR to have a federally permitted crew on site to translocate fish stranded behind the constructed cofferdam to the Green River prior to dewatering the work areas.
 - (5) Pumps used to dewater the work area will be screened (1/4" mesh) to minimize entrapment of fish.
 - (6) The contractor will minimize the time that the cofferdam is in the river.
 - (7) As practicable, sections of the coffer dam will be placed gently in the channel to minimize disturbance to fish and the river substrates.

- (8) All non-permanent materials placed in the river will be removed from the river after completion of the in channel portion of project.
12. Nielson Pumping Station - With the relocation of the existing Nielson Pumping Station to the new pump site, the existing site will be rehabilitated to as near natural condition as practicable consistent with the methods and requirements described in Environmental Commitment number 10 above. The removal and revegetation of the Nielson Station would eliminate the potential for possible leaks of contaminants into the Green River. Previous oil spills in this area must be removed and disposed of at appropriate facilities.
 13. Bank hardening caused by the installation of the sheet piles to protect the pump station has the potential for altering erosion patterns of the Green River immediately downstream of the pump station. If additional erosion occurs as a result of hardening the bank for the pump station, additional bank protection would be provided by the District at District expense.
 14. Birds - A survey of ground nesting birds (especially neotropical migrants) and raptor nests would be conducted prior to any ground disturbing activities. These surveys would be conducted by a biologist. This would be done in order to avoid any negative impacts to these birds to the extent possible.
 15. GRPP Operation – Since the designed pumping plant may exceed maximum flow velocities (prescribed by the Service) under certain extreme scenarios, the Service has required that the following actions be met to reduce potential adverse effects to Colorado River listed fish species. These actions must be taken to minimize impacts to endangered Colorado River fish.

Actions to Minimize Impacts to Endangered Colorado River Fish

- a. The pumps would be shut off during the midnight period (10pm to 2am) during the expected periods of larval drift (defined below) for both razorback sucker and Colorado pikeminnow, to the most practical amount consistent with the operating criteria described in Section 2.3.3.3. Larval fish density in the water column is densest during these times. Therefore, this action would reduce the entrainment of larval fish into the pump system, thus minimizing impacts to larval fish.

- (1) **Expected periods of larval drift:** The timing and length of larval drift periods are highly variable. Newly hatched razorback sucker larvae are generally captured during the ascending limb of the hydrograph from mid-April to June, while Colorado pikeminnow reproduction generally occurs after the peak runoff during June to

August, when water temperatures exceed 16°C. We expect that the two larval drift periods will be distinct periods, but there may be overlap.

2. **Communication of larval fish activity:** The District will send a letter to both the Upper Colorado River Endangered Fish Recovery Program and the Utah Ecological Services Office of the Service every April requesting to be informed when the larval drift periods begin and end. The Service would then provide the District with yearly data indicating the projected day when the larval drift begins and ends, so that the District only has to turn pumps off when larval fish are expected to be present. To acquire this information, the District would contact the Service at the respective addresses and phone numbers below:

Upper Colorado River Endangered Fish Recovery Program
P.O. Box 25486, DFC
Lakewood, CO 80225
(303) 969-7322

US Fish and Wildlife Service
Utah Ecological Services Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119
(801) 975-3330

- b. As part of project operation, the actual approach velocity at the structure would be measured using up-to-date scientific methodology. The purpose of actual approach velocity measuring is to assist the Service in determining potential impacts from similar projects proposed in the future and thus would have no impact on operations of the GRPP. An appropriate method for this measurement is described in Carter et al. 2003. This would allow the Service to determine if design criteria were adequate to keep the approach velocities in the engineered, predicted range.
 - (1) **Timing of monitoring events:** The Service is interested in approach velocities during full project operation at various levels of flows in the Green River. Therefore the project facility needs to be operating at full operational capacity (at the highest level of expected project diversion) during all required monitoring events.

The Service requires that three monitoring events take place so that a comparison of approach velocities at various Green River flows can be made.

- The first monitoring event would need to take place during the first year after construction and after peak flows have subsided, most likely in August.
If operational capacity of the structure is increased during the life of the project, such as adding a pump or increasing the diverted amount, another monitoring event would need to take place.
- A second monitoring event would need to take place if the flow of the Green River falls below 5000 cubic feet per second (cfs), as measured at the USGS Green River at Ouray, Utah gauge, during project operations.
- A third monitoring event would need to take place if the flow of the Green River falls below 2000 cfs at the Ouray gauge during project operations.

(2) **Participation:** The exact timing of the monitoring events should be mutually agreed upon by the District and the Service. In addition, the Service would like to be notified of these monitoring events and be allowed to participate.

(3) **Techniques:** The Service provided the District with a scientific paper describing how these monitoring events were conducted in Washington State for similar purposes (Pacific Northwest National Laboratory 2003). The District would perform similar techniques or would contact the Service to get prior approval for differing techniques.

16. Meeting and Protecting the Flow and Temperature Recommendations for Endangered Fishes Downstream of Flaming Gorge Dam (Flow Recommendations) - Meeting the Flow Recommendations (Muth et. al, 2000) is essential for endangered fish recovery in the Green River Basin (Basin). Development of Basin water may impact Reclamation's ability to meet the Flow Recommendations, even if the developed water is Flaming Gorge storage water. In order to work towards meeting the Flow Recommendations in the future, Reclamation will analyze the long-term, cumulative effects of water development and delivery in the Basin, including water service contracts. Specifically, Reclamation is working on a modeling effort to determine how the interaction of Flaming Gorge releases, tributary inflows, and water development impacts the Flow Recommendations. This modeling effort is concurrent with interagency efforts (Service, Reclamation, State of Utah and others) to create a mechanism to protect flows in the Green River, as described in the Upper Colorado River Endangered Fish Recovery Program's Recovery Implementation Plan.

Until these efforts are complete, special focus must be made on meeting the Flow Recommendations in dry and moderately dry years (as classified in Muth et. al, 2000). In years classified as dry or moderately dry, Reclamation will use the best available information to compensate for the Project depletion in the Basin. If the Service has reason to believe that the Flow Recommendations, specifically, the baseflow targets for Reach 2 established by the Flaming Gorge Technical Workgroup are not being met, extra releases (up to the amount of Project depletions) from Flaming Gorge will be provided.

Chapter 5 – Consultation and Coordination

5.1 Introduction

This chapter details the consultation and coordination between Reclamation and other Federal, State, and local government agencies, Native American Tribes, and the public during the preparation of this EA. Compliance with NEPA is a federal responsibility that involves the participation of all of these entities in the planning process. NEPA requires full disclosure about major actions taken by Federal agencies and accompanying alternatives, impacts, and potential mitigation of impacts.

5.2 Public Involvement

This draft EA is being distributed to approximately 59 individuals, organizations and agencies for a 30-day period of review and comment. Comments received on the draft EA will be carefully and completely considered in determining any needed revisions to the EA and whether a Finding of No Significant Impact can be issued.

5.3 Native American Consultation

Reclamation conducted Native American consultation throughout the public involvement process. A consultation letter and copy of the Class III cultural resource inventory report were sent to the Ute Indian Tribe of the Uintah and Ouray Reservation. This consultation was conducted in compliance with 36 CFR 800.2(c)(2) on a government-to-government basis. Through this effort the tribe is given a reasonable opportunity to identify any concerns about historic properties; to advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; to express their views on the effects of the proposed action on such properties; and to participate in the resolution of adverse effects. Reclamation received no response regarding effects to historic properties from the Ute Indian Tribe of the Uintah and Ouray Reservation.

5.4 Utah State Historic Preservation Office

A copy of the Class III cultural resource report and a determination of no historic properties affected for the proposed project were submitted to the SHPO in January 2010. SHPO concurred with Reclamation's determination of no historic properties affected in a letter dated January 25, 2010.

5.5 Utah Geological Survey

A paleontological file search was conducted by Martha Hayden, Paleontological Assistant with the Utah Geological Survey (UGS). File search results and recommendations from the UGS were received in a letter dated January 26, 2010.

Chapter 6 – Preparers

The following contributors to the EA are employees of the U.S. Department of the Interior, Bureau of Reclamation, Provo Area Office and the Upper Colorado Regional Office.

<u>Name</u>	<u>Position Title</u>	<u>Contribution</u>
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W. Russ Findlay, MS	Fish and Wildlife Biologist	Wildlife Resources, Vegetation, T&E Species, Environmental Compliance
Beverley Heffernan, AB	Chief, Environmental Group	NEPA Compliance; Environmental Justice; Indian Trust Assets; Agency Review
Johnn Sterzer	Landscape Architect	Recreation, Visual Resources
Linda Andra	Administrative Assistant	Technical Writing and Editing
Mike Draper	Engineering Draftsman	Geologic Section Maps
Greg Lott, BS	Geologist	Geology Drawings
Rafael A. Lopez, BA	General Biologist	Wetlands, CWA Compliance, 404 Permit
Don Merrill	Public Involvement Specialist	Consultation and Coordination
Robert Radtke, Ph.D.	Physical Scientist	Water Quality
Scott Taylor, MS	Economist	Socioeconomics
Justin Record, PE ^a	Civil Engineer	Review of Water Rights
Ira Terry	Geologist	Geology Report
Heather Patno	Hydrologist	Water Resources and Operations
Gary Carlson	Chief, Security and Dam Safety Group	Public Safety, Access, and Transportation

a = Registered Professional Engineer

b = Registered Landscape Architect

Chapter 7 – References

- Carter, J.A., G.A. McMichael, and M.A. Chamness. 2003. Yakima River Basin Phase II Fish Screen Evaluations, 2002. Prepared by the Pacific Northwest National Laboratory for the U.S. Department of Energy under contract DE-AC06-76RL01830
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- National Marine Fisheries Service, Southwest Region. 1997. Fish Screening Criteria for Anadromous Salmonids. 12 pp.

Pacific Northwest National Laboratory. 2003. Yakima River Basin Phase II Fish Screen Evaluations, 2002.

Tetra Tech (formerly Mussetter Engineering, Inc.). 2009. Evaluation of Uintah Water Conservancy District Pumping Plant. A study of channel stability and sedimentation conditions.

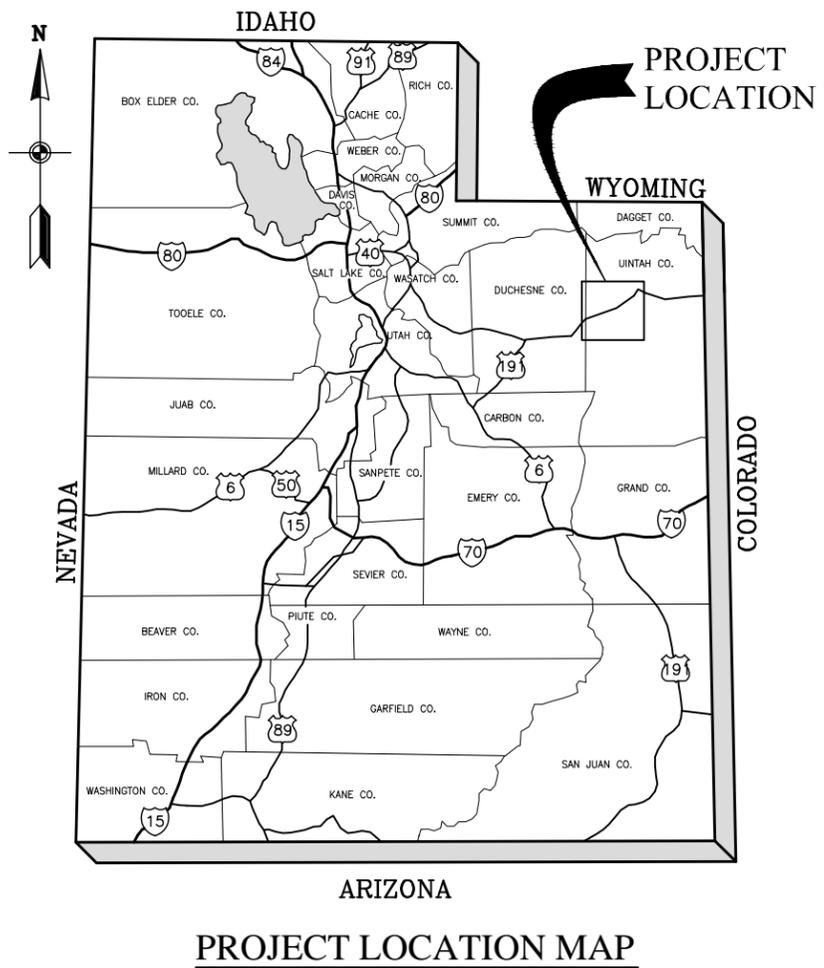
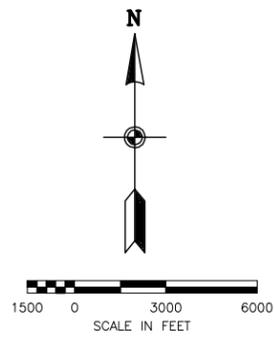
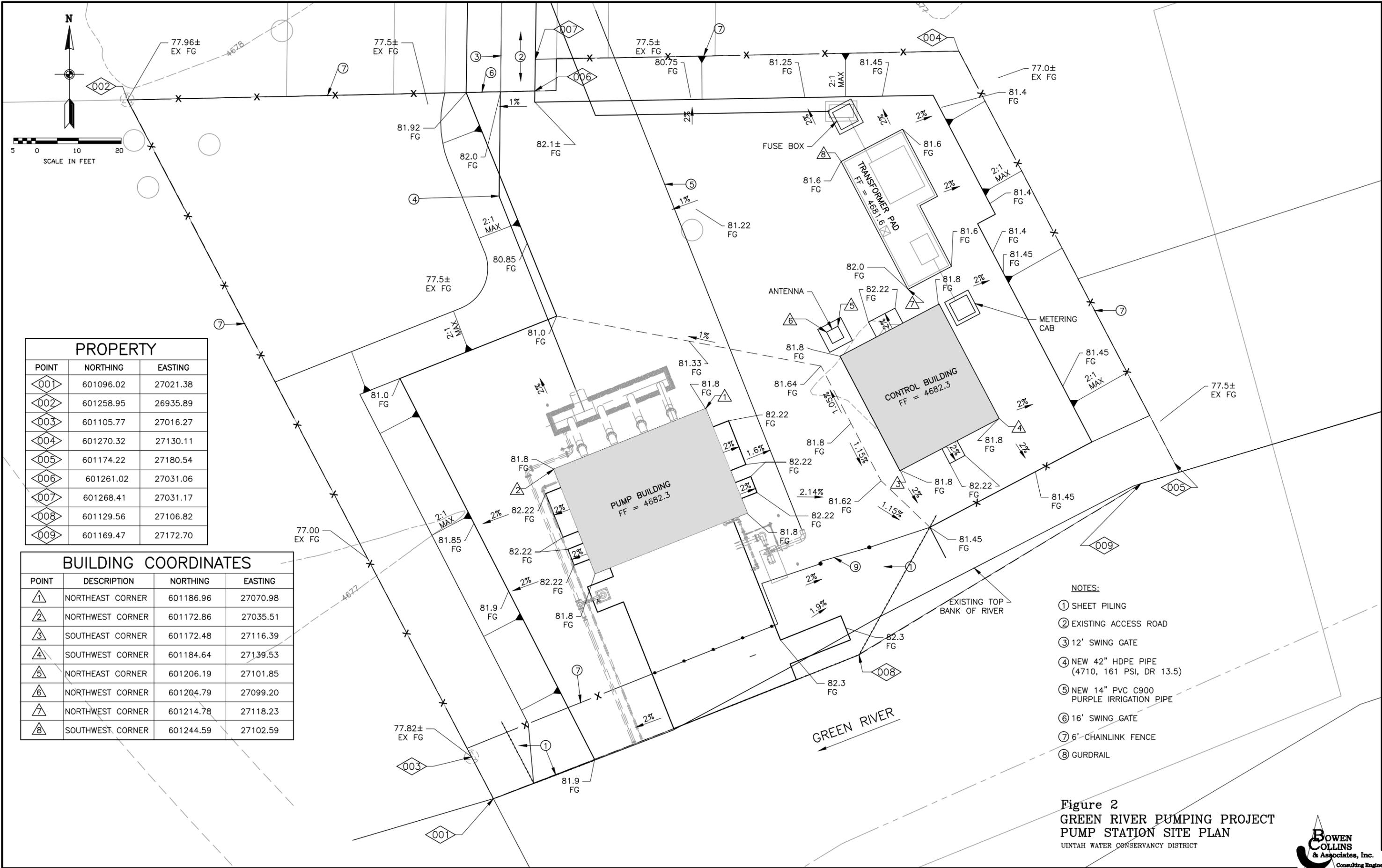


Figure 1
GREEN RIVER PUMPING PROJECT
OVERVIEW MAP
 UINTAH WATER CONSERVANCY DISTRICT





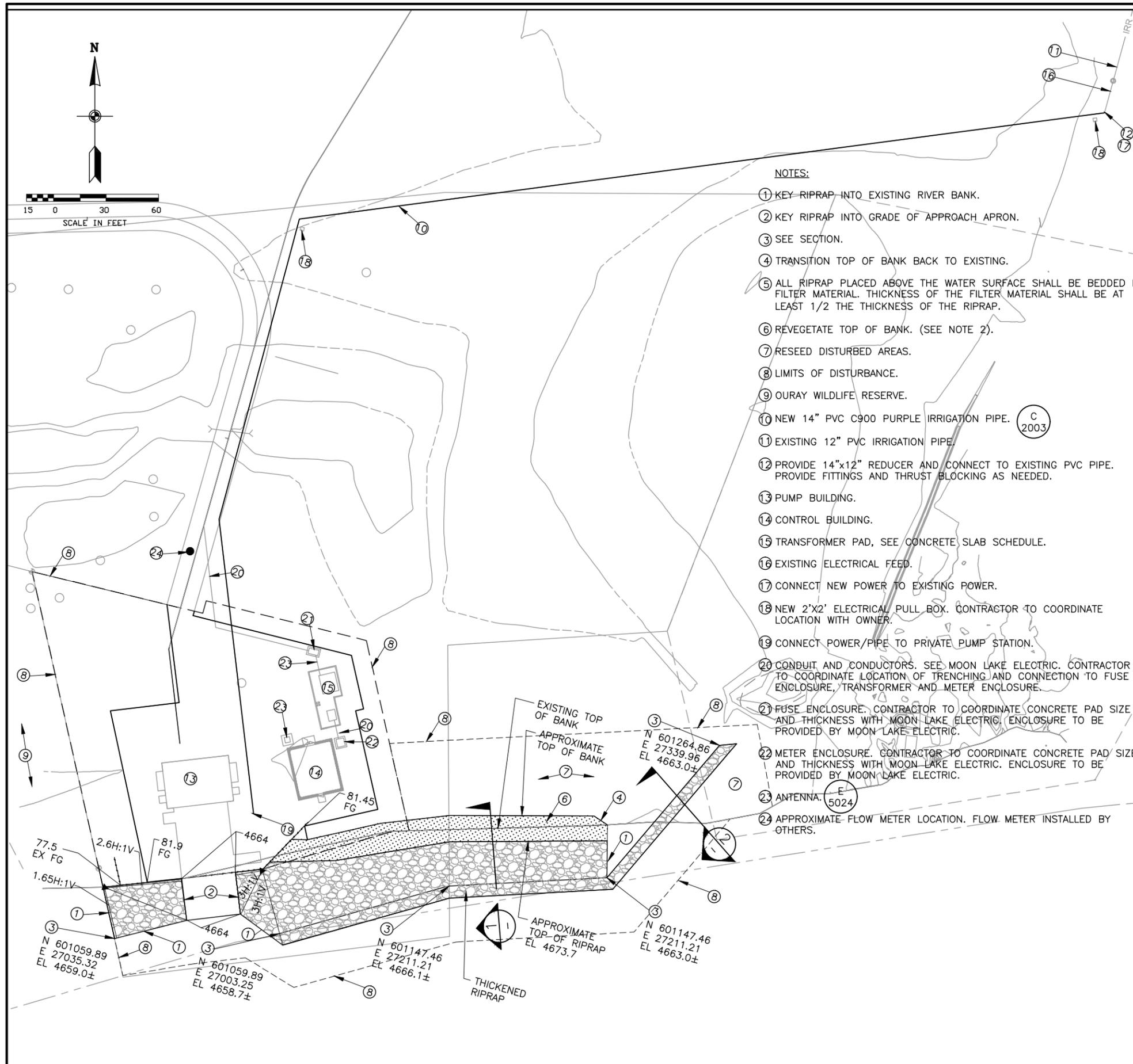
PROPERTY		
POINT	NORTHING	EASTING
001	601096.02	27021.38
002	601258.95	26935.89
003	601105.77	27016.27
004	601270.32	27130.11
005	601174.22	27180.54
006	601261.02	27031.06
007	601268.41	27031.17
008	601129.56	27106.82
009	601169.47	27172.70

BUILDING COORDINATES			
POINT	DESCRIPTION	NORTHING	EASTING
1	NORTHEAST CORNER	601186.96	27070.98
2	NORTHWEST CORNER	601172.86	27035.51
3	SOUTHEAST CORNER	601172.48	27116.39
4	SOUTHWEST CORNER	601184.64	27139.53
5	NORTHEAST CORNER	601206.19	27101.85
6	NORTHWEST CORNER	601204.79	27099.20
7	NORTHWEST CORNER	601214.78	27118.23
8	SOUTHWEST CORNER	601244.59	27102.59

- NOTES:**
- ① SHEET PILING
 - ② EXISTING ACCESS ROAD
 - ③ 12' SWING GATE
 - ④ NEW 42" HDPE PIPE (4710, 161 PSI, DR 13.5)
 - ⑤ NEW 14" PVC C900 PURPLE IRRIGATION PIPE
 - ⑥ 16' SWING GATE
 - ⑦ 6'-CHAINLINK FENCE
 - ⑧ GURDRAIL

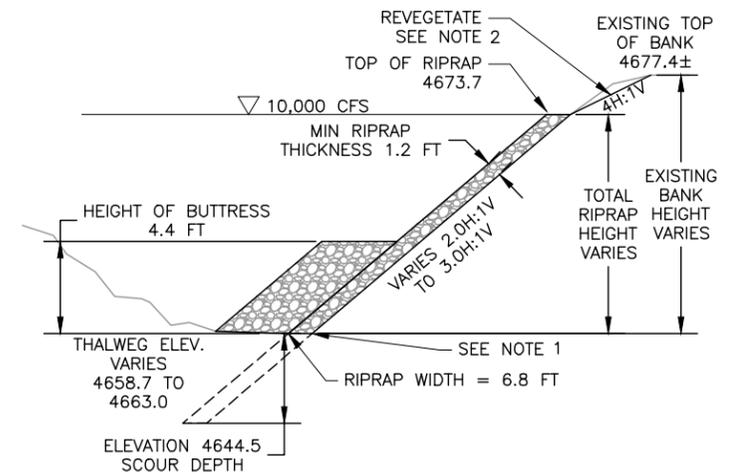
Figure 2
GREEN RIVER PUMPING PROJECT
PUMP STATION SITE PLAN
 UTAH WATER CONSERVANCY DISTRICT



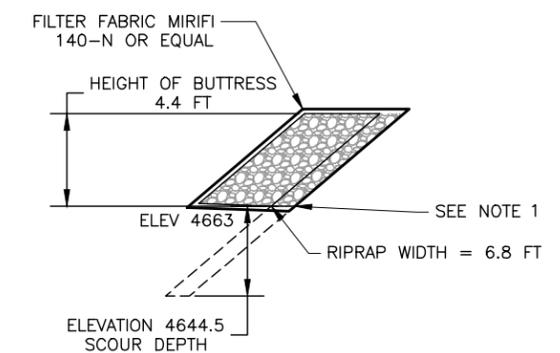


NOTES:

- ① KEY RIPRAP INTO EXISTING RIVER BANK.
- ② KEY RIPRAP INTO GRADE OF APPROACH APRON.
- ③ SEE SECTION.
- ④ TRANSITION TOP OF BANK BACK TO EXISTING.
- ⑤ ALL RIPRAP PLACED ABOVE THE WATER SURFACE SHALL BE BEDDED IN FILTER MATERIAL. THICKNESS OF THE FILTER MATERIAL SHALL BE AT LEAST 1/2 THE THICKNESS OF THE RIPRAP.
- ⑥ REVEGETATE TOP OF BANK. (SEE NOTE 2).
- ⑦ RESEED DISTURBED AREAS.
- ⑧ LIMITS OF DISTURBANCE.
- ⑨ OURAY WILDLIFE RESERVE.
- ⑩ NEW 14" PVC C900 PURPLE IRRIGATION PIPE. (C 2003)
- ⑪ EXISTING 12" PVC IRRIGATION PIPE.
- ⑫ PROVIDE 14"x12" REDUCER AND CONNECT TO EXISTING PVC PIPE. PROVIDE FITTINGS AND THRUST BLOCKING AS NEEDED.
- ⑬ PUMP BUILDING.
- ⑭ CONTROL BUILDING.
- ⑮ TRANSFORMER PAD, SEE CONCRETE SLAB SCHEDULE.
- ⑯ EXISTING ELECTRICAL FEED.
- ⑰ CONNECT NEW POWER TO EXISTING POWER.
- ⑱ NEW 2'x2' ELECTRICAL PULL BOX. CONTRACTOR TO COORDINATE LOCATION WITH OWNER.
- ⑲ CONNECT POWER/PIPE TO PRIVATE PUMP STATION.
- ⑳ CONDUIT AND CONDUCTORS. SEE MOON LAKE ELECTRIC. CONTRACTOR TO COORDINATE LOCATION OF TRENCHING AND CONNECTION TO FUSE ENCLOSURE, TRANSFORMER AND METER ENCLOSURE.
- ㉑ FUSE ENCLOSURE. CONTRACTOR TO COORDINATE CONCRETE PAD SIZE AND THICKNESS WITH MOON LAKE ELECTRIC. ENCLOSURE TO BE PROVIDED BY MOON LAKE ELECTRIC.
- ㉒ METER ENCLOSURE. CONTRACTOR TO COORDINATE CONCRETE PAD SIZE AND THICKNESS WITH MOON LAKE ELECTRIC. ENCLOSURE TO BE PROVIDED BY MOON LAKE ELECTRIC.
- ㉓ ANTENNA. (E 5024)
- ㉔ APPROXIMATE FLOW METER LOCATION. FLOW METER INSTALLED BY OTHERS.



SECTION 1
NTS



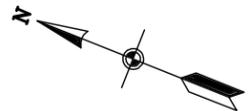
SECTION 2
NTS

SECTION NOTES:

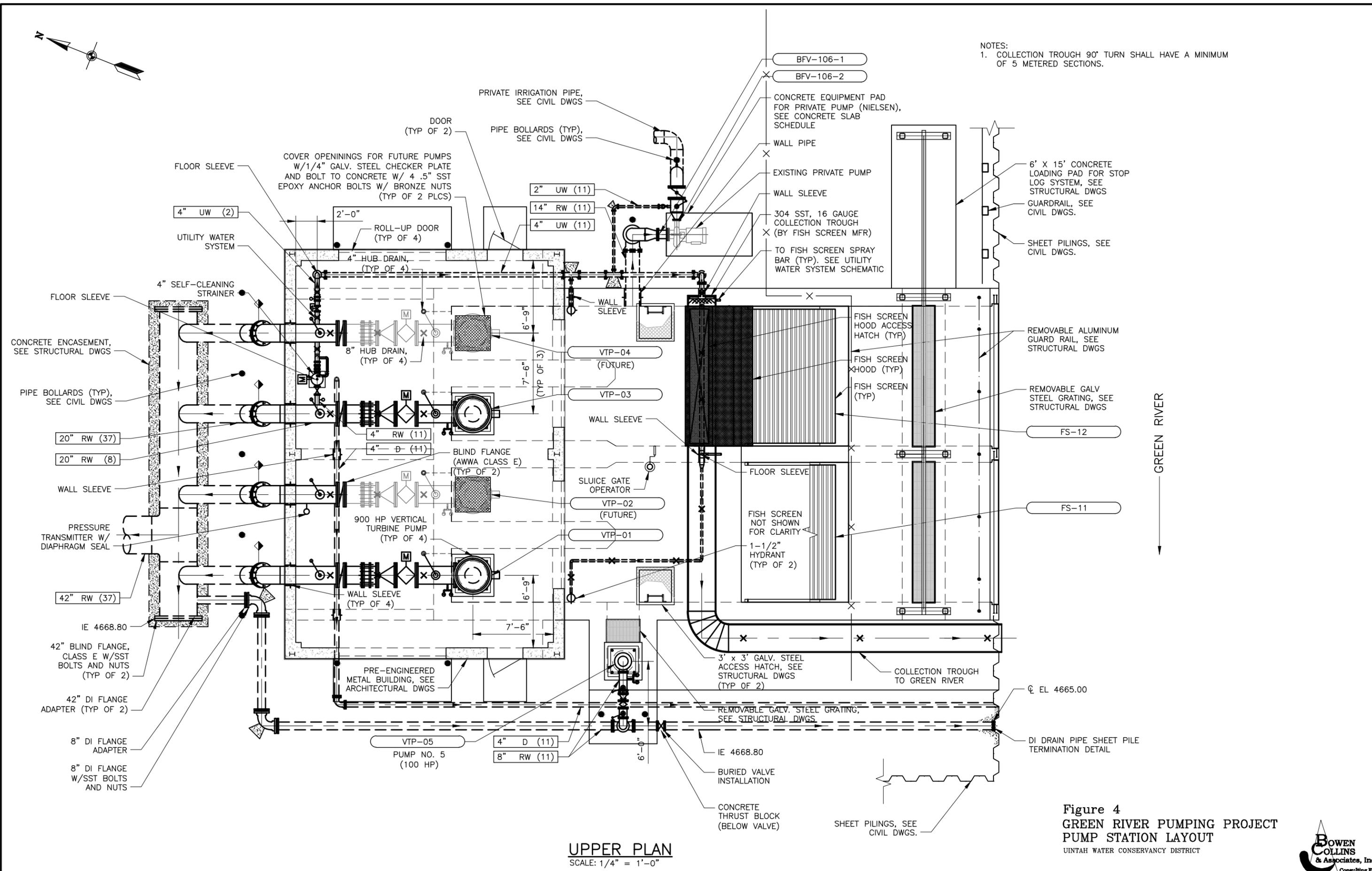
- 1 SEE PLAN VIEW FOR LOCATION AND ELEVATION.
- 2 REVEGETATE WITH LIVE WILLOW PLANTINGS OR OTHER SUITABLE MATERIALS.

Figure 3
GREEN RIVER PUMPING PROJECT
BANK PROTECTION
UNTAH WATER CONSERVANCY DISTRICT





NOTES:
 1. COLLECTION TROUGH 90° TURN SHALL HAVE A MINIMUM OF 5 METERED SECTIONS.



UPPER PLAN
 SCALE: 1/4" = 1'-0"

Figure 4
GREEN RIVER PUMPING PROJECT
PUMP STATION LAYOUT
 UTAH WATER CONSERVANCY DISTRICT



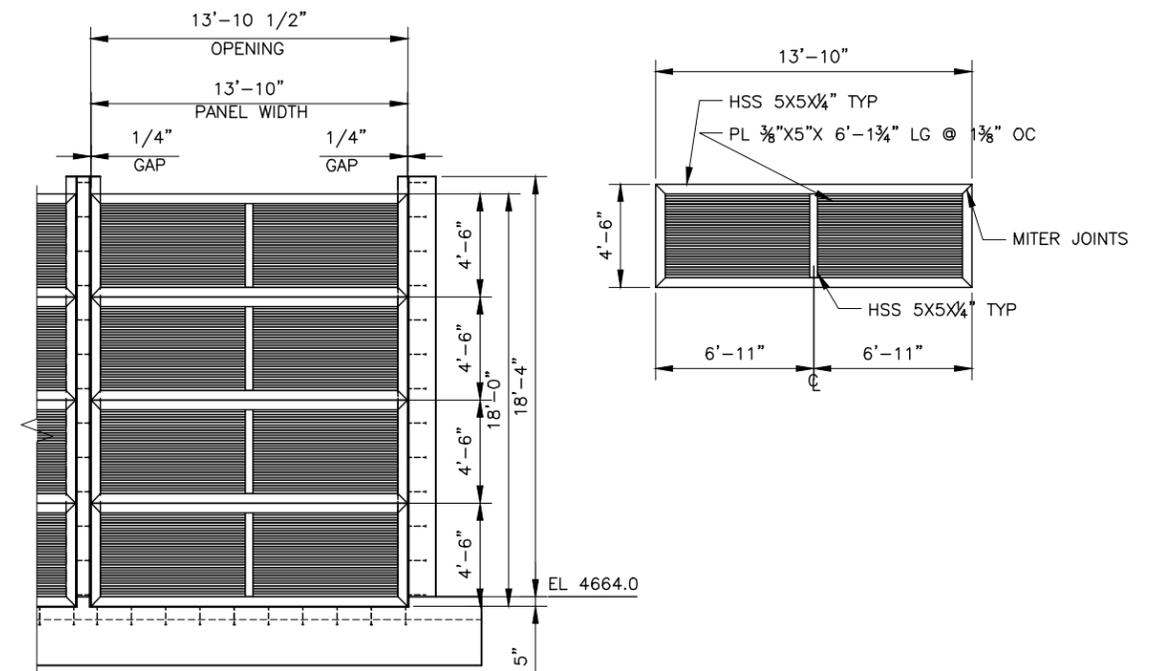
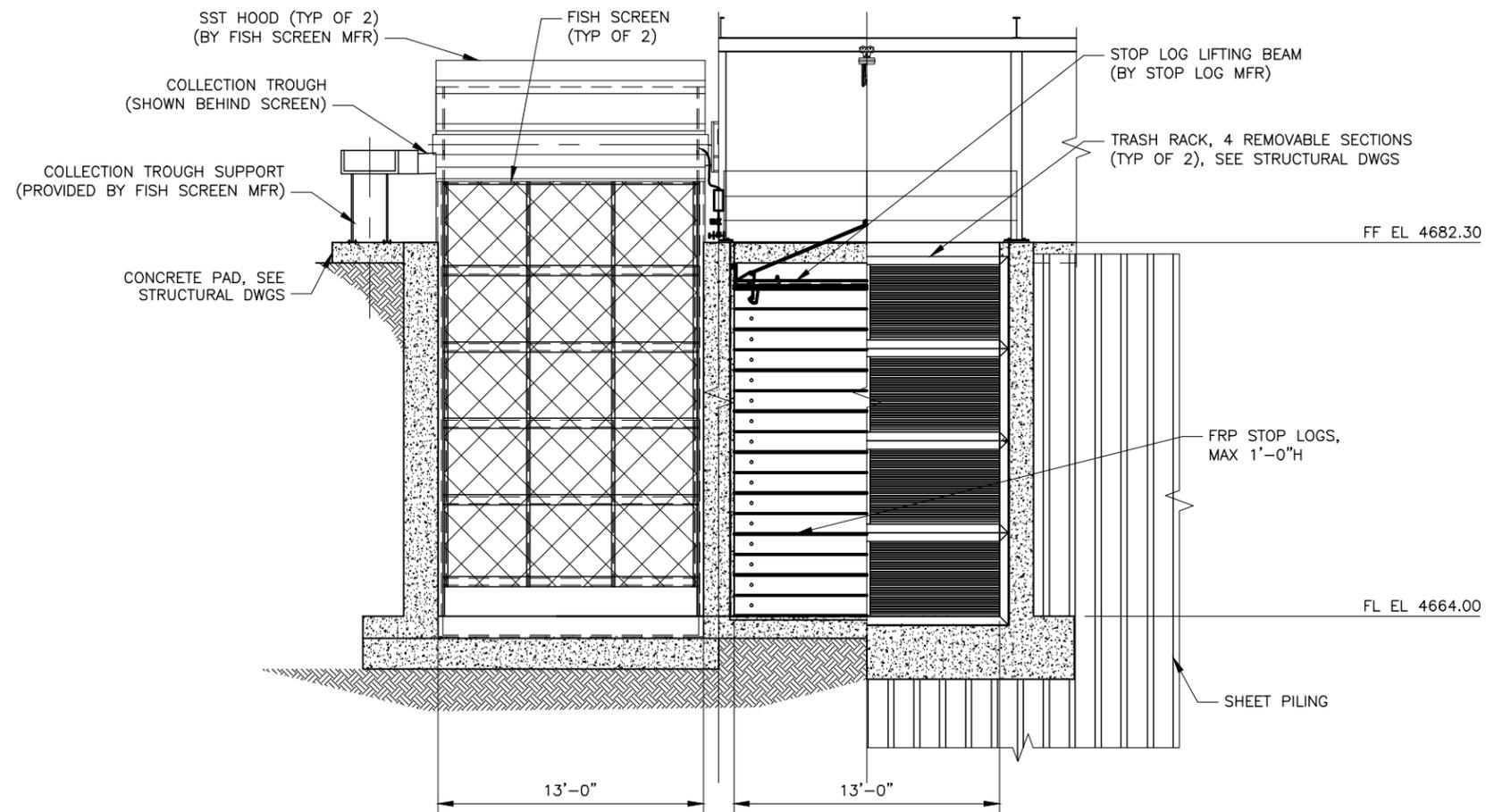


Figure 5
 GREEN RIVER PUMPING PROJECT
 TRASH RACK
 UTAH WATER CONSERVANCY DISTRICT





Figure 6
GREEN RIVER PUMPING PROJECT
EXISTING PRIVATE PUMP STATION
PHOTOS
UINTAH WATER CONSERVANCY DISTRICT



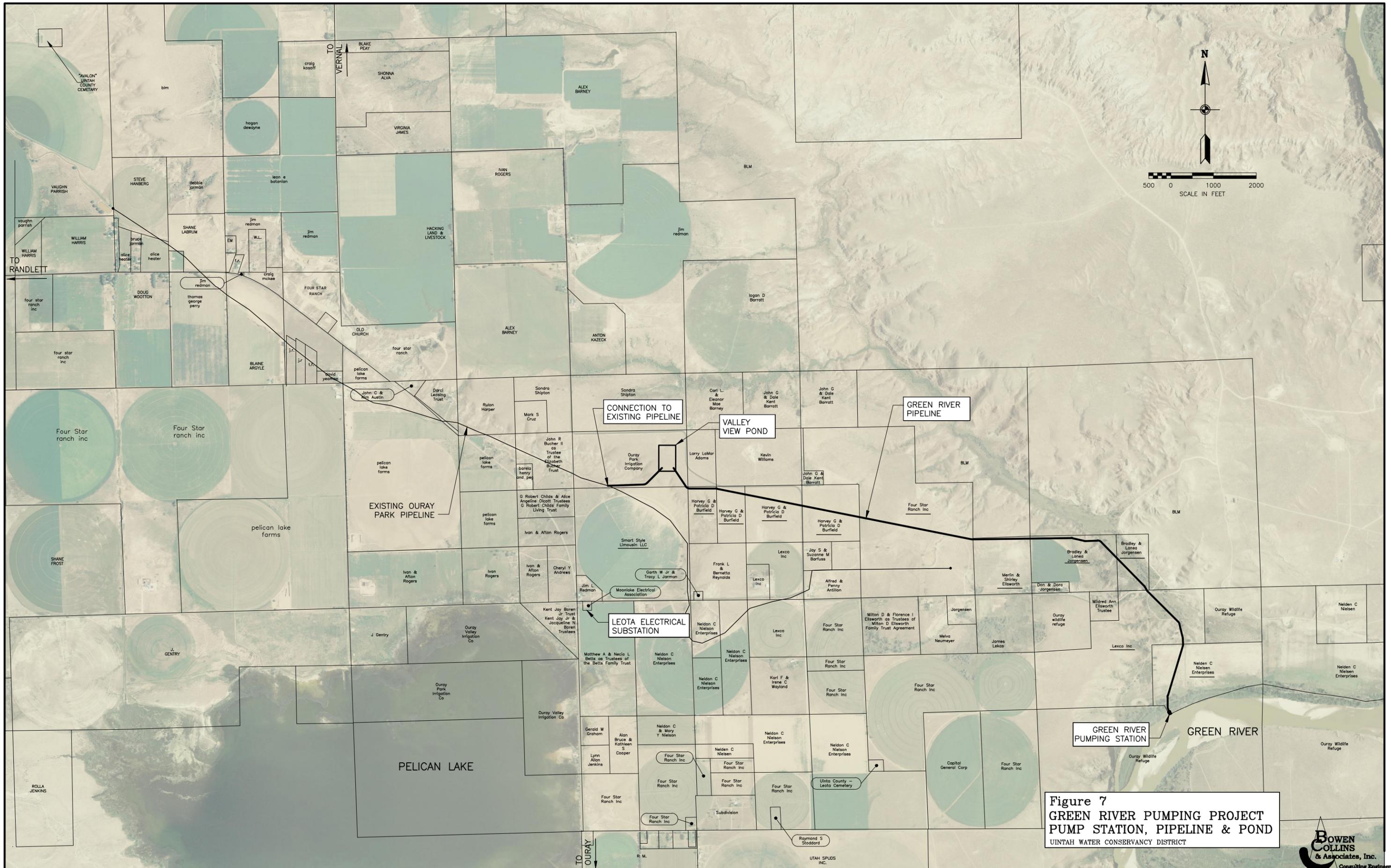


Figure 7
GREEN RIVER PUMPING PROJECT
PUMP STATION, PIPELINE & POND
 UTAH WATER CONSERVANCY DISTRICT



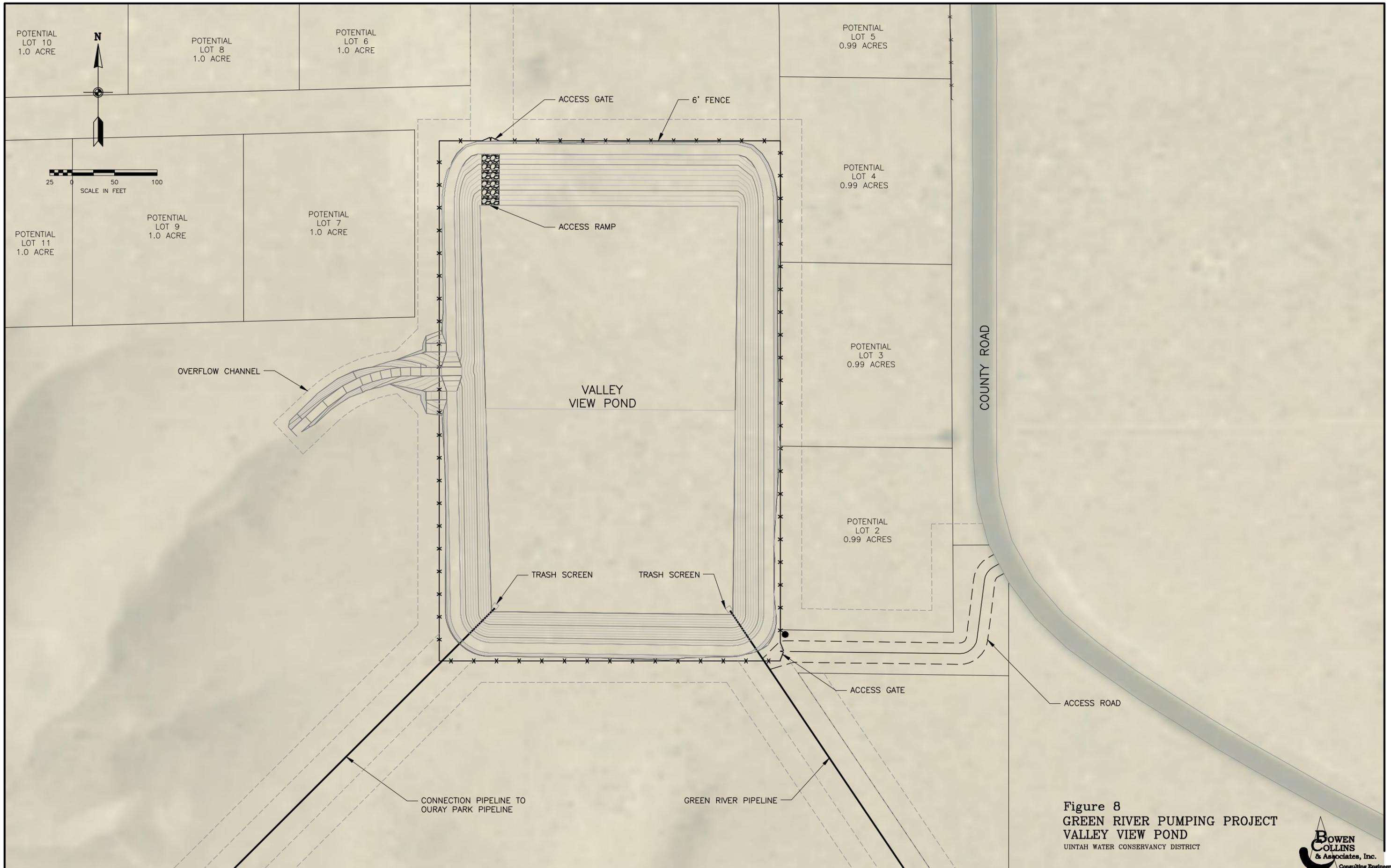


Figure 8
GREEN RIVER PUMPING PROJECT
VALLEY VIEW POND
 UTAH WATER CONSERVANCY DISTRICT





LOOKING NORTH-WEST INTO SITE FROM THE GREEN RIVER



LOOKING SOUTH-WEST INTO SITE TOWARDS THE GREEN RIVER



LOOKING SOUTH FROM SITE BANK



LOOKING SOUTH FROM SITE BANK

Figure 9
GREEN RIVER PUMPING PROJECT
PUMP STATION SITE PHOTOS
UINTAH WATER CONSERVANCY DISTRICT



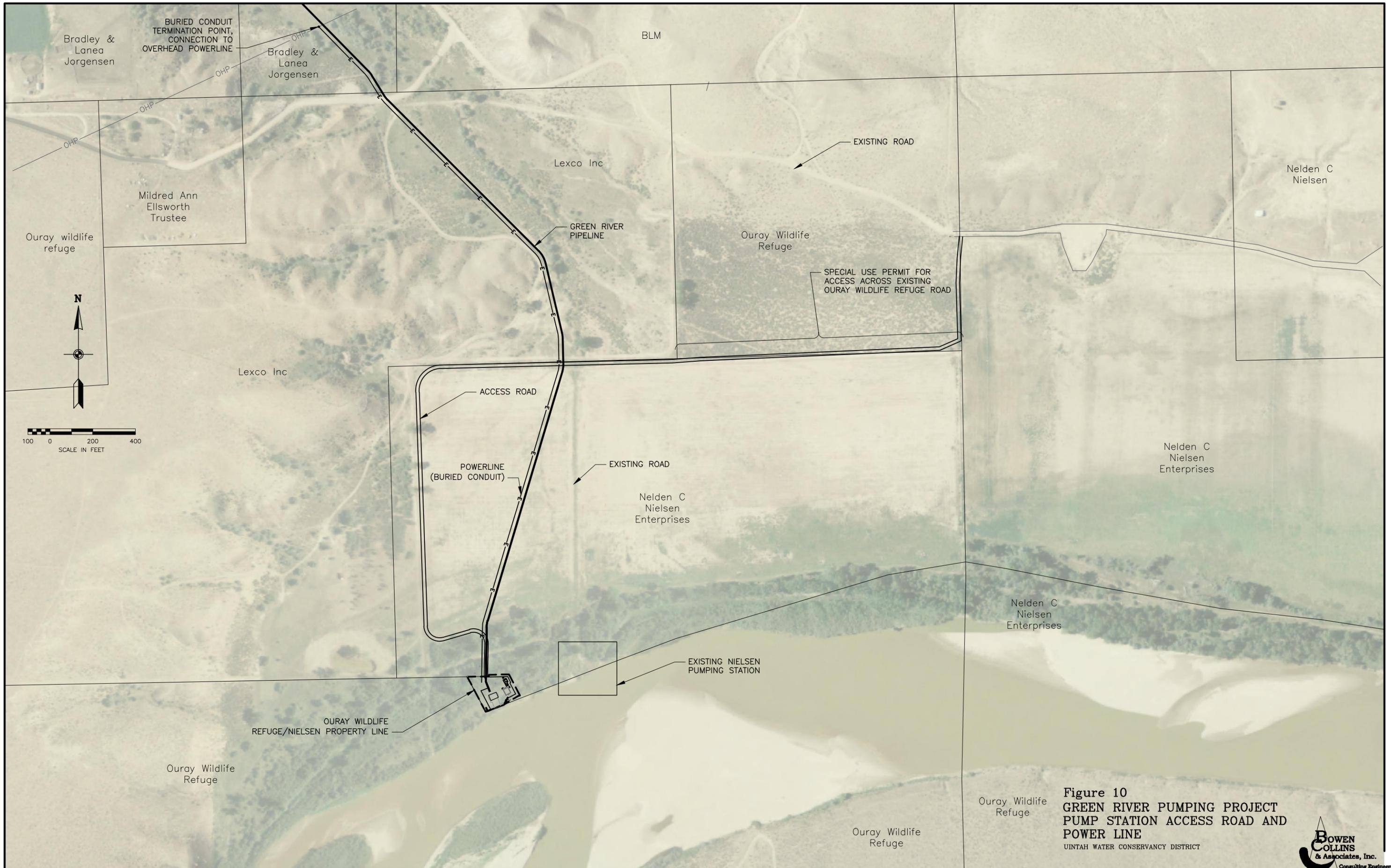
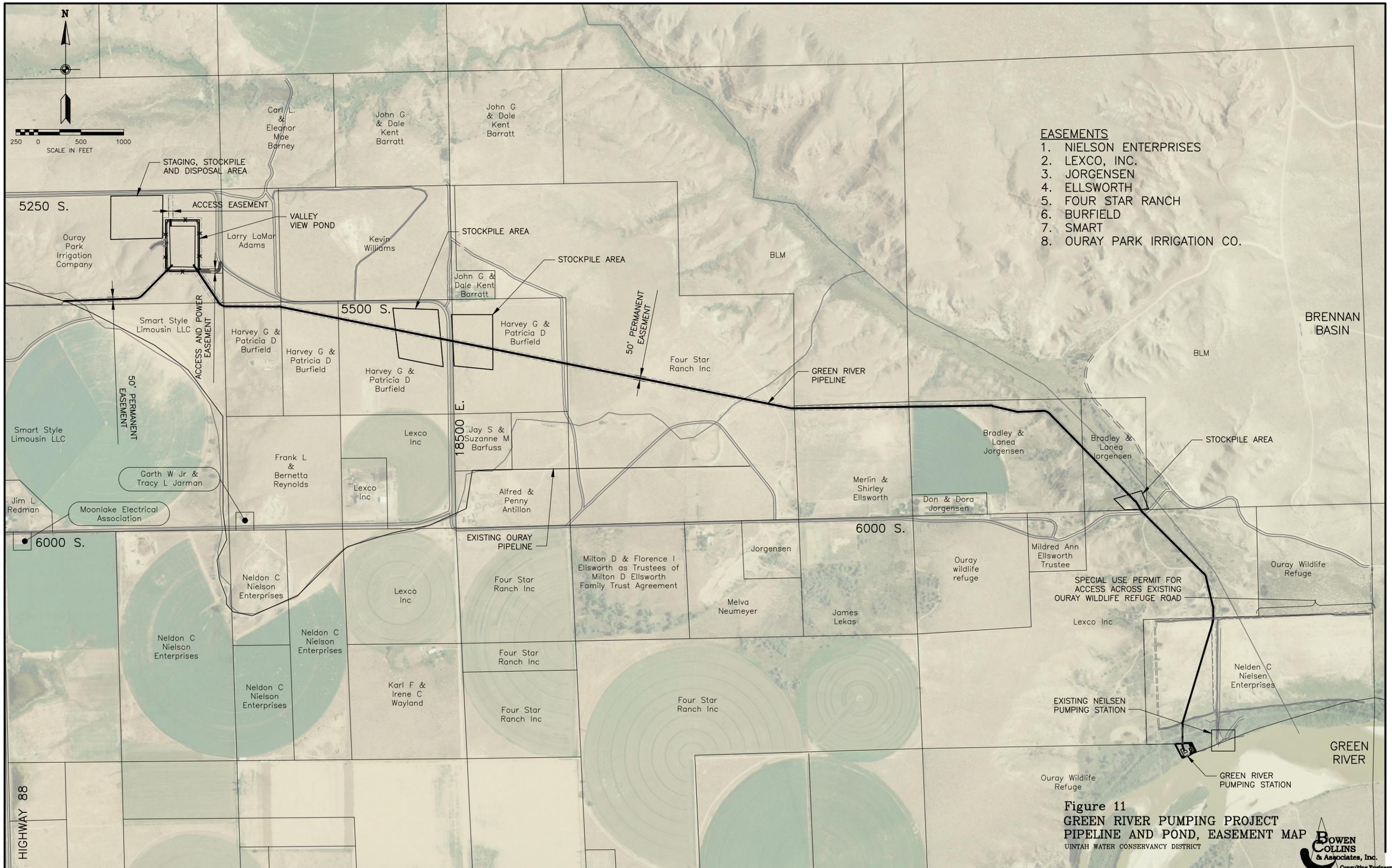


Figure 10
GREEN RIVER PUMPING PROJECT
PUMP STATION ACCESS ROAD AND
POWER LINE
 UTAH WATER CONSERVANCY DISTRICT





- EASEMENTS**
1. NIELSON ENTERPRISES
 2. LEXCO, INC.
 3. JORGENSEN
 4. ELLSWORTH
 5. FOUR STAR RANCH
 6. BURFIELD
 7. SMART
 8. OURAY PARK IRRIGATION CO.

Figure 11
GREEN RIVER PUMPING PROJECT
PIPELINE AND POND, EASEMENT MAP
 UTAH WATER CONSERVANCY DISTRICT



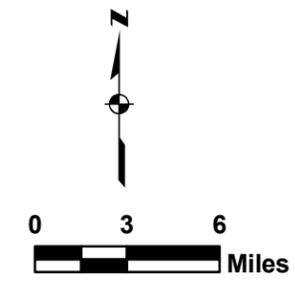


Figure 12
GREEN RIVER PUMPING PROJECT
USGS GAGE LOCATIONS

UINTAH WATER CONSERVANCY DISTRICT



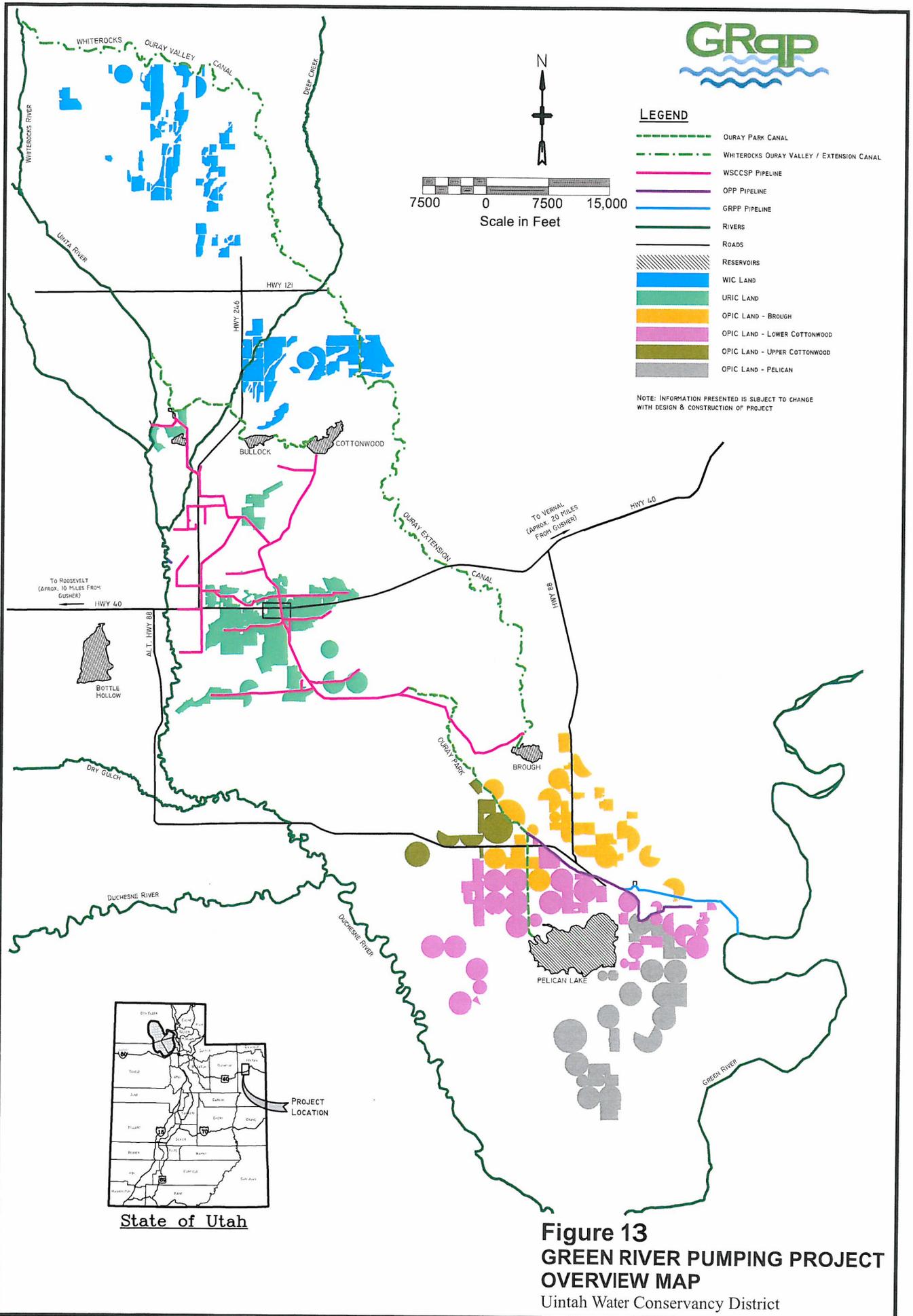


Figure 13
GREEN RIVER PUMPING PROJECT
OVERVIEW MAP
 Uintah Water Conservancy District

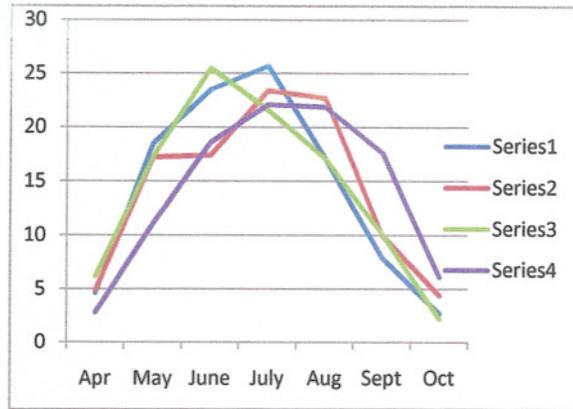
Appendix A

Irrigation Distribution Computations

Monthly Distribution

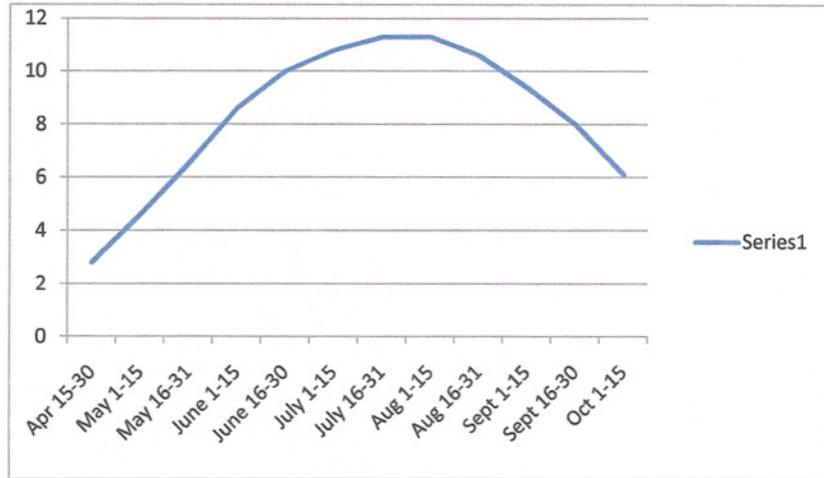
Green River Pumping Plant Irrigation Distribution Pattern

	Hist	Theor	State	GRPP
Apr	4.6	4.9	6.2	2.8
May	18.5	17.2	17.3	11.1
June	23.5	17.4	25.5	18.6
July	25.7	23.4	21.6	22.1
Aug	17.1	22.7	17.1	21.9
Sept	7.9	10.0	10.1	17.6
Oct	2.7	4.4	2.2	6.1
	100.0	100.0	100.0	100.2



New Demand Pattern

Apr 15-30	2.8	
May 1-15	4.6	11.1
May 16-31	6.5	
June 1-15	8.6	18.60
June 16-30	10.0	
July 1-15	10.8	22.10
July 16-31	11.3	
Aug 1-15	11.3	21.90
Aug 16-31	10.6	
Sept 1-15	9.4	17.40
Sept 16-30	8.0	
Oct 1-15	6.1	
Total	100.0	



	Historical		Supplemental		Total		Rounded	
	Percent	Demand	Percent	Demand	Demand	Percent	Percent	
Apr	4.6	227			227	2.8	2.8	
May	18.5	913			913	11.1	11.1	
June	23.5	1,160	11.2	372	1,532	18.6	18.6	
July	25.7	1,269	16.9	558	1,827	22.2	22.1	
Aug	17.1	844	29.2	967	1,811	22.0	21.9	
Sept	7.9	390	31.5	1,041	1,431	17.4	17.4	
Oct	2.7	133	11.2	372	505	6.1	6.1	
Total	100.0	4937	88.8	3,309	8,246	100.0	100.0	

Apr 15-30	2.8	238	280
May 1-15	4.6	391	460
May 16-31	6.5	553	650
June 1-15	8.6	731	860
June 16-30	10.0	850	1,000
July 1-15	10.8	918	1,080
July 16-31	11.3	960	1,130
Aug 1-15	11.3	960	1,130
Aug 16-31	10.6	901	1,060
Sept 1-15	9.4	799	940
Sept 16-30	8.0	680	800
Oct 1-15	6.1	519	610
Total	100.0	8,500	10,000

Supplemental Irrigation Computations

Month	<u>Uintah R Direct Flow</u>		<u>Distribution</u>		Diff*	Adj	Total	Percent
	Uinta R	Dir Flow	Hist	Theor				
Apr	4,906	4.4	4.6	4.9				
May	20,624	18.6	18.5	17.2				
June	35,322	31.8	23.5	17.4		1	1.0	11.2
July	19,334	17.4	25.7	23.4		1.5	1.5	16.9
Aug	13,239	11.9	17.1	22.7	5.6	-3.0	2.6	29.2
Sept	10,102	9.1	7.9	10.0	2.1	0.7	2.8	31.5
Oct	7,519	6.8	2.7	4.4	1.7	-0.7	1.0	11.2
Total	111,046	100.0	100.0	100.0	9.4		8.9	88.8

* Difference between theoretical (ideal demand) and historical, except in June and July. June and July are adjusted to reflect estimated storage component of historical deliveries

Water Demands

	Hist	Supp	Total GRPP	Exchange
WIC				400
URIC				1900
OPIC - Br				2300
OPIC - UC				332
OPIC - LC	4937	3309	8246	
OPIC - PL				
Total	4937	3309	8246	4932

Note: The Franson Civil study shows a total average delivery to the Lower Cottonwood Service area of 4,937 af/yr. This amount would be delivered on the historical distribution pattern. The study shows an additional delivery of 3,309 af/yr (2,949 + 360) delivered to the Lower Cottonwood Service area as supplemental water which would be delivered on a supplemental irrigation distribution pattern. The 4,937 af/yr historical to Lower Cottonwood would be exchanged higher in the system as supplemental water to the other project participants.

Animal Distribution

Green River Pumping Plant

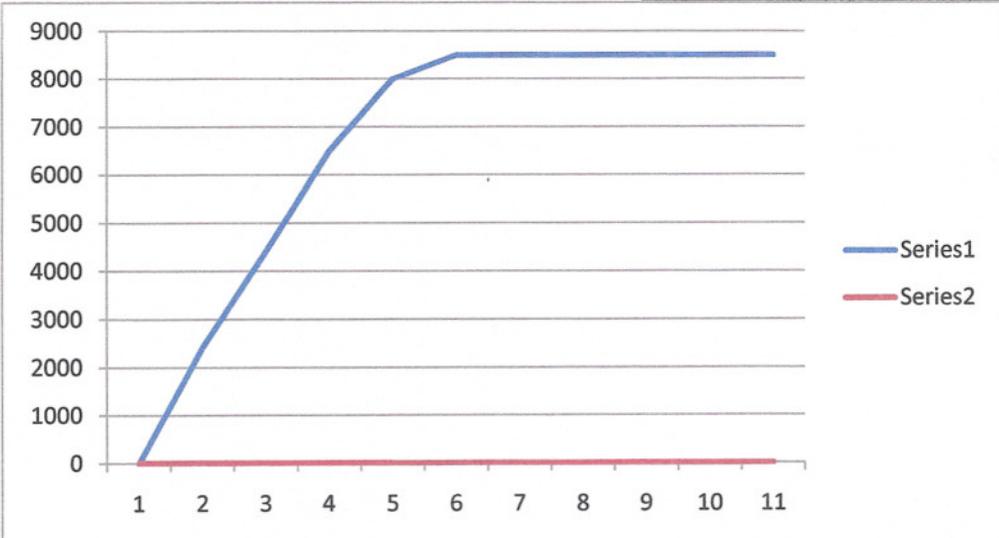
Annual Demand Variation

Based on Uinta River at Neola Gage

Year	U.R. Flow	Percent	Sorted		Water Year	%	Uinta R
1930	136,820	104.8	235,210	100%	Dry Year	80%	104,481
1931	84,374	64.6	223,650		Average Year	100%	130,602
1932	132,160	101.2	222,630		Wet Year	120%	156,722
1933	89,924	68.9	198,250				
1934	52,710	40.4	194,790				
1935	99,230	76.0	193,880		Uintah River	8,500 AF	10,000 AF
1936	105,424	80.7	183,110		235,210	0	-
1937	139,830	107.1	178,260	90%	223,650	648	762
1938	159,960	122.5	178,120		222,630	705	830
1939	117,122	89.7	176,580		198,250	2,072	2,438
1940	89,262	68.3	175,630		194,790	2,266	2,666
1941	194,790	149.1	174,580		193,880	2,317	2,726
1942	164,930	126.3	170,600		183,110	2,921	3,436
1943	124,555	95.4	164,930		178,260	3,193	3,756
1944	193,880	148.5	163,690	80%	178,120	3,200	3,765
1945	117,828	90.2	159,960		176,580	3,287	3,867
1946	91,076	69.7	159,839		175,630	3,340	3,929
1947	153,930	117.9	157,880		174,580	3,399	3,999
1948	98,277	75.2	153,930		170,600	3,622	4,261
1949	152,930	117.1	153,600		164,930	3,940	4,635
1950	137,650	105.4	152,930		163,690	4,009	4,717
1951	114,561	87.7	152,370	70%	159,960	4,218	4,963
1952	183,110	140.2	144,790		159,839	4,225	4,971
1953	105,380	80.7	140,580		157,880	4,335	5,100
1954	95,131	72.8	139,830		156,722	4,400	5,176
1955	96,571	73.9	138,930		153,930	4,851	5,707
1956	111,828	85.6	138,840		153,600	4,905	5,770
1957	124,070	95.0	137,650		152,930	5,013	5,898
1958	140,580	107.6	136,820	60%	152,370	5,103	6,004
1959	100,659	77.1	136,400		144,790	6,329	7,445
1960	99,876	76.5	133,324		140,580	7,009	8,246
1961	92,743	71.0	132,160		139,830	7,130	8,388
1962	176,580	135.2	131,355		138,930	7,276	8,560
1963	118,549	90.8	129,663		138,840	7,290	8,577
1964	153,600	117.6	124,555		137,650	7,483	8,803
1965	222,630	170.5	124,070	50%	136,820	7,617	8,961
1966	133,324	102.1	119,596		136,400	7,685	9,041
1967	174,580	133.7	118,549		133,324	8,182	9,626
1968	175,630	134.5	117,828		132,160	8,370	9,847
1969	170,600	130.6	117,122		131,355	8,500	10,000
1970	129,663	99.3	115,984				

Year	Value 1	Value 2	Value 3	Probability	Water Year	# Years	% Exceedence
1971	138,840	106.3	114,561				
1972	115,984	88.8	114,250	40%	< Dry	22	
1973	163,690	125.3	113,280		Dry - Ave	17	
1974	88,146	67.5	111,828		Ave to Wet	14	
1975	157,880	120.9	108,460		> Wet	18	
1976	100,682	77.1	107,411		Total	71	
1977	81,922	62.7	105,424				
1978	108,460	83.0	105,380				
1979	98,717	75.6	103,690	30%	Demand	Water Year	% Exceedence
1980	136,400	104.4	100,682		0	10	0
1981	113,280	86.7	100,659		2400	9	10
1982	152,370	116.7	99,984		4400	8	20
1983	235,210	180.1	99,876		6500	7	30
1984	159,839	122.4	99,230		8000	6	40
1985	131,355	100.6	98,717		8500	5	50
1986	178,120	136.4	98,277	20%	8500	4	60
1987	138,930	106.4	96,571		8500	3	70
1988	78,115	59.8	95,131		8500	2	80
1989	67,727	51.9	94,100		8500	1	90
1990	103,690	79.4	92,743		8500	0	100
1991	114,250	87.5	91,076				
1992	86,741	66.4	89,924				
1993	119,596	91.6	89,262	10%			
1994	94,100	72.1	88,146				
1995	223,650	171.2	86,741				
1996	107,411	82.2	84,374				
1997	144,790	110.9	81,922				
1998	198,250	151.8	78,115				
1999	178,260	136.5	67,727				
2000	99,984	76.6	52,710	0%			
	9,272,716						
	130,602						

Range	Probability
0 - 2400	10%
2400 - 4400	20%
4400 - 6500	30%
6500 - 8000	40%
8000 - 8500	50%



Appendix B

Pumping Plant and Pond Operation Analysis Output

Pump Operation

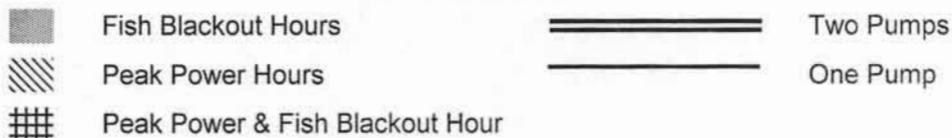
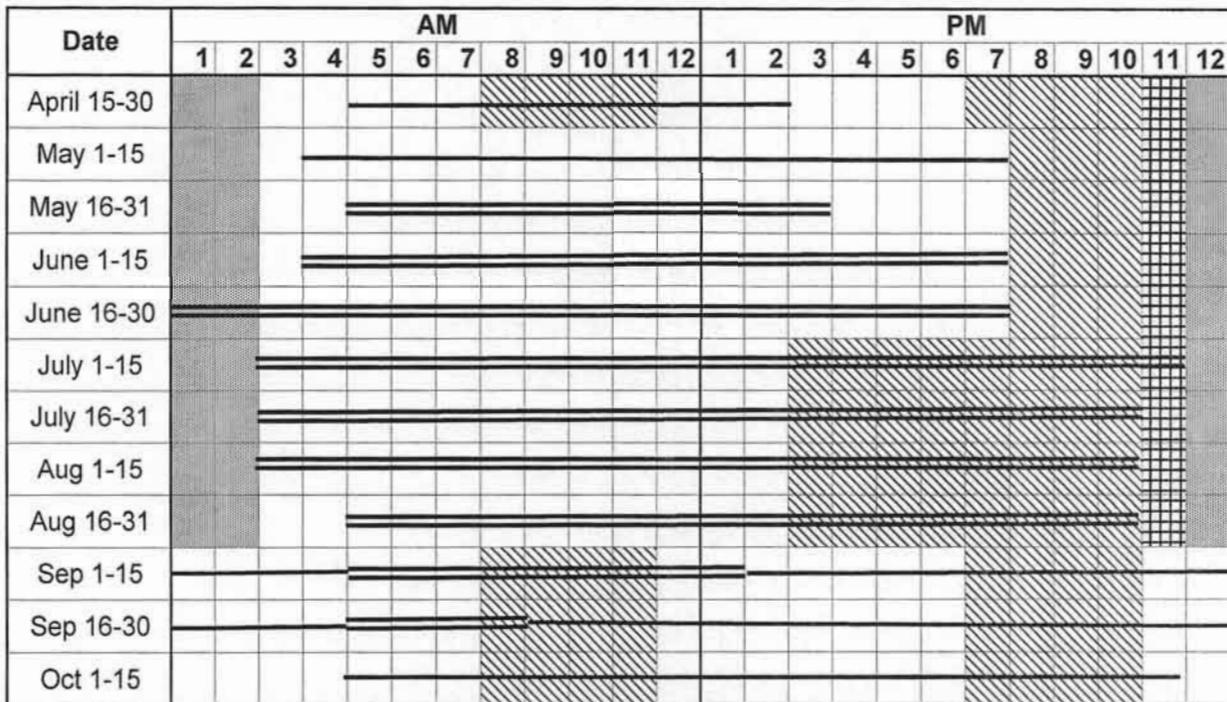
Initial Phase – 8,500 af/yr

Two Pumps

Green River Pumping Plant

Pump Operation Hours

Initial Phase (8,500 af/yr) - Two Pump Option



Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

April 15-30

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		238					30.0			
Input	1.7	0.7	0.7		1.0	0.0	12.0			
1am		0.7	0.0	0.7	0.0	0.7	11.3	0.0		
2am		0.7	0.0	0.7	0.0	0.7	10.6	0.0		
3am		0.7	0.0	0.7	0.0	0.7	9.9	0.0		
4am		0.7	0.0	0.7	0.0	0.7	9.2	0.0		
5am	1.7	0.7	0.7	0.0	1.0	0.0	10.2	0.0		
6am	1.7	0.7	0.7	0.0	1.0	0.0	11.2	0.0		
7am	1.7	0.7	0.7	0.0	1.0	0.0	12.2	0.0		
8am	1.7	0.7	0.7	0.0	1.0	0.0	13.2	0.0		
9am	1.7	0.7	0.7	0.0	1.0	0.0	14.2	0.0		
10am	1.7	0.7	0.7	0.0	1.0	0.0	15.2	0.0		
11am	1.7	0.7	0.7	0.0	1.0	0.0	16.2	0.0		
12 noon	1.7	0.7	0.7	0.0	1.0	0.0	17.2	0.0		
1pm	1.7	0.7	0.7	0.0	1.0	0.0	18.2	0.0		
2pm	1.7	0.7	0.7	0.0	1.0	0.0	19.2	0.0		
3pm		0.7	0.0	0.7	0.0	0.7	18.5	0.0		
4pm		0.7	0.0	0.7	0.0	0.7	17.8	0.0		
5pm		0.7	0.0	0.7	0.0	0.7	17.1	0.0		
6pm		0.7	0.0	0.7	0.0	0.7	16.4	0.0		
7pm		0.7	0.0	0.7	0.0	0.7	15.7	0.0		
8pm		0.7	0.0	0.7	0.0	0.7	15.0	0.0		
9pm		0.7	0.0	0.7	0.0	0.7	14.3	0.0		
10pm		0.7	0.0	0.7	0.0	0.7	13.6	0.0		
11pm		0.7	0.0	0.7	0.0	0.7	12.9	0.0		
12pm		0.7	0.0	0.7	0.0	0.7	12.2	0.0		
Total	17.0	16.8	7.0	9.8	10.0	9.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

May 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		391					30.0			
Input	1.7	1.1	1.1		0.6	0.0	12.0			
1am		1.1	0.0	1.1	0.0	1.1	10.9	0.0		
2am		1.1	0.0	1.1	0.0	1.1	9.8	0.0		
3am		1.1	0.0	1.1	0.0	1.1	8.7	0.0		
4am	1.7	1.1	1.1	0.0	0.6	0.0	9.3	0.0		
5am	1.7	1.1	1.1	0.0	0.6	0.0	9.9	0.0		
6am	1.7	1.1	1.1	0.0	0.6	0.0	10.5	0.0		
7am	1.7	1.1	1.1	0.0	0.6	0.0	11.1	0.0		
8am	1.7	1.1	1.1	0.0	0.6	0.0	11.7	0.0		
9am	1.7	1.1	1.1	0.0	0.6	0.0	12.3	0.0		
10am	1.7	1.1	1.1	0.0	0.6	0.0	12.9	0.0		
11am	1.7	1.1	1.1	0.0	0.6	0.0	13.5	0.0		
12 noon	1.7	1.1	1.1	0.0	0.6	0.0	14.1	0.0		
1pm	1.7	1.1	1.1	0.0	0.6	0.0	14.7	0.0		
2pm	1.7	1.1	1.1	0.0	0.6	0.0	15.3	0.0		
3pm	1.7	1.1	1.1	0.0	0.6	0.0	15.9	0.0		
4pm	1.7	1.1	1.1	0.0	0.6	0.0	16.5	0.0		
5pm	1.7	1.1	1.1	0.0	0.6	0.0	17.1	0.0		
6pm	1.7	1.1	1.1	0.0	0.6	0.0	17.7	0.0		
7pm	1.7	1.1	1.1	0.0	0.6	0.0	18.3	0.0		
8pm		1.1	0.0	1.1	0.0	1.1	17.2	0.0		
9pm		1.1	0.0	1.1	0.0	1.1	16.1	0.0		
10pm		1.1	0.0	1.1	0.0	1.1	15.0	0.0		
11pm		1.1	0.0	1.1	0.0	1.1	13.9	0.0		
12pm		1.1	0.0	1.1	0.0	1.1	12.8	0.0		
Total	27.2	26.4	17.6	8.8	9.6	8.8		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

May 16-31

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		553	1.4		1.7	0.0	30.0			
Input	3.1	1.4	1.4		1.7	0.0	12.0			
1am		1.4	0.0	1.4	0.0	1.4	10.6	0.0		
2am		1.4	0.0	1.4	0.0	1.4	9.2	0.0		
3am		1.4	0.0	1.4	0.0	1.4	7.8	0.0		
4am		1.4	0.0	1.4	0.0	1.4	6.4	0.0		
5am	3.1	1.4	1.4	0.0	1.7	0.0	8.1	0.0		
6am	3.1	1.4	1.4	0.0	1.7	0.0	9.8	0.0		
7am	3.1	1.4	1.4	0.0	1.7	0.0	11.5	0.0		
8am	3.1	1.4	1.4	0.0	1.7	0.0	13.2	0.0		
9am	3.1	1.4	1.4	0.0	1.7	0.0	14.9	0.0		
10am	3.1	1.4	1.4	0.0	1.7	0.0	16.6	0.0		
11am	3.1	1.4	1.4	0.0	1.7	0.0	18.3	0.0		
12 noon	3.1	1.4	1.4	0.0	1.7	0.0	20.0	0.0		
1pm	3.1	1.4	1.4	0.0	1.7	0.0	21.7	0.0		
2pm	3.1	1.4	1.4	0.0	1.7	0.0	23.4	0.0		
3pm	3.1	1.4	1.4	0.0	1.7	0.0	25.1	0.0		
4pm		1.4	0.0	1.4	0.0	1.4	23.7	0.0		
5pm		1.4	0.0	1.4	0.0	1.4	22.3	0.0		
6pm		1.4	0.0	1.4	0.0	1.4	20.9	0.0		
7pm		1.4	0.0	1.4	0.0	1.4	19.5	0.0		
8pm		1.4	0.0	1.4	0.0	1.4	18.1	0.0		
9pm		1.4	0.0	1.4	0.0	1.4	16.7	0.0		
10pm		1.4	0.0	1.4	0.0	1.4	15.3	0.0		
11pm		1.4	0.0	1.4	0.0	1.4	13.9	0.0		
12pm		1.4	0.0	1.4	0.0	1.4	12.5	0.0		
Total	34.1	33.6	15.4	18.2	18.7	18.2		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

June 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 731	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.0	2.0		1.1	0.0	12.0			
1am		2.0	0.0	2.0	0.0	2.0	10.0	0.0		
2am		2.0	0.0	2.0	0.0	2.0	8.0	0.0		
3am		2.0	0.0	2.0	0.0	2.0	6.0	0.0		
4am	3.1	2.0	2.0	0.0	1.1	0.0	7.1	0.0		
5am	3.1	2.0	2.0	0.0	1.1	0.0	8.2	0.0		
6am	3.1	2.0	2.0	0.0	1.1	0.0	9.3	0.0		
7am	3.1	2.0	2.0	0.0	1.1	0.0	10.4	0.0		
8am	3.1	2.0	2.0	0.0	1.1	0.0	11.5	0.0		
9am	3.1	2.0	2.0	0.0	1.1	0.0	12.6	0.0		
10am	3.1	2.0	2.0	0.0	1.1	0.0	13.7	0.0		
11am	3.1	2.0	2.0	0.0	1.1	0.0	14.8	0.0		
12 noon	3.1	2.0	2.0	0.0	1.1	0.0	15.9	0.0		
1pm	3.1	2.0	2.0	0.0	1.1	0.0	17.0	0.0		
2pm	3.1	2.0	2.0	0.0	1.1	0.0	18.1	0.0		
3pm	3.1	2.0	2.0	0.0	1.1	0.0	19.2	0.0		
4pm	3.1	2.0	2.0	0.0	1.1	0.0	20.3	0.0		
5pm	3.1	2.0	2.0	0.0	1.1	0.0	21.4	0.0		
6pm	3.1	2.0	2.0	0.0	1.1	0.0	22.5	0.0		
7pm	3.1	2.0	2.0	0.0	1.1	0.0	23.6	0.0		
8pm		2.0	0.0	2.0	0.0	2.0	21.6	0.0		
9pm		2.0	0.0	2.0	0.0	2.0	19.6	0.0		
10pm		2.0	0.0	2.0	0.0	2.0	17.6	0.0		
11pm		2.0	0.0	2.0	0.0	2.0	15.6	0.0		
12pm		2.0	0.0	2.0	0.0	2.0	13.6	0.0		
Total	49.6	48.0	32.0	16.0	17.6	16.0		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

June 16-30

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 850	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.4	2.4		0.7	0.0	12.0			
1am	3.1	2.4	2.4	0.0	0.7	0.0	12.7	0.0		
2am	3.1	2.4	2.4	0.0	0.7	0.0	13.4	0.0		
3am	3.1	2.4	2.4	0.0	0.7	0.0	14.1	0.0		
4am	3.1	2.4	2.4	0.0	0.7	0.0	14.8	0.0		
5am	3.1	2.4	2.4	0.0	0.7	0.0	15.5	0.0		
6am	3.1	2.4	2.4	0.0	0.7	0.0	16.2	0.0		
7am	3.1	2.4	2.4	0.0	0.7	0.0	16.9	0.0		
8am	3.1	2.4	2.4	0.0	0.7	0.0	17.6	0.0		
9am	3.1	2.4	2.4	0.0	0.7	0.0	18.3	0.0		
10am	3.1	2.4	2.4	0.0	0.7	0.0	19.0	0.0		
11am	3.1	2.4	2.4	0.0	0.7	0.0	19.7	0.0		
12 noon	3.1	2.4	2.4	0.0	0.7	0.0	20.4	0.0		
1pm	3.1	2.4	2.4	0.0	0.7	0.0	21.1	0.0		
2pm	3.1	2.4	2.4	0.0	0.7	0.0	21.8	0.0		
3pm	3.1	2.4	2.4	0.0	0.7	0.0	22.5	0.0		
4pm	3.1	2.4	2.4	0.0	0.7	0.0	23.2	0.0		
5pm	3.1	2.4	2.4	0.0	0.7	0.0	23.9	0.0		
6pm	3.1	2.4	2.4	0.0	0.7	0.0	24.6	0.0		
7pm	3.1	2.4	2.4	0.0	0.7	0.0	25.3	0.0		
8pm		2.4	0.0	2.4	0.0	2.4	22.9	0.0		
9pm		2.4	0.0	2.4	0.0	2.4	20.5	0.0		
10pm		2.4	0.0	2.4	0.0	2.4	18.1	0.0		
11pm		2.4	0.0	2.4	0.0	2.4	15.7	0.0		
12pm		2.4	0.0	2.4	0.0	2.4	13.3	0.0		
Total	58.9	57.6	45.6	12.0	13.3	12.0		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

July 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		918					30.0			
Input	3.1	2.6	2.6		0.5	0.0	12.0			
1am		2.6	0.0	2.6	0.0	2.6	9.4	0.0		
2am		2.6	0.0	2.6	0.0	2.6	6.8	0.0		
3am	3.1	2.6	2.6	0.0	0.5	0.0	7.3	0.0		
4am	3.1	2.6	2.6	0.0	0.5	0.0	7.8	0.0		
5am	3.1	2.6	2.6	0.0	0.5	0.0	8.3	0.0		
6am	3.1	2.6	2.6	0.0	0.5	0.0	8.8	0.0		
7am	3.1	2.6	2.6	0.0	0.5	0.0	9.3	0.0		
8am	3.1	2.6	2.6	0.0	0.5	0.0	9.8	0.0		
9am	3.1	2.6	2.6	0.0	0.5	0.0	10.3	0.0		
10am	3.1	2.6	2.6	0.0	0.5	0.0	10.8	0.0		
11am	3.1	2.6	2.6	0.0	0.5	0.0	11.3	0.0		
12 noon	3.1	2.6	2.6	0.0	0.5	0.0	11.8	0.0		
1pm	3.1	2.6	2.6	0.0	0.5	0.0	12.3	0.0		
2pm	3.1	2.6	2.6	0.0	0.5	0.0	12.8	0.0		
3pm	3.1	2.6	2.6	0.0	0.5	0.0	13.3	0.0		
4pm	3.1	2.6	2.6	0.0	0.5	0.0	13.8	0.0		
5pm	3.1	2.6	2.6	0.0	0.5	0.0	14.3	0.0		
6pm	3.1	2.6	2.6	0.0	0.5	0.0	14.8	0.0		
7pm	3.1	2.6	2.6	0.0	0.5	0.0	15.3	0.0		
8pm	3.1	2.6	2.6	0.0	0.5	0.0	15.8	0.0		
9pm	3.1	2.6	2.6	0.0	0.5	0.0	16.3	0.0		
10pm	3.1	2.6	2.6	0.0	0.5	0.0	16.8	0.0		
11pm	3.1	2.6	2.6	0.0	0.5	0.0	17.3	0.0		
12pm		2.6	0.0	2.6	0.0	2.6	14.7	0.0		
Total	65.1	62.4	54.6	7.8	10.5	7.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

July 16-31

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 970	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.5	2.5		0.6	0.0	12.0			
1am		2.5	0.0	2.5	0.0	2.5	9.5	0.0		
2am		2.5	0.0	2.5	0.0	2.5	7.0	0.0		
3am	3.1	2.5	2.5	0.0	0.6	0.0	7.6	0.0		
4am	3.1	2.5	2.5	0.0	0.6	0.0	8.2	0.0		
5am	3.1	2.5	2.5	0.0	0.6	0.0	8.8	0.0		
6am	3.1	2.5	2.5	0.0	0.6	0.0	9.4	0.0		
7am	3.1	2.5	2.5	0.0	0.6	0.0	10.0	0.0		
8am	3.1	2.5	2.5	0.0	0.6	0.0	10.6	0.0		
9am	3.1	2.5	2.5	0.0	0.6	0.0	11.2	0.0		
10am	3.1	2.5	2.5	0.0	0.6	0.0	11.8	0.0		
11am	3.1	2.5	2.5	0.0	0.6	0.0	12.4	0.0		
12 noon	3.1	2.5	2.5	0.0	0.6	0.0	13.0	0.0		
1pm	3.1	2.5	2.5	0.0	0.6	0.0	13.6	0.0		
2pm	3.1	2.5	2.5	0.0	0.6	0.0	14.2	0.0		
3pm	3.1	2.5	2.5	0.0	0.6	0.0	14.8	0.0		
4pm	3.1	2.5	2.5	0.0	0.6	0.0	15.4	0.0		
5pm	3.1	2.5	2.5	0.0	0.6	0.0	16.0	0.0		
6pm	3.1	2.5	2.5	0.0	0.6	0.0	16.6	0.0		
7pm	3.1	2.5	2.5	0.0	0.6	0.0	17.2	0.0		
8pm	3.1	2.5	2.5	0.0	0.6	0.0	17.8	0.0		
9pm	3.1	2.5	2.5	0.0	0.6	0.0	18.4	0.0		
10pm	3.1	2.5	2.5	0.0	0.6	0.0	19.0	0.0		
11pm		2.5	0.0	2.5	0.0	2.5	16.5	0.0		
12pm		2.5	0.0	2.5	0.0	2.5	14.0	0.0		
Total	62.0	60.0	50.0	10.0	12.0	10.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

August 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 960	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.5	2.5		0.6	0.0	12.0			
1am		2.5	0.0	2.5	0.0	2.5	9.5	0.0		
2am		2.5	0.0	2.5	0.0	2.5	7.0	0.0		
3am	3.1	2.5	2.5	0.0	0.6	0.0	7.6	0.0		
4am	3.1	2.5	2.5	0.0	0.6	0.0	8.2	0.0		
5am	3.1	2.5	2.5	0.0	0.6	0.0	8.8	0.0		
6am	3.1	2.5	2.5	0.0	0.6	0.0	9.4	0.0		
7am	3.1	2.5	2.5	0.0	0.6	0.0	10.0	0.0		
8am	3.1	2.5	2.5	0.0	0.6	0.0	10.6	0.0		
9am	3.1	2.5	2.5	0.0	0.6	0.0	11.2	0.0		
10am	3.1	2.5	2.5	0.0	0.6	0.0	11.8	0.0		
11am	3.1	2.5	2.5	0.0	0.6	0.0	12.4	0.0		
12 noon	3.1	2.5	2.5	0.0	0.6	0.0	13.0	0.0		
1pm	3.1	2.5	2.5	0.0	0.6	0.0	13.6	0.0		
2pm	3.1	2.5	2.5	0.0	0.6	0.0	14.2	0.0		
3pm	3.1	2.5	2.5	0.0	0.6	0.0	14.8	0.0		
4pm	3.1	2.5	2.5	0.0	0.6	0.0	15.4	0.0		
5pm	3.1	2.5	2.5	0.0	0.6	0.0	16.0	0.0		
6pm	3.1	2.5	2.5	0.0	0.6	0.0	16.6	0.0		
7pm	3.1	2.5	2.5	0.0	0.6	0.0	17.2	0.0		
8pm	3.1	2.5	2.5	0.0	0.6	0.0	17.8	0.0		
9pm	3.1	2.5	2.5	0.0	0.6	0.0	18.4	0.0		
10pm	3.1	2.5	2.5	0.0	0.6	0.0	19.0	0.0		
11pm		2.5	0.0	2.5	0.0	2.5	16.5	0.0		
12pm		2.5	0.0	2.5	0.0	2.5	14.0	0.0		
Total	62.0	60.0	50.0	10.0	12.0	10.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

August 16-31

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 901	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.3	2.3		0.8	0.0	12.0			
1am		2.3	0.0	2.3	0.0	2.3	9.7	0.0		
2am		2.3	0.0	2.3	0.0	2.3	7.4	0.0		
3am		2.3	0.0	2.3	0.0	2.3	5.1	0.0		
4am		2.3	0.0	2.3	0.0	2.3	2.8	0.0		
5am	3.1	2.3	2.3	0.0	0.8	0.0	3.6	0.0		
6am	3.1	2.3	2.3	0.0	0.8	0.0	4.4	0.0		
7am	3.1	2.3	2.3	0.0	0.8	0.0	5.2	0.0		
8am	3.1	2.3	2.3	0.0	0.8	0.0	6.0	0.0		
9am	3.1	2.3	2.3	0.0	0.8	0.0	6.8	0.0		
10am	3.1	2.3	2.3	0.0	0.8	0.0	7.6	0.0		
11am	3.1	2.3	2.3	0.0	0.8	0.0	8.4	0.0		
12 noon	3.1	2.3	2.3	0.0	0.8	0.0	9.2	0.0		
1pm	3.1	2.3	2.3	0.0	0.8	0.0	10.0	0.0		
2pm	3.1	2.3	2.3	0.0	0.8	0.0	10.8	0.0		
3pm	3.1	2.3	2.3	0.0	0.8	0.0	11.6	0.0		
4pm	3.1	2.3	2.3	0.0	0.8	0.0	12.4	0.0		
5pm	3.1	2.3	2.3	0.0	0.8	0.0	13.2	0.0		
6pm	3.1	2.3	2.3	0.0	0.8	0.0	14.0	0.0		
7pm	3.1	2.3	2.3	0.0	0.8	0.0	14.8	0.0		
8pm	3.1	2.3	2.3	0.0	0.8	0.0	15.6	0.0		
9pm	3.1	2.3	2.3	0.0	0.8	0.0	16.4	0.0		
10pm	3.1	2.3	2.3	0.0	0.8	0.0	17.2	0.0		
11pm		2.3	0.0	2.3	0.0	2.3	14.9	0.0		
12pm		2.3	0.0	2.3	0.0	2.3	12.6	0.0		
Total	55.8	55.2	41.4	13.8	14.4	13.8		0.0		

Non-pump hour

Peak Power Hour

Pump durir Pump during "Fish Blackout"

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

September 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 799	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	2.2	1.7		0.0	0.5	12.0			
1am	1.7	2.2	1.7	0.5	0.0	0.5	11.5	0.0		
2am	1.7	2.2	1.7	0.5	0.0	0.5	11.0	0.0		
3am	1.7	2.2	1.7	0.5	0.0	0.5	10.5	0.0		
4am	1.7	2.2	1.7	0.5	0.0	0.5	10.0	0.0		
5am	3.1	2.2	2.2	0.0	0.9	0.0	10.9	0.0		
6am	3.1	2.2	2.2	0.0	0.9	0.0	11.8	0.0		
7am	3.1	2.2	2.2	0.0	0.9	0.0	12.7	0.0		
8am	3.1	2.2	2.2	0.0	0.9	0.0	13.6	0.0		
9am	3.1	2.2	2.2	0.0	0.9	0.0	14.5	0.0		
10am	3.1	2.2	2.2	0.0	0.9	0.0	15.4	0.0		
11am	3.1	2.2	2.2	0.0	0.9	0.0	16.3	0.0		
12 noon	3.1	2.2	2.2	0.0	0.9	0.0	17.2	0.0		
1pm	3.1	2.2	2.2	0.0	0.9	0.0	18.1	0.0		
2pm	1.7	2.2	1.7	0.5	0.0	0.5	17.6	0.0		
3pm	1.7	2.2	1.7	0.5	0.0	0.5	17.1	0.0		
4pm	1.7	2.2	1.7	0.5	0.0	0.5	16.6	0.0		
5pm	1.7	2.2	1.7	0.5	0.0	0.5	16.1	0.0		
6pm	1.7	2.2	1.7	0.5	0.0	0.5	15.6	0.0		
7pm	1.7	2.2	1.7	0.5	0.0	0.5	15.1	0.0		
8pm	1.7	2.2	1.7	0.5	0.0	0.5	14.6	0.0		
9pm	1.7	2.2	1.7	0.5	0.0	0.5	14.1	0.0		
10pm	1.7	2.2	1.7	0.5	0.0	0.5	13.6	0.0		
11pm	1.7	2.2	1.7	0.5	0.0	0.5	13.1	0.0		
12pm	1.7	2.2	1.7	0.5	0.0	0.5	12.6	0.0		
Total	53.4	52.8	45.3	7.5	8.1	7.5		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

September 16-30

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 680	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	1.9	1.7		0.0	0.2	12.0			
1am	1.7	1.9	1.7	0.2	0.0	0.2	11.8	0.0		
2am	1.7	1.9	1.7	0.2	0.0	0.2	11.6	0.0		
3am	1.7	1.9	1.7	0.2	0.0	0.2	11.4	0.0		
4am	1.7	1.9	1.7	0.2	0.0	0.2	11.2	0.0		
5am	3.1	1.9	1.9	0.0	1.2	0.0	12.4	0.0		
6am	3.1	1.9	1.9	0.0	1.2	0.0	13.6	0.0		
7am	3.1	1.9	1.9	0.0	1.2	0.0	14.8	0.0		
8am	3.1	1.9	1.9	0.0	1.2	0.0	16.0	0.0		
9am	1.7	1.9	1.7	0.2	0.0	0.2	15.8	0.0		
10am	1.7	1.9	1.7	0.2	0.0	0.2	15.6	0.0		
11am	1.7	1.9	1.7	0.2	0.0	0.2	15.4	0.0		
12 noon	1.7	1.9	1.7	0.2	0.0	0.2	15.2	0.0		
1pm	1.7	1.9	1.7	0.2	0.0	0.2	15.0	0.0		
2pm	1.7	1.9	1.7	0.2	0.0	0.2	14.8	0.0		
3pm	1.7	1.9	1.7	0.2	0.0	0.2	14.6	0.0		
4pm	1.7	1.9	1.7	0.2	0.0	0.2	14.4	0.0		
5pm	1.7	1.9	1.7	0.2	0.0	0.2	14.2	0.0		
6pm	1.7	1.9	1.7	0.2	0.0	0.2	14.0	0.0		
7pm	1.7	1.9	1.7	0.2	0.0	0.2	13.8	0.0		
8pm	1.7	1.9	1.7	0.2	0.0	0.2	13.6	0.0		
9pm	1.7	1.9	1.7	0.2	0.0	0.2	13.4	0.0		
10pm	1.7	1.9	1.7	0.2	0.0	0.2	13.2	0.0		
11pm	1.7	1.9	1.7	0.2	0.0	0.2	13.0	0.0		
12pm	1.7	1.9	1.7	0.2	0.0	0.2	12.8	0.0		
Total	46.4	45.6	41.6	4.0	4.8	4.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Two-Pump Option

October 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		519					30.0			
Input	1.7	1.4	1.4		0.3	0.0	12.0			
1am		1.4	0.0	1.4	0.0	1.4	10.6	0.0		
2am		1.4	0.0	1.4	0.0	1.4	9.2	0.0		
3am		1.4	0.0	1.4	0.0	1.4	7.8	0.0		
4am	1.7	1.4	1.4	0.0	0.3	0.0	8.1	0.0		
5am	1.7	1.4	1.4	0.0	0.3	0.0	8.4	0.0		
6am	1.7	1.4	1.4	0.0	0.3	0.0	8.7	0.0		
7am	1.7	1.4	1.4	0.0	0.3	0.0	9.0	0.0		
8am	1.7	1.4	1.4	0.0	0.3	0.0	9.3	0.0		
9am	1.7	1.4	1.4	0.0	0.3	0.0	9.6	0.0		
10am	1.7	1.4	1.4	0.0	0.3	0.0	9.9	0.0		
11am	1.7	1.4	1.4	0.0	0.3	0.0	10.2	0.0		
12 noon	1.7	1.4	1.4	0.0	0.3	0.0	10.5	0.0		
1pm	1.7	1.4	1.4	0.0	0.3	0.0	10.8	0.0		
2pm	1.7	1.4	1.4	0.0	0.3	0.0	11.1	0.0		
3pm	1.7	1.4	1.4	0.0	0.3	0.0	11.4	0.0		
4pm	1.7	1.4	1.4	0.0	0.3	0.0	11.7	0.0		
5pm	1.7	1.4	1.4	0.0	0.3	0.0	12.0	0.0		
6pm	1.7	1.4	1.4	0.0	0.3	0.0	12.3	0.0		
7pm	1.7	1.4	1.4	0.0	0.3	0.0	12.6	0.0		
8pm	1.7	1.4	1.4	0.0	0.3	0.0	12.9	0.0		
9pm	1.7	1.4	1.4	0.0	0.3	0.0	13.2	0.0		
10pm	1.7	1.4	1.4	0.0	0.3	0.0	13.5	0.0		
11pm	1.7	1.4	1.4	0.0	0.3	0.0	13.8	0.0		
12pm		1.4	0.0	1.4	0.0	1.4	12.4	0.0		
Total	34.0	33.6	28.0	5.6	6.0	5.6		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Pump Operation

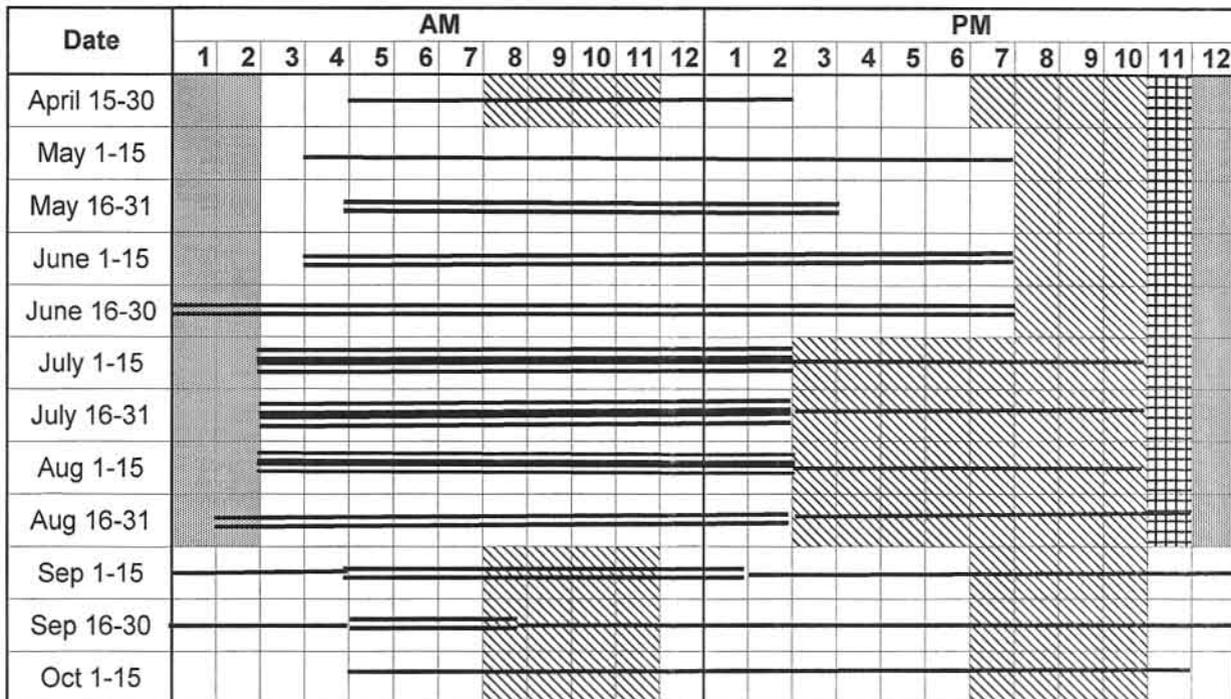
Initial Phase – 8,500 af/yr

Three Pumps

Green River Pumping Plant

Pump Operation Hours

Initial Phase (8,500 af/yr) - Three Pump Option



Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

April 15-30

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		238					30.0			
Input	1.7	0.7	0.7		1.0	0.0	12.0			
1am		0.7	0.0	0.7	0.0	0.7	11.3	0.0		
2am		0.7	0.0	0.7	0.0	0.7	10.6	0.0		
3am		0.7	0.0	0.7	0.0	0.7	9.9	0.0		
4am		0.7	0.0	0.7	0.0	0.7	9.2	0.0		
5am	1.7	0.7	0.7	0.0	1.0	0.0	10.2	0.0		
6am	1.7	0.7	0.7	0.0	1.0	0.0	11.2	0.0		
7am	1.7	0.7	0.7	0.0	1.0	0.0	12.2	0.0		
8am	1.7	0.7	0.7	0.0	1.0	0.0	13.2	0.0		
9am	1.7	0.7	0.7	0.0	1.0	0.0	14.2	0.0		
10am	1.7	0.7	0.7	0.0	1.0	0.0	15.2	0.0		
11am	1.7	0.7	0.7	0.0	1.0	0.0	16.2	0.0		
12 noon	1.7	0.7	0.7	0.0	1.0	0.0	17.2	0.0		
1pm	1.7	0.7	0.7	0.0	1.0	0.0	18.2	0.0		
2pm	1.7	0.7	0.7	0.0	1.0	0.0	19.2	0.0		
3pm		0.7	0.0	0.7	0.0	0.7	18.5	0.0		
4pm		0.7	0.0	0.7	0.0	0.7	17.8	0.0		
5pm		0.7	0.0	0.7	0.0	0.7	17.1	0.0		
6pm		0.7	0.0	0.7	0.0	0.7	16.4	0.0		
7pm		0.7	0.0	0.7	0.0	0.7	15.7	0.0		
8pm		0.7	0.0	0.7	0.0	0.7	15.0	0.0		
9pm		0.7	0.0	0.7	0.0	0.7	14.3	0.0		
10pm		0.7	0.0	0.7	0.0	0.7	13.6	0.0		
11pm		0.7	0.0	0.7	0.0	0.7	12.9	0.0		
12pm		0.7	0.0	0.7	0.0	0.7	12.2	0.0		
Total	17.0	16.8	7.0	9.8	10.0	9.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

May 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 391	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	1.1	1.1		0.6	0.0	12.0			
1am		1.1	0.0	1.1	0.0	1.1	10.9	0.0		
2am		1.1	0.0	1.1	0.0	1.1	9.8	0.0		
3am		1.1	0.0	1.1	0.0	1.1	8.7	0.0		
4am	1.7	1.1	1.1	0.0	0.6	0.0	9.3	0.0		
5am	1.7	1.1	1.1	0.0	0.6	0.0	9.9	0.0		
6am	1.7	1.1	1.1	0.0	0.6	0.0	10.5	0.0		
7am	1.7	1.1	1.1	0.0	0.6	0.0	11.1	0.0		
8am	1.7	1.1	1.1	0.0	0.6	0.0	11.7	0.0		
9am	1.7	1.1	1.1	0.0	0.6	0.0	12.3	0.0		
10am	1.7	1.1	1.1	0.0	0.6	0.0	12.9	0.0		
11am	1.7	1.1	1.1	0.0	0.6	0.0	13.5	0.0		
12 noon	1.7	1.1	1.1	0.0	0.6	0.0	14.1	0.0		
1pm	1.7	1.1	1.1	0.0	0.6	0.0	14.7	0.0		
2pm	1.7	1.1	1.1	0.0	0.6	0.0	15.3	0.0		
3pm	1.7	1.1	1.1	0.0	0.6	0.0	15.9	0.0		
4pm	1.7	1.1	1.1	0.0	0.6	0.0	16.5	0.0		
5pm	1.7	1.1	1.1	0.0	0.6	0.0	17.1	0.0		
6pm	1.7	1.1	1.1	0.0	0.6	0.0	17.7	0.0		
7pm	1.7	1.1	1.1	0.0	0.6	0.0	18.3	0.0		
8pm		1.1	0.0	1.1	0.0	1.1	17.2	0.0		
9pm		1.1	0.0	1.1	0.0	1.1	16.1	0.0		
10pm		1.1	0.0	1.1	0.0	1.1	15.0	0.0		
11pm		1.1	0.0	1.1	0.0	1.1	13.9	0.0		
12pm		1.1	0.0	1.1	0.0	1.1	12.8	0.0		
Total	27.2	26.4	17.6	8.8	9.6	8.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

May 16-31

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 553	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	1.4	1.4		1.7	0.0	12.0			
1am		1.4	0.0	1.4	0.0	1.4	10.6	0.0		
2am		1.4	0.0	1.4	0.0	1.4	9.2	0.0		
3am		1.4	0.0	1.4	0.0	1.4	7.8	0.0		
4am		1.4	0.0	1.4	0.0	1.4	6.4	0.0		
5am	3.1	1.4	1.4	0.0	1.7	0.0	8.1	0.0		
6am	3.1	1.4	1.4	0.0	1.7	0.0	9.8	0.0		
7am	3.1	1.4	1.4	0.0	1.7	0.0	11.5	0.0		
8am	3.1	1.4	1.4	0.0	1.7	0.0	13.2	0.0		
9am	3.1	1.4	1.4	0.0	1.7	0.0	14.9	0.0		
10am	3.1	1.4	1.4	0.0	1.7	0.0	16.6	0.0		
11am	3.1	1.4	1.4	0.0	1.7	0.0	18.3	0.0		
12 noon	3.1	1.4	1.4	0.0	1.7	0.0	20.0	0.0		
1pm	3.1	1.4	1.4	0.0	1.7	0.0	21.7	0.0		
2pm	3.1	1.4	1.4	0.0	1.7	0.0	23.4	0.0		
3pm	3.1	1.4	1.4	0.0	1.7	0.0	25.1	0.0		
4pm		1.4	0.0	1.4	0.0	1.4	23.7	0.0		
5pm		1.4	0.0	1.4	0.0	1.4	22.3	0.0		
6pm		1.4	0.0	1.4	0.0	1.4	20.9	0.0		
7pm		1.4	0.0	1.4	0.0	1.4	19.5	0.0		
8pm		1.4	0.0	1.4	0.0	1.4	18.1	0.0		
9pm		1.4	0.0	1.4	0.0	1.4	16.7	0.0		
10pm		1.4	0.0	1.4	0.0	1.4	15.3	0.0		
11pm		1.4	0.0	1.4	0.0	1.4	13.9	0.0		
12pm		1.4	0.0	1.4	0.0	1.4	12.5	0.0		
Total	34.1	33.6	15.4	18.2	18.7	18.2		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

June 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		731					30.0			
Input	3.1	2.0	2.0		1.1	0.0	12.0			
1am		2.0	0.0	2.0	0.0	2.0	10.0	0.0		
2am		2.0	0.0	2.0	0.0	2.0	8.0	0.0		
3am		2.0	0.0	2.0	0.0	2.0	6.0	0.0		
4am	3.1	2.0	2.0	0.0	1.1	0.0	7.1	0.0		
5am	3.1	2.0	2.0	0.0	1.1	0.0	8.2	0.0		
6am	3.1	2.0	2.0	0.0	1.1	0.0	9.3	0.0		
7am	3.1	2.0	2.0	0.0	1.1	0.0	10.4	0.0		
8am	3.1	2.0	2.0	0.0	1.1	0.0	11.5	0.0		
9am	3.1	2.0	2.0	0.0	1.1	0.0	12.6	0.0		
10am	3.1	2.0	2.0	0.0	1.1	0.0	13.7	0.0		
11am	3.1	2.0	2.0	0.0	1.1	0.0	14.8	0.0		
12 noon	3.1	2.0	2.0	0.0	1.1	0.0	15.9	0.0		
1pm	3.1	2.0	2.0	0.0	1.1	0.0	17.0	0.0		
2pm	3.1	2.0	2.0	0.0	1.1	0.0	18.1	0.0		
3pm	3.1	2.0	2.0	0.0	1.1	0.0	19.2	0.0		
4pm	3.1	2.0	2.0	0.0	1.1	0.0	20.3	0.0		
5pm	3.1	2.0	2.0	0.0	1.1	0.0	21.4	0.0		
6pm	3.1	2.0	2.0	0.0	1.1	0.0	22.5	0.0		
7pm	3.1	2.0	2.0	0.0	1.1	0.0	23.6	0.0		
8pm		2.0	0.0	2.0	0.0	2.0	21.6	0.0		
9pm		2.0	0.0	2.0	0.0	2.0	19.6	0.0		
10pm		2.0	0.0	2.0	0.0	2.0	17.6	0.0		
11pm		2.0	0.0	2.0	0.0	2.0	15.6	0.0		
12pm		2.0	0.0	2.0	0.0	2.0	13.6	0.0		
Total	49.6	48.0	32.0	16.0	17.6	16.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

June 16-30

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 850	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.4	2.4		0.7	0.0	12.0			
1am	3.1	2.4	2.4	0.0	0.7	0.0	12.7	0.0		
2am	3.1	2.4	2.4	0.0	0.7	0.0	13.4	0.0		
3am	3.1	2.4	2.4	0.0	0.7	0.0	14.1	0.0		
4am	3.1	2.4	2.4	0.0	0.7	0.0	14.8	0.0		
5am	3.1	2.4	2.4	0.0	0.7	0.0	15.5	0.0		
6am	3.1	2.4	2.4	0.0	0.7	0.0	16.2	0.0		
7am	3.1	2.4	2.4	0.0	0.7	0.0	16.9	0.0		
8am	3.1	2.4	2.4	0.0	0.7	0.0	17.6	0.0		
9am	3.1	2.4	2.4	0.0	0.7	0.0	18.3	0.0		
10am	3.1	2.4	2.4	0.0	0.7	0.0	19.0	0.0		
11am	3.1	2.4	2.4	0.0	0.7	0.0	19.7	0.0		
12 noon	3.1	2.4	2.4	0.0	0.7	0.0	20.4	0.0		
1pm	3.1	2.4	2.4	0.0	0.7	0.0	21.1	0.0		
2pm	3.1	2.4	2.4	0.0	0.7	0.0	21.8	0.0		
3pm	3.1	2.4	2.4	0.0	0.7	0.0	22.5	0.0		
4pm	3.1	2.4	2.4	0.0	0.7	0.0	23.2	0.0		
5pm	3.1	2.4	2.4	0.0	0.7	0.0	23.9	0.0		
6pm	3.1	2.4	2.4	0.0	0.7	0.0	24.6	0.0		
7pm	3.1	2.4	2.4	0.0	0.7	0.0	25.3	0.0		
8pm		2.4	0.0	2.4	0.0	2.4	22.9	0.0		
9pm		2.4	0.0	2.4	0.0	2.4	20.5	0.0		
10pm		2.4	0.0	2.4	0.0	2.4	18.1	0.0		
11pm		2.4	0.0	2.4	0.0	2.4	15.7	0.0		
12pm		2.4	0.0	2.4	0.0	2.4	13.3	0.0		
Total	58.9	57.6	45.6	12.0	13.3	12.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

July 1-15

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand 918	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	4.4	2.6	2.6		1.8	0.0	10.0			
1am		2.6	0.0	2.6	0.0	2.6	7.4	0.0		
2am		2.6	0.0	2.6	0.0	2.6	4.8	0.0		
3am	4.4	2.6	2.6	0.0	1.8	0.0	6.6	0.0		
4am	4.4	2.6	2.6	0.0	1.8	0.0	8.4	0.0		
5am	4.4	2.6	2.6	0.0	1.8	0.0	10.2	0.0		
6am	4.4	2.6	2.6	0.0	1.8	0.0	12.0	0.0		
7am	4.4	2.6	2.6	0.0	1.8	0.0	13.8	0.0		
8am	4.4	2.6	2.6	0.0	1.8	0.0	15.6	0.0		
9am	4.4	2.6	2.6	0.0	1.8	0.0	17.4	0.0		
10am	4.4	2.6	2.6	0.0	1.8	0.0	19.2	0.0		
11am	4.4	2.6	2.6	0.0	1.8	0.0	21.0	0.0		
12 noon	4.4	2.6	2.6	0.0	1.8	0.0	22.8	0.0		
1pm	4.4	2.6	2.6	0.0	1.8	0.0	24.6	0.0		
2pm	4.4	2.6	2.6	0.0	1.8	0.0	26.4	0.0		
3pm	1.7	2.6	1.7	0.9	0.0	0.9	25.5	0.0		
4pm	1.7	2.6	1.7	0.9	0.0	0.9	24.6	0.0		
5pm	1.7	2.6	1.7	0.9	0.0	0.9	23.7	0.0		
6pm	1.7	2.6	1.7	0.9	0.0	0.9	22.8	0.0		
7pm	1.7	2.6	1.7	0.9	0.0	0.9	21.9	0.0		
8pm	1.7	2.6	1.7	0.9	0.0	0.9	21.0	0.0		
9pm	1.7	2.6	1.7	0.9	0.0	0.9	20.1	0.0		
10pm	1.7	2.6	1.7	0.9	0.0	0.9	19.2	0.0		
11pm		2.6	0.0	2.6	0.0	2.6	16.6	0.0		
12pm		2.6	0.0	2.6	0.0	2.6	14.0	0.0		
Total	66.4	62.4	44.8	17.6	21.6	17.6		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

July 16-31

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		960					30.0			
Input	4.4	2.7	2.7		1.7	0.0	12.0			
1am		2.7	0.0	2.7	0.0	2.7	9.3	0.0		
2am		2.7	0.0	2.7	0.0	2.7	6.6	0.0		
3am	4.4	2.7	2.7	0.0	1.7	0.0	8.3	0.0		
4am	4.4	2.7	2.7	0.0	1.7	0.0	10.0	0.0		
5am	4.4	2.7	2.7	0.0	1.7	0.0	11.7	0.0		
6am	4.4	2.7	2.7	0.0	1.7	0.0	13.4	0.0		
7am	4.4	2.7	2.7	0.0	1.7	0.0	15.1	0.0		
8am	4.4	2.7	2.7	0.0	1.7	0.0	16.8	0.0		
9am	4.4	2.7	2.7	0.0	1.7	0.0	18.5	0.0		
10am	4.4	2.7	2.7	0.0	1.7	0.0	20.2	0.0		
11am	4.4	2.7	2.7	0.0	1.7	0.0	21.9	0.0		
12 noon	4.4	2.7	2.7	0.0	1.7	0.0	23.6	0.0		
1pm	4.4	2.7	2.7	0.0	1.7	0.0	25.3	0.0		
2pm	4.4	2.7	2.7	0.0	1.7	0.0	27.0	0.0		
3pm	1.7	2.7	1.7	1.0	0.0	1.0	26.0	0.0		
4pm	1.7	2.7	1.7	1.0	0.0	1.0	25.0	0.0		
5pm	1.7	2.7	1.7	1.0	0.0	1.0	24.0	0.0		
6pm	1.7	2.7	1.7	1.0	0.0	1.0	23.0	0.0		
7pm	1.7	2.7	1.7	1.0	0.0	1.0	22.0	0.0		
8pm	1.7	2.7	1.7	1.0	0.0	1.0	21.0	0.0		
9pm	1.7	2.7	1.7	1.0	0.0	1.0	20.0	0.0		
10pm	1.7	2.7	1.7	1.0	0.0	1.0	19.0	0.0		
11pm		2.7	0.0	2.7	0.0	2.7	16.3	0.0		
12pm		2.7	0.0	2.7	0.0	2.7	13.6	0.0		
Total	66.4	64.8	46.0	18.8	20.4	18.8		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

August 1-15

Units: Acre-feet

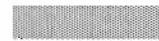
Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		960								
Input	4.4	2.7	2.7		1.7	0.0	12.0			
1am		2.7	0.0	2.7	0.0	2.7	9.3	0.0		
2am		2.7	0.0	2.7	0.0	2.7	6.6	0.0		
3am	4.4	2.7	2.7	0.0	1.7	0.0	8.3	0.0		
4am	4.4	2.7	2.7	0.0	1.7	0.0	10.0	0.0		
5am	4.4	2.7	2.7	0.0	1.7	0.0	11.7	0.0		
6am	4.4	2.7	2.7	0.0	1.7	0.0	13.4	0.0		
7am	4.4	2.7	2.7	0.0	1.7	0.0	15.1	0.0		
8am	4.4	2.7	2.7	0.0	1.7	0.0	16.8	0.0		
9am	4.4	2.7	2.7	0.0	1.7	0.0	18.5	0.0		
10am	4.4	2.7	2.7	0.0	1.7	0.0	20.2	0.0		
11am	4.4	2.7	2.7	0.0	1.7	0.0	21.9	0.0		
12 noon	4.4	2.7	2.7	0.0	1.7	0.0	23.6	0.0		
1pm	4.4	2.7	2.7	0.0	1.7	0.0	25.3	0.0		
2pm	4.4	2.7	2.7	0.0	1.7	0.0	27.0	0.0		
3pm	1.7	2.7	1.7	1.0	0.0	1.0	26.0	0.0		
4pm	1.7	2.7	1.7	1.0	0.0	1.0	25.0	0.0		
5pm	1.7	2.7	1.7	1.0	0.0	1.0	24.0	0.0		
6pm	1.7	2.7	1.7	1.0	0.0	1.0	23.0	0.0		
7pm	1.7	2.7	1.7	1.0	0.0	1.0	22.0	0.0		
8pm	1.7	2.7	1.7	1.0	0.0	1.0	21.0	0.0		
9pm	1.7	2.7	1.7	1.0	0.0	1.0	20.0	0.0		
10pm	1.7	2.7	1.7	1.0	0.0	1.0	19.0	0.0		
11pm		2.7	0.0	2.7	0.0	2.7	16.3	0.0		
12pm		2.7	0.0	2.7	0.0	2.7	13.6	0.0		
Total	66.4	64.8	46.0	18.8	20.4	18.8		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

August 16-31

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 901	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	2.3	1.7		0.0	0.6	12.0			
1am		2.3	0.0	2.3	0.0	2.3	9.7	0.0		
2am	3.1	2.3	2.3	0.0	0.8	0.0	10.5	0.0		
3am	3.1	2.3	2.3	0.0	0.8	0.0	11.3	0.0		
4am	3.1	2.3	2.3	0.0	0.8	0.0	12.1	0.0		
5am	3.1	2.3	2.3	0.0	0.8	0.0	12.9	0.0		
6am	3.1	2.3	2.3	0.0	0.8	0.0	13.7	0.0		
7am	3.1	2.3	2.3	0.0	0.8	0.0	14.5	0.0		
8am	3.1	2.3	2.3	0.0	0.8	0.0	15.3	0.0		
9am	3.1	2.3	2.3	0.0	0.8	0.0	16.1	0.0		
10am	3.1	2.3	2.3	0.0	0.8	0.0	16.9	0.0		
11am	3.1	2.3	2.3	0.0	0.8	0.0	17.7	0.0		
12 noon	3.1	2.3	2.3	0.0	0.8	0.0	18.5	0.0		
1pm	3.1	2.3	2.3	0.0	0.8	0.0	19.3	0.0		
2pm	3.1	2.3	2.3	0.0	0.8	0.0	20.1	0.0		
3pm	1.7	2.3	1.7	0.6	0.0	0.6	19.5	0.0		
4pm	1.7	2.3	1.7	0.6	0.0	0.6	18.9	0.0		
5pm	1.7	2.3	1.7	0.6	0.0	0.6	18.3	0.0		
6pm	1.7	2.3	1.7	0.6	0.0	0.6	17.7	0.0		
7pm	1.7	2.3	1.7	0.6	0.0	0.6	17.1	0.0		
8pm	1.7	2.3	1.7	0.6	0.0	0.6	16.5	0.0		
9pm	1.7	2.3	1.7	0.6	0.0	0.6	15.9	0.0		
10pm	1.7	2.3	1.7	0.6	0.0	0.6	15.3	0.0		
11pm	1.7	2.3	1.7	0.6	0.0	0.6	14.7	0.0		
12pm		2.3	0.0	2.3	0.0	2.3	12.4	0.0		
Total	55.6	55.2	45.2	10.0	10.4	10.0		0.0		

Non-pump hour

Peak Power Hour

Pump durir Pump during "Fish Blackout"

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

September 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 799	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	2.2	1.7		0.0	0.5	12.0			
1am	1.7	2.2	1.7	0.5	0.0	0.5	11.5	0.0		
2am	1.7	2.2	1.7	0.5	0.0	0.5	11.0	0.0		
3am	1.7	2.2	1.7	0.5	0.0	0.5	10.5	0.0		
4am	1.7	2.2	1.7	0.5	0.0	0.5	10.0	0.0		
5am	3.1	2.2	2.2	0.0	0.9	0.0	10.9	0.0		
6am	3.1	2.2	2.2	0.0	0.9	0.0	11.8	0.0		
7am	3.1	2.2	2.2	0.0	0.9	0.0	12.7	0.0		
8am	3.1	2.2	2.2	0.0	0.9	0.0	13.6	0.0		
9am	3.1	2.2	2.2	0.0	0.9	0.0	14.5	0.0		
10am	3.1	2.2	2.2	0.0	0.9	0.0	15.4	0.0		
11am	3.1	2.2	2.2	0.0	0.9	0.0	16.3	0.0		
12 noon	3.1	2.2	2.2	0.0	0.9	0.0	17.2	0.0		
1pm	3.1	2.2	2.2	0.0	0.9	0.0	18.1	0.0		
2pm	1.7	2.2	1.7	0.5	0.0	0.5	17.6	0.0		
3pm	1.7	2.2	1.7	0.5	0.0	0.5	17.1	0.0		
4pm	1.7	2.2	1.7	0.5	0.0	0.5	16.6	0.0		
5pm	1.7	2.2	1.7	0.5	0.0	0.5	16.1	0.0		
6pm	1.7	2.2	1.7	0.5	0.0	0.5	15.6	0.0		
7pm	1.7	2.2	1.7	0.5	0.0	0.5	15.1	0.0		
8pm	1.7	2.2	1.7	0.5	0.0	0.5	14.6	0.0		
9pm	1.7	2.2	1.7	0.5	0.0	0.5	14.1	0.0		
10pm	1.7	2.2	1.7	0.5	0.0	0.5	13.6	0.0		
11pm	1.7	2.2	1.7	0.5	0.0	0.5	13.1	0.0		
12pm	1.7	2.2	1.7	0.5	0.0	0.5	12.6	0.0		
Total	53.4	52.8	45.3	7.5	8.1	7.5		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

September 16-30

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 680	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	1.9	1.7		0.0	0.2	12.0			
1am	1.7	1.9	1.7	0.2	0.0	0.2	11.8	0.0		
2am	1.7	1.9	1.7	0.2	0.0	0.2	11.6	0.0		
3am	1.7	1.9	1.7	0.2	0.0	0.2	11.4	0.0		
4am	1.7	1.9	1.7	0.2	0.0	0.2	11.2	0.0		
5am	3.1	1.9	1.9	0.0	1.2	0.0	12.4	0.0		
6am	3.1	1.9	1.9	0.0	1.2	0.0	13.6	0.0		
7am	3.1	1.9	1.9	0.0	1.2	0.0	14.8	0.0		
8am	3.1	1.9	1.9	0.0	1.2	0.0	16.0	0.0		
9am	1.7	1.9	1.7	0.2	0.0	0.2	15.8	0.0		
10am	1.7	1.9	1.7	0.2	0.0	0.2	15.6	0.0		
11am	1.7	1.9	1.7	0.2	0.0	0.2	15.4	0.0		
12 noon	1.7	1.9	1.7	0.2	0.0	0.2	15.2	0.0		
1pm	1.7	1.9	1.7	0.2	0.0	0.2	15.0	0.0		
2pm	1.7	1.9	1.7	0.2	0.0	0.2	14.8	0.0		
3pm	1.7	1.9	1.7	0.2	0.0	0.2	14.6	0.0		
4pm	1.7	1.9	1.7	0.2	0.0	0.2	14.4	0.0		
5pm	1.7	1.9	1.7	0.2	0.0	0.2	14.2	0.0		
6pm	1.7	1.9	1.7	0.2	0.0	0.2	14.0	0.0		
7pm	1.7	1.9	1.7	0.2	0.0	0.2	13.8	0.0		
8pm	1.7	1.9	1.7	0.2	0.0	0.2	13.6	0.0		
9pm	1.7	1.9	1.7	0.2	0.0	0.2	13.4	0.0		
10pm	1.7	1.9	1.7	0.2	0.0	0.2	13.2	0.0		
11pm	1.7	1.9	1.7	0.2	0.0	0.2	13.0	0.0		
12pm	1.7	1.9	1.7	0.2	0.0	0.2	12.8	0.0		
Total	46.4	45.6	41.6	4.0	4.8	4.0		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Initial Phase (8,500 af/yr) Three-Pump Option

October 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 519	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	1.4	1.4		0.3	0.0	12.0			
1am		1.4	0.0	1.4	0.0	1.4	10.6	0.0		
2am		1.4	0.0	1.4	0.0	1.4	9.2	0.0		
3am		1.4	0.0	1.4	0.0	1.4	7.8	0.0		
4am	1.7	1.4	1.4	0.0	0.3	0.0	8.1	0.0		
5am	1.7	1.4	1.4	0.0	0.3	0.0	8.4	0.0		
6am	1.7	1.4	1.4	0.0	0.3	0.0	8.7	0.0		
7am	1.7	1.4	1.4	0.0	0.3	0.0	9.0	0.0		
8am	1.7	1.4	1.4	0.0	0.3	0.0	9.3	0.0		
9am	1.7	1.4	1.4	0.0	0.3	0.0	9.6	0.0		
10am	1.7	1.4	1.4	0.0	0.3	0.0	9.9	0.0		
11am	1.7	1.4	1.4	0.0	0.3	0.0	10.2	0.0		
12 noon	1.7	1.4	1.4	0.0	0.3	0.0	10.5	0.0		
1pm	1.7	1.4	1.4	0.0	0.3	0.0	10.8	0.0		
2pm	1.7	1.4	1.4	0.0	0.3	0.0	11.1	0.0		
3pm	1.7	1.4	1.4	0.0	0.3	0.0	11.4	0.0		
4pm	1.7	1.4	1.4	0.0	0.3	0.0	11.7	0.0		
5pm	1.7	1.4	1.4	0.0	0.3	0.0	12.0	0.0		
6pm	1.7	1.4	1.4	0.0	0.3	0.0	12.3	0.0		
7pm	1.7	1.4	1.4	0.0	0.3	0.0	12.6	0.0		
8pm	1.7	1.4	1.4	0.0	0.3	0.0	12.9	0.0		
9pm	1.7	1.4	1.4	0.0	0.3	0.0	13.2	0.0		
10pm	1.7	1.4	1.4	0.0	0.3	0.0	13.5	0.0		
11pm	1.7	1.4	1.4	0.0	0.3	0.0	13.8	0.0		
12pm		1.4	0.0	1.4	0.0	1.4	12.4	0.0		
Total	34.0	33.6	28.0	5.6	6.0	5.6		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

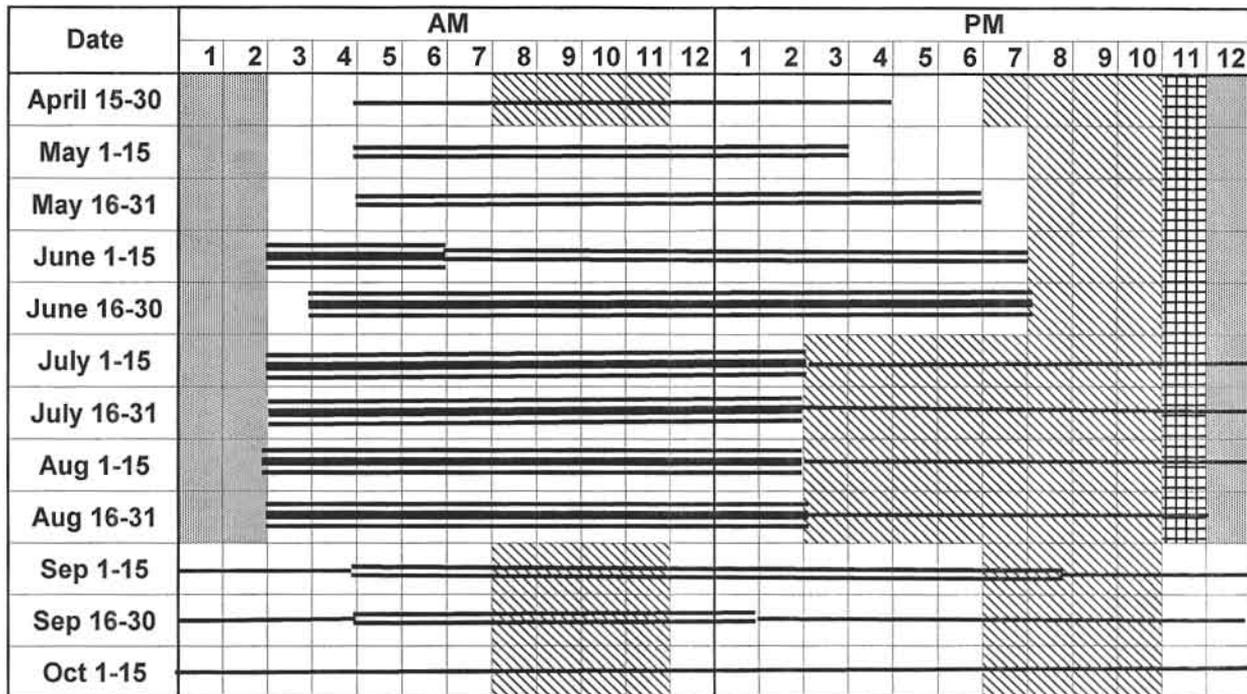
Pump Operation

Full Project – 10,000 af/yr

Three Pumps

Green River Pumping Plant

Pump Operation Hours
Full Phase (10,000 af/yr) - Three Pump Option



 Fish Blackout Hours

 Peak Power Hours



Three Pumps



Two Pumps

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

April 15-30

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 280	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	0.8	0.8		0.9	0.0	12.0			
1am		0.8	0.0	0.8	0.0	0.8	11.2	0.0		
2am		0.8	0.0	0.8	0.0	0.8	10.4	0.0		
3am		0.8	0.0	0.8	0.0	0.8	9.6	0.0		
4am		0.8	0.0	0.8	0.0	0.8	8.8	0.0		
5am	1.7	0.8	0.8	0.0	0.9	0.0	9.7	0.0		
6am	1.7	0.8	0.8	0.0	0.9	0.0	10.6	0.0		
7am	1.7	0.8	0.8	0.0	0.9	0.0	11.5	0.0		
8am	1.7	0.8	0.8	0.0	0.9	0.0	12.4	0.0		
9am	1.7	0.8	0.8	0.0	0.9	0.0	13.3	0.0		
10am	1.7	0.8	0.8	0.0	0.9	0.0	14.2	0.0		
11am	1.7	0.8	0.8	0.0	0.9	0.0	15.1	0.0		
12 noon	1.7	0.8	0.8	0.0	0.9	0.0	16.0	0.0		
1pm	1.7	0.8	0.8	0.0	0.9	0.0	16.9	0.0		
2pm	1.7	0.8	0.8	0.0	0.9	0.0	17.8	0.0		
3pm	1.7	0.8	0.8	0.0	0.9	0.0	18.7	0.0		
4pm	1.7	0.8	0.8	0.0	0.9	0.0	19.6	0.0		
5pm		0.8	0.0	0.8	0.0	0.8	18.8	0.0		
6pm		0.8	0.0	0.8	0.0	0.8	18.0	0.0		
7pm		0.8	0.0	0.8	0.0	0.8	17.2	0.0		
8pm		0.8	0.0	0.8	0.0	0.8	16.4	0.0		
9pm		0.8	0.0	0.8	0.0	0.8	15.6	0.0		
10pm		0.8	0.0	0.8	0.0	0.8	14.8	0.0		
11pm		0.8	0.0	0.8	0.0	0.8	14.0	0.0		
12pm		0.8	0.0	0.8	0.0	0.8	13.2	0.0		
Total	20.4	19.2	9.6	9.6	10.8	9.6		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

May 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 460	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	1.3	1.3		1.8	0.0	12.0			
1am		1.3	0.0	1.3	0.0	1.3	10.7	0.0		
2am		1.3	0.0	1.3	0.0	1.3	9.4	0.0		
3am		1.3	0.0	1.3	0.0	1.3	8.1	0.0		
4am		1.3	0.0	1.3	0.0	1.3	6.8	0.0		
5am	3.1	1.3	1.3	0.0	1.8	0.0	8.6	0.0		
6am	3.1	1.3	1.3	0.0	1.8	0.0	10.4	0.0		
7am	3.1	1.3	1.3	0.0	1.8	0.0	12.2	0.0		
8am	3.1	1.3	1.3	0.0	1.8	0.0	14.0	0.0		
9am	3.1	1.3	1.3	0.0	1.8	0.0	15.8	0.0		
10am	3.1	1.3	1.3	0.0	1.8	0.0	17.6	0.0		
11am	3.1	1.3	1.3	0.0	1.8	0.0	19.4	0.0		
12 noon	3.1	1.3	1.3	0.0	1.8	0.0	21.2	0.0		
1pm	3.1	1.3	1.3	0.0	1.8	0.0	23.0	0.0		
2pm	3.1	1.3	1.3	0.0	1.8	0.0	24.8	0.0		
3pm	3.1	1.3	1.3	0.0	1.8	0.0	26.6	0.0		
4pm		1.3	0.0	1.3	0.0	1.3	25.3	0.0		
5pm		1.3	0.0	1.3	0.0	1.3	24.0	0.0		
6pm		1.3	0.0	1.3	0.0	1.3	22.7	0.0		
7pm		1.3	0.0	1.3	0.0	1.3	21.4	0.0		
8pm		1.3	0.0	1.3	0.0	1.3	20.1	0.0		
9pm		1.3	0.0	1.3	0.0	1.3	18.8	0.0		
10pm		1.3	0.0	1.3	0.0	1.3	17.5	0.0		
11pm		1.3	0.0	1.3	0.0	1.3	16.2	0.0		
12pm		1.3	0.0	1.3	0.0	1.3	14.9	0.0		
Total	34.1	31.2	14.3	16.9	19.8	16.9		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

May 16-31

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 650	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	1.7	1.7		1.4	0.0	12.0			
1am		1.7	0.0	1.7	0.0	1.7	10.3	0.0		
2am		1.7	0.0	1.7	0.0	1.7	8.6	0.0		
3am		1.7	0.0	1.7	0.0	1.7	6.9	0.0		
4am		1.7	0.0	1.7	0.0	1.7	5.2	0.0		
5am	3.1	1.7	1.7	0.0	1.4	0.0	6.6	0.0		
6am	3.1	1.7	1.7	0.0	1.4	0.0	8.0	0.0		
7am	3.1	1.7	1.7	0.0	1.4	0.0	9.4	0.0		
8am	3.1	1.7	1.7	0.0	1.4	0.0	10.8	0.0		
9am	3.1	1.7	1.7	0.0	1.4	0.0	12.2	0.0		
10am	3.1	1.7	1.7	0.0	1.4	0.0	13.6	0.0		
11am	3.1	1.7	1.7	0.0	1.4	0.0	15.0	0.0		
12 noon	3.1	1.7	1.7	0.0	1.4	0.0	16.4	0.0		
1pm	3.1	1.7	1.7	0.0	1.4	0.0	17.8	0.0		
2pm	3.1	1.7	1.7	0.0	1.4	0.0	19.2	0.0		
3pm	3.1	1.7	1.7	0.0	1.4	0.0	20.6	0.0		
4pm	3.1	1.7	1.7	0.0	1.4	0.0	22.0	0.0		
5pm	3.1	1.7	1.7	0.0	1.4	0.0	23.4	0.0		
6pm	3.1	1.7	1.7	0.0	1.4	0.0	24.8	0.0		
7pm		1.7	0.0	1.7	0.0	1.7	23.1	0.0		
8pm		1.7	0.0	1.7	0.0	1.7	21.4	0.0		
9pm		1.7	0.0	1.7	0.0	1.7	19.7	0.0		
10pm		1.7	0.0	1.7	0.0	1.7	18.0	0.0		
11pm		1.7	0.0	1.7	0.0	1.7	16.3	0.0		
12pm		1.7	0.0	1.7	0.0	1.7	14.6	0.0		
Total	43.4	40.8	23.8	17.0	19.6	17.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

June 1-15

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		860					30.0			
Input	3.1	2.4	2.4		0.7	0.0	12.0			
1am		2.4	0.0	2.4	0.0	2.4	9.6	0.0		
2am		2.4	0.0	2.4	0.0	2.4	7.2	0.0		
3am	4.4	2.4	2.4	0.0	2.0	0.0	9.2	0.0		
4am	4.4	2.4	2.4	0.0	2.0	0.0	11.2	0.0		
5am	4.4	2.4	2.4	0.0	2.0	0.0	13.2	0.0		
6am	4.4	2.4	2.4	0.0	2.0	0.0	15.2	0.0		
7am	3.1	2.4	2.4	0.0	0.7	0.0	15.9	0.0		
8am	3.1	2.4	2.4	0.0	0.7	0.0	16.6	0.0		
9am	3.1	2.4	2.4	0.0	0.7	0.0	17.3	0.0		
10am	3.1	2.4	2.4	0.0	0.7	0.0	18.0	0.0		
11am	3.1	2.4	2.4	0.0	0.7	0.0	18.7	0.0		
12 noon	3.1	2.4	2.4	0.0	0.7	0.0	19.4	0.0		
1pm	3.1	2.4	2.4	0.0	0.7	0.0	20.1	0.0		
2pm	3.1	2.4	2.4	0.0	0.7	0.0	20.8	0.0		
3pm	3.1	2.4	2.4	0.0	0.7	0.0	21.5	0.0		
4pm	3.1	2.4	2.4	0.0	0.7	0.0	22.2	0.0		
5pm	3.1	2.4	2.4	0.0	0.7	0.0	22.9	0.0		
6pm	3.1	2.4	2.4	0.0	0.7	0.0	23.6	0.0		
7pm	3.1	2.4	2.4	0.0	0.7	0.0	24.3	0.0		
8pm		2.4	0.0	2.4	0.0	2.4	21.9	0.0		
9pm		2.4	0.0	2.4	0.0	2.4	19.5	0.0		
10pm		2.4	0.0	2.4	0.0	2.4	17.1	0.0		
11pm		2.4	0.0	2.4	0.0	2.4	14.7	0.0		
12pm		2.4	0.0	2.4	0.0	2.4	12.3	0.0		
Total	57.9	57.6	40.8	16.8	17.1	16.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

June 16-30

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		1000					30.0			
Input	4.4	2.8	2.8		1.6	0.0	12.0			
1am		2.8	0.0	2.8	0.0	2.8	9.2	0.0		
2am		2.8	0.0	2.8	0.0	2.8	6.4	0.0		
3am		2.8	0.0	2.8	0.0	2.8	3.6	0.0		
4am	4.4	2.8	2.8	0.0	1.6	0.0	5.2	0.0		
5am	4.4	2.8	2.8	0.0	1.6	0.0	6.8	0.0		
6am	4.4	2.8	2.8	0.0	1.6	0.0	8.4	0.0		
7am	4.4	2.8	2.8	0.0	1.6	0.0	10.0	0.0		
8am	4.4	2.8	2.8	0.0	1.6	0.0	11.6	0.0		
9am	4.4	2.8	2.8	0.0	1.6	0.0	13.2	0.0		
10am	4.4	2.8	2.8	0.0	1.6	0.0	14.8	0.0		
11am	4.4	2.8	2.8	0.0	1.6	0.0	16.4	0.0		
12 noon	4.4	2.8	2.8	0.0	1.6	0.0	18.0	0.0		
1pm	4.4	2.8	2.8	0.0	1.6	0.0	19.6	0.0		
2pm	4.4	2.8	2.8	0.0	1.6	0.0	21.2	0.0		
3pm	4.4	2.8	2.8	0.0	1.6	0.0	22.8	0.0		
4pm	4.4	2.8	2.8	0.0	1.6	0.0	24.4	0.0		
5pm	4.4	2.8	2.8	0.0	1.6	0.0	26.0	0.0		
6pm	4.4	2.8	2.8	0.0	1.6	0.0	27.6	0.0		
7pm	4.4	2.8	2.8	0.0	1.6	0.0	29.2	0.0		
8pm		2.8	0.0	2.8	0.0	2.8	26.4	0.0		
9pm		2.8	0.0	2.8	0.0	2.8	23.6	0.0		
10pm		2.8	0.0	2.8	0.0	2.8	20.8	0.0		
11pm		2.8	0.0	2.8	0.0	2.8	18.0	0.0		
12pm		2.8	0.0	2.8	0.0	2.8	15.2	0.0		
Total	70.4	67.2	44.8	22.4	25.6	22.4		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

July 1-15

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand 1080	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	4.4	2.9	2.9		1.5	0.0	12.0			
1am		2.9	0.0	2.9	0.0	2.9	9.1	0.0		
2am		2.9	0.0	2.9	0.0	2.9	6.2	0.0		
3am	4.4	2.9	2.9	0.0	1.5	0.0	7.7	0.0		
4am	4.4	2.9	2.9	0.0	1.5	0.0	9.2	0.0		
5am	4.4	2.9	2.9	0.0	1.5	0.0	10.7	0.0		
6am	4.4	2.9	2.9	0.0	1.5	0.0	12.2	0.0		
7am	4.4	2.9	2.9	0.0	1.5	0.0	13.7	0.0		
8am	4.4	2.9	2.9	0.0	1.5	0.0	15.2	0.0		
9am	4.4	2.9	2.9	0.0	1.5	0.0	16.7	0.0		
10am	4.4	2.9	2.9	0.0	1.5	0.0	18.2	0.0		
11am	4.4	2.9	2.9	0.0	1.5	0.0	19.7	0.0		
12 noon	4.4	2.9	2.9	0.0	1.5	0.0	21.2	0.0		
1pm	4.4	2.9	2.9	0.0	1.5	0.0	22.7	0.0		
2pm	4.4	2.9	2.9	0.0	1.5	0.0	24.2	0.0		
3pm	1.7	2.9	1.7	1.2	0.0	1.2	23.0	0.0		
4pm	1.7	2.9	1.7	1.2	0.0	1.2	21.8	0.0		
5pm	1.7	2.9	1.7	1.2	0.0	1.2	20.6	0.0		
6pm	1.7	2.9	1.7	1.2	0.0	1.2	19.4	0.0		
7pm	1.7	2.9	1.7	1.2	0.0	1.2	18.2	0.0		
8pm	1.7	2.9	1.7	1.2	0.0	1.2	17.0	0.0		
9pm	1.7	2.9	1.7	1.2	0.0	1.2	15.8	0.0		
10pm	1.7	2.9	1.7	1.2	0.0	1.2	14.6	0.0		
11pm	1.7	2.9	1.7	1.2	0.0	1.2	13.4	0.0		
12pm	1.7	2.9	1.7	1.2	0.0	1.2	12.2	0.0		
Total	69.8	69.6	51.8	17.8	18.0	17.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

July 16-31

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand	From GR	Rem Dem	Inflow	From Pond	Content	Spill		
		1130					30.0			
Input	4.4	2.9	2.9		1.5	0.0	12.0			
1am		2.9	0.0	2.9	0.0	2.9	9.1	0.0		
2am		2.9	0.0	2.9	0.0	2.9	6.2	0.0		
3am	4.4	2.9	2.9	0.0	1.5	0.0	7.7	0.0		
4am	4.4	2.9	2.9	0.0	1.5	0.0	9.2	0.0		
5am	4.4	2.9	2.9	0.0	1.5	0.0	10.7	0.0		
6am	4.4	2.9	2.9	0.0	1.5	0.0	12.2	0.0		
7am	4.4	2.9	2.9	0.0	1.5	0.0	13.7	0.0		
8am	4.4	2.9	2.9	0.0	1.5	0.0	15.2	0.0		
9am	4.4	2.9	2.9	0.0	1.5	0.0	16.7	0.0		
10am	4.4	2.9	2.9	0.0	1.5	0.0	18.2	0.0		
11am	4.4	2.9	2.9	0.0	1.5	0.0	19.7	0.0		
12 noon	4.4	2.9	2.9	0.0	1.5	0.0	21.2	0.0		
1pm	4.4	2.9	2.9	0.0	1.5	0.0	22.7	0.0		
2pm	4.4	2.9	2.9	0.0	1.5	0.0	24.2	0.0		
3pm	1.7	2.9	1.7	1.2	0.0	1.2	23.0	0.0		
4pm	1.7	2.9	1.7	1.2	0.0	1.2	21.8	0.0		
5pm	1.7	2.9	1.7	1.2	0.0	1.2	20.6	0.0		
6pm	1.7	2.9	1.7	1.2	0.0	1.2	19.4	0.0		
7pm	1.7	2.9	1.7	1.2	0.0	1.2	18.2	0.0		
8pm	1.7	2.9	1.7	1.2	0.0	1.2	17.0	0.0		
9pm	1.7	2.9	1.7	1.2	0.0	1.2	15.8	0.0		
10pm	1.7	2.9	1.7	1.2	0.0	1.2	14.6	0.0		
11pm	1.7	2.9	1.7	1.2	0.0	1.2	13.4	0.0		
12pm	1.7	2.9	1.7	1.2	0.0	1.2	12.2	0.0		
Total	69.8	69.6	51.8	17.8	18.0	17.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

August 1-15

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand 1130	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	4.4	2.9	2.9		1.5	0.0	12.0			
1am		2.9	0.0	2.9	0.0	2.9	9.1	0.0		
2am		2.9	0.0	2.9	0.0	2.9	6.2	0.0		
3am	4.4	2.9	2.9	0.0	1.5	0.0	7.7	0.0		
4am	4.4	2.9	2.9	0.0	1.5	0.0	9.2	0.0		
5am	4.4	2.9	2.9	0.0	1.5	0.0	10.7	0.0		
6am	4.4	2.9	2.9	0.0	1.5	0.0	12.2	0.0		
7am	4.4	2.9	2.9	0.0	1.5	0.0	13.7	0.0		
8am	4.4	2.9	2.9	0.0	1.5	0.0	15.2	0.0		
9am	4.4	2.9	2.9	0.0	1.5	0.0	16.7	0.0		
10am	4.4	2.9	2.9	0.0	1.5	0.0	18.2	0.0		
11am	4.4	2.9	2.9	0.0	1.5	0.0	19.7	0.0		
12 noon	4.4	2.9	2.9	0.0	1.5	0.0	21.2	0.0		
1pm	4.4	2.9	2.9	0.0	1.5	0.0	22.7	0.0		
2pm	4.4	2.9	2.9	0.0	1.5	0.0	24.2	0.0		
3pm	1.7	2.9	1.7	1.2	0.0	1.2	23.0	0.0		
4pm	1.7	2.9	1.7	1.2	0.0	1.2	21.8	0.0		
5pm	1.7	2.9	1.7	1.2	0.0	1.2	20.6	0.0		
6pm	1.7	2.9	1.7	1.2	0.0	1.2	19.4	0.0		
7pm	1.7	2.9	1.7	1.2	0.0	1.2	18.2	0.0		
8pm	1.7	2.9	1.7	1.2	0.0	1.2	17.0	0.0		
9pm	1.7	2.9	1.7	1.2	0.0	1.2	15.8	0.0		
10pm	1.7	2.9	1.7	1.2	0.0	1.2	14.6	0.0		
11pm	1.7	2.9	1.7	1.2	0.0	1.2	13.4	0.0		
12pm	1.7	2.9	1.7	1.2	0.0	1.2	12.2	0.0		
Total	69.8	69.6	51.8	17.8	18.0	17.8		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

August 16-31

Units: Acre-feet

Hour	GR Pumping 53	Irrigation			Pond Operation				Peak Power	Fish
		Demand 1060	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	4.4	2.8	2.8		1.6	0.0	12.0			
1am		2.8	0.0	2.8	0.0	2.8	9.2	0.0		
2am		2.8	0.0	2.8	0.0	2.8	6.4	0.0		
3am	4.4	2.8	2.8	0.0	1.6	0.0	8.0	0.0		
4am	4.4	2.8	2.8	0.0	1.6	0.0	9.6	0.0		
5am	4.4	2.8	2.8	0.0	1.6	0.0	11.2	0.0		
6am	4.4	2.8	2.8	0.0	1.6	0.0	12.8	0.0		
7am	4.4	2.8	2.8	0.0	1.6	0.0	14.4	0.0		
8am	4.4	2.8	2.8	0.0	1.6	0.0	16.0	0.0		
9am	4.4	2.8	2.8	0.0	1.6	0.0	17.6	0.0		
10am	4.4	2.8	2.8	0.0	1.6	0.0	19.2	0.0		
11am	4.4	2.8	2.8	0.0	1.6	0.0	20.8	0.0		
12 noon	4.4	2.8	2.8	0.0	1.6	0.0	22.4	0.0		
1pm	4.4	2.8	2.8	0.0	1.6	0.0	24.0	0.0		
2pm	4.4	2.8	2.8	0.0	1.6	0.0	25.6	0.0		
3pm	1.7	2.8	1.7	1.1	0.0	1.1	24.5	0.0		
4pm	1.7	2.8	1.7	1.1	0.0	1.1	23.4	0.0		
5pm	1.7	2.8	1.7	1.1	0.0	1.1	22.3	0.0		
6pm	1.7	2.8	1.7	1.1	0.0	1.1	21.2	0.0		
7pm	1.7	2.8	1.7	1.1	0.0	1.1	20.1	0.0		
8pm	1.7	2.8	1.7	1.1	0.0	1.1	19.0	0.0		
9pm	1.7	2.8	1.7	1.1	0.0	1.1	17.9	0.0		
10pm	1.7	2.8	1.7	1.1	0.0	1.1	16.8	0.0		
11pm	1.7	2.8	1.7	1.1	0.0	1.1	15.7	0.0		
12pm		2.8	0.0	2.8	0.0	2.8	12.9	0.0		
Total	68.1	67.2	48.9	18.3	19.2	18.3		0.0		

 Non-pump hour

 Peak Power Hour

 Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

September 1-15

Units: Acre-feet

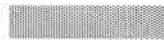
Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 940	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.6	2.6		0.5	0.0	12.0			
1am	1.7	2.6	1.7	0.9	0.0	0.9	11.1	0.0		
2am	1.7	2.6	1.7	0.9	0.0	0.9	10.2	0.0		
3am	1.7	2.6	1.7	0.9	0.0	0.9	9.3	0.0		
4am	1.7	2.6	1.7	0.9	0.0	0.9	8.4	0.0		
5am	3.1	2.6	2.6	0.0	0.5	0.0	8.9	0.0		
6am	3.1	2.6	2.6	0.0	0.5	0.0	9.4	0.0		
7am	3.1	2.6	2.6	0.0	0.5	0.0	9.9	0.0		
8am	3.1	2.6	2.6	0.0	0.5	0.0	10.4	0.0		
9am	3.1	2.6	2.6	0.0	0.5	0.0	10.9	0.0		
10am	3.1	2.6	2.6	0.0	0.5	0.0	11.4	0.0		
11am	3.1	2.6	2.6	0.0	0.5	0.0	11.9	0.0		
12 noon	3.1	2.6	2.6	0.0	0.5	0.0	12.4	0.0		
1pm	3.1	2.6	2.6	0.0	0.5	0.0	12.9	0.0		
2pm	3.1	2.6	2.6	0.0	0.5	0.0	13.4	0.0		
3pm	3.1	2.6	2.6	0.0	0.5	0.0	13.9	0.0		
4pm	3.1	2.6	2.6	0.0	0.5	0.0	14.4	0.0		
5pm	3.1	2.6	2.6	0.0	0.5	0.0	14.9	0.0		
6pm	3.1	2.6	2.6	0.0	0.5	0.0	15.4	0.0		
7pm	3.1	2.6	2.6	0.0	0.5	0.0	15.9	0.0		
8pm	3.1	2.6	2.6	0.0	0.5	0.0	16.4	0.0		
9pm	1.7	2.6	1.7	0.9	0.0	0.9	15.5	0.0		
10pm	1.7	2.6	1.7	0.9	0.0	0.9	14.6	0.0		
11pm	1.7	2.6	1.7	0.9	0.0	0.9	13.7	0.0		
12pm	1.7	2.6	1.7	0.9	0.0	0.9	12.8	0.0		
Total	63.2	62.4	55.2	7.2	8.0	7.2		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

September 16-30

Units: Acre-feet

Hour	GR Pumping 37	Irrigation			Pond Operation				Peak Power	Fish
		Demand 800	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	3.1	2.2	2.2		0.9	0.0	12.0			
1am	1.7	2.2	1.7	0.5	0.0	0.5	11.5	0.0		
2am	1.7	2.2	1.7	0.5	0.0	0.5	11.0	0.0		
3am	1.7	2.2	1.7	0.5	0.0	0.5	10.5	0.0		
4am	1.7	2.2	1.7	0.5	0.0	0.5	10.0	0.0		
5am	3.1	2.2	2.2	0.0	0.9	0.0	10.9	0.0		
6am	3.1	2.2	2.2	0.0	0.9	0.0	11.8	0.0		
7am	3.1	2.2	2.2	0.0	0.9	0.0	12.7	0.0		
8am	3.1	2.2	2.2	0.0	0.9	0.0	13.6	0.0		
9am	3.1	2.2	2.2	0.0	0.9	0.0	14.5	0.0		
10am	3.1	2.2	2.2	0.0	0.9	0.0	15.4	0.0		
11am	3.1	2.2	2.2	0.0	0.9	0.0	16.3	0.0		
12 noon	3.1	2.2	2.2	0.0	0.9	0.0	17.2	0.0		
1pm	3.1	2.2	2.2	0.0	0.9	0.0	18.1	0.0		
2pm	1.7	2.2	1.7	0.5	0.0	0.5	17.6	0.0		
3pm	1.7	2.2	1.7	0.5	0.0	0.5	17.1	0.0		
4pm	1.7	2.2	1.7	0.5	0.0	0.5	16.6	0.0		
5pm	1.7	2.2	1.7	0.5	0.0	0.5	16.1	0.0		
6pm	1.7	2.2	1.7	0.5	0.0	0.5	15.6	0.0		
7pm	1.7	2.2	1.7	0.5	0.0	0.5	15.1	0.0		
8pm	1.7	2.2	1.7	0.5	0.0	0.5	14.6	0.0		
9pm	1.7	2.2	1.7	0.5	0.0	0.5	14.1	0.0		
10pm	1.7	2.2	1.7	0.5	0.0	0.5	13.6	0.0		
11pm	1.7	2.2	1.7	0.5	0.0	0.5	13.1	0.0		
12pm	1.7	2.2	1.7	0.5	0.0	0.5	12.6	0.0		
Total	53.4	52.8	45.3	7.5	8.1	7.5		0.0		



Non-pump hour



Peak Power Hour



Fish Blackout Hour

Green River Pumping Plant and Pond Operation

Full Phase (10,000 af/yr) Three-Pump Option

October 1-15

Units: Acre-feet

Hour	GR Pumping 20	Irrigation			Pond Operation				Peak Power	Fish
		Demand 610	From GR	Rem Dem	Inflow	From Pond	Content 30.0	Spill		
Input	1.7	1.7	1.7		0.0	0.0	12.0			
1am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
2am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
3am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
4am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
5am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
6am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
7am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
8am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
9am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
10am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
11am	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
12 noon	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
1pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
2pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
3pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
4pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
5pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
6pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
7pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
8pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
9pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
10pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
11pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
12pm	1.7	1.7	1.7	0.0	0.0	0.0	12.0	0.0		
Total	40.8	40.8	40.8	0.0	0.0	0.0		0.0		

Non-pump hour

Peak Power Hour

Fish Blackout Hour

Appendix C

Moon Lake Electric Power Rates

ELECTRIC SERVICE
SCHEDULE LP

LARGE POWER SERVICE

AVAILABILITY: Available to Consumers located on or near Association's three-phase lines of adequate capacity for all types of usage, subject to the established rules and regulations of Association. Service under this schedule is limited to consumers whose load requirements are equal to or exceed 50 kVa of transformer capacity. This rate not for resale.

MONTHLY BILL:

RATE: Customer Services Charge	\$29.00	per service per month
Demand Charge	\$11.00	per kW of billing demand
Demand Charge Limit	\$.06	per kWh
Energy Charge	\$ 0.03720	per kWh.

MINIMUM MONTHLY CHARGE: \$41.00 plus any increase required under the Line Extension Policy.

DETERMINATION OF BILLING DEMAND WITHOUT TIME OF USE OPTION: The billing demand shall be the maximum kilowatt demand established by the Consumer for any period of fifteen (15) consecutive minutes during the month for which the bill is rendered, as indicated or recorded by a demand meter and adjusted for power factor as follows:

POWER FACTOR ADJUSTMENT: Demand charges will be adjusted for Consumers with an average monthly power factor less than 90% lagging. Such adjustments will be made by increasing the Demand Charge by 1% for each 1% by which the average power factor is less than 90% lagging.

CONDITIONS OF SERVICE:

1. Motors having a rated capacity in excess of ten (10) horsepower should be three-phase.
2. All wiring, pole lines, and other electrical equipment beyond the metering point, shall be considered the distribution system of the Consumer, and shall be furnished and maintained by the Consumer.

TEMPORARY DISCONTINUANCE OF SERVICE: A Consumer requesting reconnection at the same location shall be required to pay the Minimum Monthly Charge for the intervening months. Non-use of service for 12 months may make the premises subject to removal under the Idle Service Regulation.

TERMS OF PAYMENT: Payment is due within twenty (20) days after the bill is prepared.

SPECIAL PROVISION: Rates and Service hereunder subject to Electric Service Regulations of the Association as amended from time to time.

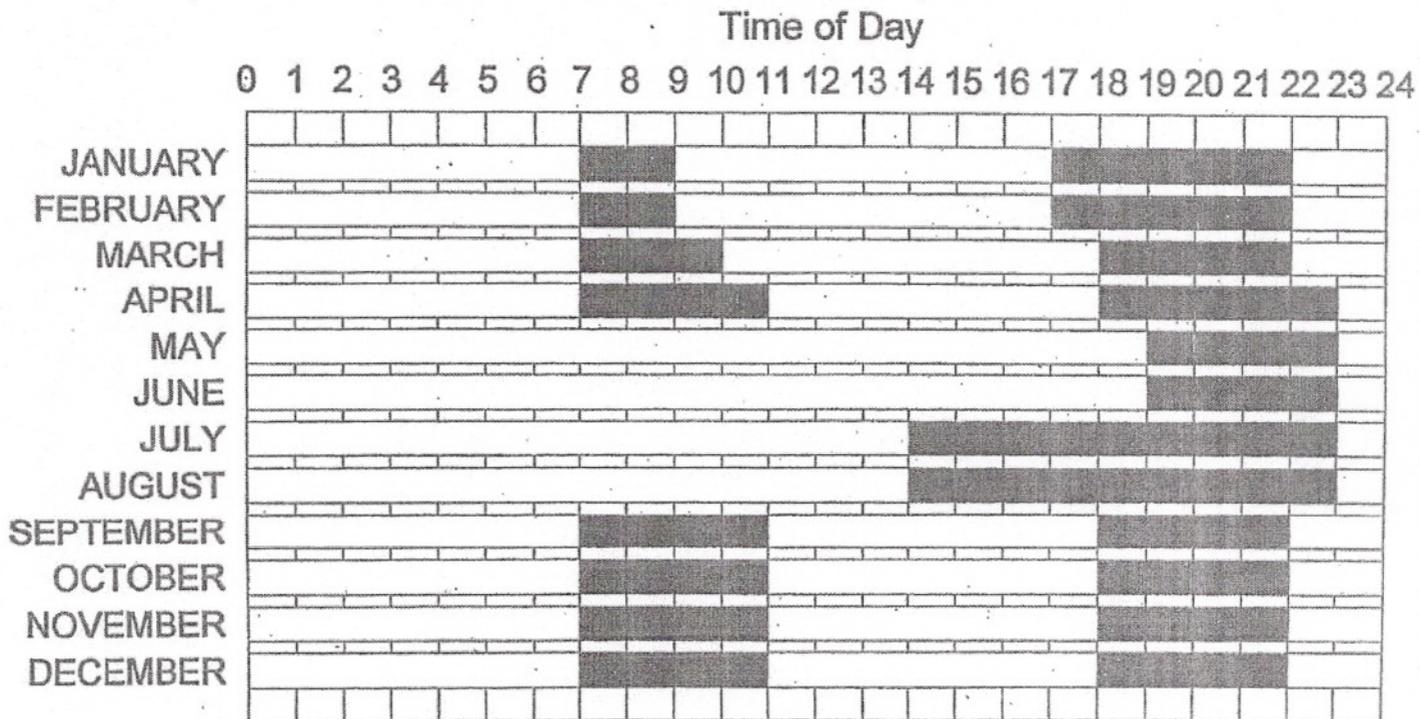
ELECTRIC SERVICE WITH TIME-OF-USE OPTION

AVAILABILITY: Available to all Consumers electing the Time-of-Use Option. Consumer must direct Association in writing to apply the Time-of-Use rate to selected accounts.

DETERMINATION OF THE BILLING DEMAND: The billing demand shall be the maximum kilowatt demand which occurred during the On-peak period. The On-peak period shall be determined by Moon Lake for each month and made known to those consumers electing to use the Time-of-Use Option.

The consumer will be responsible to pay a contribution-in-aid payment to Moon Lake for the cost of the Time-of-Use meter and its installation.

TIME - of - USE Options



■ ON - Peak Period □ OFF - Peak Period

Appendix D

Intake Approach Velocities Analysis Output

Intake Approach Velocity

Model Output

(2%, 10%, 25% and 90%)

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

26 foot Wide Intake at 3-inches (27.57 feet), Invert at 4664.00 feet (0.33 threshold)

DATE:	Pump Flow Rate (cfs)	2% MDF		Intake Velocity (ft/s)	10% MDF (cfs)	10% WS EL	Intake Velocity (ft/s)	50% MDF (cfs)	50% WS EL	Intake Velocity (ft/s)	90% MDF (cfs)	90% WS EL	Intake Velocity (ft/s)
		(cfs)	2% WS EL										
4/15	20	2349	4669.6	0.129	2607	4669.8	0.124	4230	4671.1	0.103	8798	4673.7	0.074
4/16	20	2226	4669.5	0.131	2822	4670.0	0.120	4410	4671.2	0.101	8525	4673.6	0.075
4/17	20	2232	4669.5	0.131	3022	4670.2	0.117	4400	4671.2	0.101	8828	4673.8	0.074
4/18	20	2524	4669.8	0.125	3099	4670.2	0.116	4890	4671.5	0.096	8174	4673.4	0.077
4/19	20	2709	4669.9	0.122	3266	4670.4	0.114	4885	4671.5	0.096	9394	4674.0	0.072
4/20	20	3282	4670.4	0.114	3415	4670.5	0.112	4985	4671.6	0.096	9269	4674.0	0.073
4/21	20	3125	4670.3	0.116	3698	4670.7	0.108	5620	4672.0	0.091	8787	4673.7	0.074
4/22	20	3023	4670.2	0.117	3589	4670.6	0.110	5870	4672.2	0.089	8112	4673.4	0.077
4/23	20	3059	4670.2	0.117	3523	4670.6	0.111	5665	4672.0	0.090	8811	4673.8	0.074
4/24	20	3036	4670.2	0.117	3370	4670.4	0.113	5655	4672.0	0.090	9904	4674.3	0.071
4/25	20	2946	4670.1	0.119	3311	4670.4	0.113	5685	4672.0	0.090	10300	4674.4	0.070
4/26	20	2557	4669.8	0.125	3303	4670.4	0.113	6355	4672.4	0.086	11390	4674.9	0.067
4/27	20	2769	4670.0	0.121	3239	4670.3	0.114	6380	4672.5	0.086	11070	4674.8	0.067
4/28	20	3065	4670.2	0.117	3751	4670.7	0.108	6530	4672.5	0.085	10540	4674.5	0.069
4/29	20	3029	4670.2	0.117	3779	4670.8	0.107	6475	4672.5	0.085	10310	4674.4	0.070
4/30	20	3374	4670.4	0.112	3759	4670.7	0.108	6440	4672.5	0.085	10810	4674.6	0.068
5/1	20	3242	4670.3	0.114	3909	4670.8	0.106	6480	4672.5	0.085	11250	4674.8	0.067
5/2	20	3199	4670.3	0.115	3991	4670.9	0.105	7105	4672.9	0.082	12210	4675.2	0.065
5/3	20	3229	4670.3	0.114	3928	4670.9	0.106	7705	4673.2	0.079	12360	4675.3	0.064
5/4	20	3167	4670.3	0.115	3680	4670.7	0.109	7865	4673.3	0.078	12810	4675.4	0.063
5/5	20	3329	4670.4	0.113	3602	4670.6	0.110	8175	4673.4	0.077	13240	4675.6	0.063
5/6	20	3244	4670.4	0.114	4135	4671.0	0.104	7700	4673.2	0.079	14950	4676.2	0.060
5/7	20	3190	4670.3	0.115	4246	4671.1	0.102	8040	4673.4	0.077	15770	4676.5	0.058
5/8	20	3240	4670.3	0.114	4237	4671.1	0.102	8570	4673.6	0.075	14740	4676.1	0.060
5/9	20	3462	4670.5	0.111	4123	4671.0	0.104	7805	4673.2	0.078	14700	4676.1	0.060
5/10	20	3915	4670.8	0.106	4572	4671.3	0.099	8230	4673.5	0.077	15270	4676.3	0.059
5/11	20	3709	4670.7	0.108	4895	4671.5	0.096	8780	4673.7	0.074	16100	4676.6	0.058
5/12	20	3725	4670.7	0.108	5020	4671.6	0.095	9325	4674.0	0.073	16110	4676.6	0.058
5/13	20	3425	4670.5	0.112	5300	4671.8	0.093	9575	4674.1	0.072	16950	4676.9	0.056
5/14	20	3474	4670.5	0.111	5217	4671.7	0.094	10050	4674.3	0.070	16790	4676.8	0.057
5/15	20	3511	4670.6	0.111	5190	4671.7	0.094	9985	4674.3	0.070	15930	4676.5	0.058
5/16	37	3578	4670.6	0.203	5303	4671.8	0.172	9585	4674.1	0.133	15700	4676.4	0.108
5/17	37	3651	4670.7	0.202	5507	4671.9	0.169	9700	4674.2	0.132	16280	4676.6	0.106
5/18	37	3450	4670.5	0.206	5452	4671.9	0.170	11200	4674.8	0.124	16840	4676.8	0.105
5/19	37	3559	4670.6	0.204	5556	4672.0	0.169	11350	4674.9	0.123	17340	4677.0	0.103
5/20	37	4039	4670.9	0.193	6195	4672.4	0.161	12100	4675.2	0.120	17700	4677.1	0.102
5/21	37	3984	4670.9	0.195	5870	4672.2	0.165	12200	4675.2	0.120	18360	4677.3	0.101
5/22	37	3770	4670.7	0.199	5743	4672.1	0.166	12200	4675.2	0.120	19110	4677.6	0.099
5/23	37	3760	4670.7	0.199	5796	4672.1	0.166	12350	4675.3	0.119	20080	4677.9	0.096
5/24	37	4520	4671.3	0.184	5930	4672.2	0.164	12550	4675.3	0.118	19980	4677.9	0.097
5/25	37	4987	4671.6	0.177	5956	4672.2	0.164	12750	4675.4	0.118	18740	4677.5	0.100
5/26	37	5411	4671.9	0.171	5748	4672.1	0.166	13050	4675.5	0.117	18510	4677.4	0.100
5/27	37	5229	4671.7	0.173	5636	4672.0	0.168	13000	4675.5	0.117	18850	4677.5	0.099
5/28	37	5088	4671.7	0.175	5447	4671.9	0.170	12650	4675.4	0.118	18870	4677.5	0.099
5/29	37	4661	4671.4	0.182	5313	4671.8	0.172	12300	4675.2	0.119	18740	4677.5	0.100
5/30	37	4733	4671.4	0.181	5283	4671.8	0.172	12700	4675.4	0.118	18760	4677.5	0.100
5/31	37	4536	4671.3	0.184	5607	4672.0	0.168	12750	4675.4	0.118	19440	4677.7	0.098
6/1	37	4581	4671.3	0.183	5463	4671.9	0.170	12200	4675.2	0.120	20110	4677.9	0.096
6/2	37	4411	4671.2	0.186	5234	4671.8	0.173	12100	4675.2	0.120	19950	4677.9	0.097
6/3	37	4374	4671.2	0.187	5391	4671.9	0.171	11950	4675.1	0.121	19910	4677.9	0.097
6/4	37	4168	4671.0	0.191	5115	4671.7	0.175	11350	4674.9	0.123	19860	4677.8	0.097
6/5	37	4052	4670.9	0.193	4946	4671.6	0.177	11300	4674.8	0.124	19710	4677.8	0.097
6/6	37	3893	4670.8	0.196	4931	4671.6	0.178	11550	4674.9	0.123	20290	4678.0	0.096
6/7	37	3832	4670.8	0.198	4989	4671.6	0.177	11300	4674.8	0.124	20300	4678.0	0.096
6/8	37	3598	4670.6	0.203	5086	4671.7	0.175	11250	4674.8	0.124	19650	4677.8	0.097
6/9	37	3517	4670.6	0.205	4824	4671.5	0.179	11300	4674.8	0.124	18800	4677.5	0.100

6/10	37	3579	4670.6	0.203	4579	4671.3	0.183	11800	4675.0	0.122	19400	4677.7	0.098
6/11	37	3470	4670.5	0.206	4533	4671.3	0.184	11550	4674.9	0.123	17970	4677.2	0.102
6/12	37	3297	4670.4	0.210	4482	4671.3	0.185	11100	4674.8	0.125	16880	4676.8	0.105
6/13	37	3090	4670.2	0.215	4186	4671.0	0.191	10850	4674.7	0.126	16510	4676.7	0.106
6/14	37	2939	4670.1	0.220	4150	4671.0	0.191	10500	4674.5	0.128	15810	4676.5	0.108
6/15	37	2839	4670.0	0.222	3686	4670.7	0.201	10550	4674.5	0.127	15770	4676.5	0.108
6/16	37	2800	4670.0	0.224	3534	4670.6	0.204	10150	4674.4	0.129	16680	4676.8	0.105
6/17	37	2687	4669.9	0.227	3377	4670.5	0.208	9885	4674.2	0.131	17310	4677.0	0.103
6/18	37	2504	4669.8	0.233	3056	4670.2	0.216	9405	4674.0	0.134	17870	4677.2	0.102
6/19	37	2317	4669.6	0.239	2750	4670.0	0.225	9075	4673.9	0.136	16990	4676.9	0.104
6/20	37	2218	4669.5	0.243	2784	4670.0	0.224	9180	4673.9	0.135	16340	4676.7	0.106
6/21	37	2084	4669.4	0.248	2687	4669.9	0.227	8340	4673.5	0.141	15410	4676.3	0.109
6/22	37	2037	4669.4	0.250	2572	4669.8	0.231	7630	4673.2	0.147	15240	4676.3	0.109
6/23	37	2041	4669.4	0.249	2444	4669.7	0.235	7505	4673.1	0.148	14900	4676.2	0.110
6/24	37	1959	4669.3	0.253	2378	4669.7	0.237	7855	4673.3	0.145	14180	4675.9	0.113
6/25	37	1899	4669.3	0.255	2439	4669.7	0.235	7845	4673.3	0.145	13370	4675.6	0.115
6/26	37	1838	4669.2	0.258	2369	4669.7	0.237	8225	4673.5	0.142	12610	4675.4	0.118
6/27	37	1816	4669.2	0.259	2167	4669.5	0.245	7665	4673.2	0.146	12900	4675.5	0.117
6/28	37	1485	4668.9	0.274	2069	4669.4	0.248	7385	4673.0	0.149	11970	4675.1	0.121
6/29	37	1401	4668.8	0.278	1962	4669.3	0.253	6980	4672.8	0.152	11550	4674.9	0.123
6/30	37	1705	4669.1	0.264	1928	4669.3	0.254	6505	4672.5	0.157	11340	4674.9	0.124
7/1	37	1615	4669.0	0.268	1932	4669.3	0.254	5870	4672.2	0.165	11500	4674.9	0.123
7/2	37	1595	4669.0	0.269	1840	4669.2	0.258	5675	4672.0	0.167	11290	4674.8	0.124
7/3	37	1507	4668.9	0.273	1770	4669.1	0.261	5510	4671.9	0.169	11260	4674.8	0.124
7/4	37	1350	4668.8	0.281	1689	4669.1	0.264	5390	4671.9	0.171	10490	4674.5	0.128
7/5	37	1295	4668.7	0.284	1626	4669.0	0.267	5300	4671.8	0.172	9824	4674.2	0.131
7/6	37	1249	4668.7	0.286	1572	4669.0	0.270	4910	4671.5	0.178	9447	4674.1	0.134
7/7	37	1205	4668.6	0.289	1547	4669.0	0.271	4570	4671.3	0.184	9555	4674.1	0.133
7/8	37	1168	4668.6	0.291	1549	4669.0	0.271	4505	4671.3	0.185	8844	4673.8	0.137
7/9	37	1156	4668.6	0.292	1600	4669.0	0.268	4315	4671.1	0.188	8691	4673.7	0.138
7/10	37	1154	4668.6	0.292	1649	4669.0	0.266	4005	4670.9	0.194	8414	4673.6	0.140
7/11	37	1109	4668.6	0.294	1589	4669.0	0.269	3985	4670.9	0.194	8959	4673.8	0.137
7/12	37	1109	4668.6	0.294	1595	4669.0	0.269	3850	4670.8	0.197	9129	4673.9	0.136
7/13	37	1108	4668.6	0.294	1566	4669.0	0.270	3640	4670.6	0.202	8639	4673.7	0.139
7/14	37	1073	4668.5	0.296	1506	4668.9	0.273	3575	4670.6	0.203	8064	4673.4	0.143
7/15	37	1072	4668.5	0.296	1461	4668.9	0.275	3520	4670.6	0.205	7709	4673.2	0.146
7/16	37	1055	4668.5	0.297	1442	4668.9	0.276	3425	4670.5	0.207	7303	4673.0	0.149
7/17	37	1072	4668.5	0.296	1399	4668.8	0.278	2935	4670.1	0.220	7291	4673.0	0.150
7/18	37	1072	4668.5	0.296	1348	4668.8	0.281	2730	4669.9	0.226	7098	4672.9	0.151
7/19	37	1030	4668.5	0.299	1316	4668.7	0.283	2790	4670.0	0.224	6915	4672.8	0.153
7/20	37	1004	4668.5	0.301	1267	4668.7	0.285	2755	4670.0	0.225	6591	4672.6	0.156
7/21	37	967	4668.4	0.303	1256	4668.7	0.286	2685	4669.9	0.227	6124	4672.3	0.162
7/22	37	935	4668.4	0.305	1244	4668.7	0.287	2585	4669.8	0.230	6110	4672.3	0.162
7/23	37	1053	4668.5	0.298	1248	4668.7	0.286	2670	4669.9	0.227	5722	4672.1	0.166
7/24	37	939	4668.4	0.305	1240	4668.7	0.287	2770	4670.0	0.224	5220	4671.7	0.173
7/25	37	933	4668.4	0.305	1246	4668.7	0.286	2815	4670.0	0.223	5051	4671.6	0.176
7/26	37	936	4668.4	0.305	1248	4668.7	0.286	2575	4669.8	0.230	4642	4671.4	0.182
7/27	37	1006	4668.5	0.300	1172	4668.6	0.291	2820	4670.0	0.223	5269	4671.8	0.173
7/28	37	1029	4668.5	0.299	1238	4668.7	0.287	2585	4669.8	0.230	4758	4671.4	0.180
7/29	37	1021	4668.5	0.300	1193	4668.6	0.289	2565	4669.8	0.231	4753	4671.4	0.180
7/30	37	1002	4668.5	0.301	1241	4668.7	0.287	2500	4669.8	0.233	4528	4671.3	0.184
7/31	37	1004	4668.5	0.301	1213	4668.7	0.288	2460	4669.7	0.234	4179	4671.0	0.191
8/1	37	1004	4668.5	0.301	1179	4668.6	0.290	2310	4669.6	0.239	4045	4670.9	0.193
8/2	37	1006	4668.5	0.301	1177	4668.6	0.290	2270	4669.6	0.241	4093	4671.0	0.192
8/3	37	1034	4668.5	0.299	1177	4668.6	0.290	2310	4669.6	0.239	5048	4671.6	0.176
8/4	37	1035	4668.5	0.299	1150	4668.6	0.292	2200	4669.5	0.243	4849	4671.5	0.179
8/5	37	1034	4668.5	0.299	1145	4668.6	0.292	2240	4669.5	0.242	4547	4671.3	0.184
8/6	37	1032	4668.5	0.299	1153	4668.6	0.292	2175	4669.5	0.244	4430	4671.2	0.186
8/7	37	1013	4668.5	0.300	1162	4668.6	0.291	2180	4669.5	0.244	4333	4671.1	0.188
8/8	37	1014	4668.5	0.300	1126	4668.6	0.293	2150	4669.5	0.245	4291	4671.1	0.189
8/9	37	1011	4668.5	0.300	1153	4668.6	0.292	2220	4669.5	0.243	4192	4671.0	0.190
8/10	37	992	4668.5	0.301	1130	4668.6	0.293	2325	4669.6	0.239	4435	4671.2	0.186
8/11	37	993	4668.5	0.301	1095	4668.5	0.295	2310	4669.6	0.239	4465	4671.2	0.185
8/12	37	984	4668.4	0.302	1096	4668.5	0.295	2220	4669.5	0.243	4242	4671.1	0.189
8/13	37	970	4668.4	0.303	1079	4668.5	0.296	2170	4669.5	0.244	3660	4670.7	0.201

8/14	37	966	4668.4	0.303	1073	4668.5	0.296	2075	4669.4	0.248	3919	4670.9	0.196
8/15	37	953	4668.4	0.304	1051	4668.5	0.298	2075	4669.4	0.248	4480	4671.2	0.185
8/16	37	943	4668.4	0.304	1073	4668.5	0.296	2025	4669.4	0.250	3861	4670.8	0.197
8/17	37	980	4668.4	0.302	1052	4668.5	0.298	2020	4669.4	0.250	4028	4670.9	0.194
8/18	37	970	4668.4	0.303	1031	4668.5	0.299	2145	4669.5	0.245	3965	4670.9	0.195
8/19	37	968	4668.4	0.303	1048	4668.5	0.298	2075	4669.4	0.248	3438	4670.5	0.207
8/20	37	970	4668.4	0.303	1047	4668.5	0.298	2040	4669.4	0.249	3863	4670.8	0.197
8/21	37	959	4668.4	0.303	1051	4668.5	0.298	2055	4669.4	0.249	3625	4670.6	0.202
8/22	37	948	4668.4	0.304	1089	4668.5	0.295	2085	4669.4	0.248	3441	4670.5	0.206
8/23	37	932	4668.4	0.305	1023	4668.5	0.299	2015	4669.4	0.250	3692	4670.7	0.201
8/24	37	951	4668.4	0.304	1043	4668.5	0.298	2245	4669.6	0.242	3372	4670.4	0.208
8/25	37	941	4668.4	0.305	1078	4668.5	0.296	1965	4669.3	0.252	3229	4670.3	0.212
8/26	37	922	4668.4	0.306	1097	4668.5	0.295	2035	4669.4	0.250	3357	4670.4	0.209
8/27	37	921	4668.4	0.306	1026	4668.5	0.299	1990	4669.3	0.251	3538	4670.6	0.204
8/28	37	923	4668.4	0.306	1023	4668.5	0.299	2000	4669.3	0.251	3175	4670.3	0.213
8/29	37	958	4668.4	0.304	1026	4668.5	0.299	1880	4669.2	0.256	3131	4670.3	0.214
8/30	37	931	4668.4	0.305	1010	4668.5	0.300	1900	4669.3	0.255	3330	4670.4	0.209
8/31	37	986	4668.4	0.302	1030	4668.5	0.299	1945	4669.3	0.253	3271	4670.4	0.211
9/1	37	986	4668.4	0.302	1042	4668.5	0.298	2055	4669.4	0.249	3244	4670.4	0.211
9/2	37	893	4668.4	0.308	1010	4668.5	0.300	2025	4669.4	0.250	3097	4670.2	0.215
9/3	37	905	4668.4	0.307	1020	4668.5	0.300	2045	4669.4	0.249	3018	4670.2	0.217
9/4	37	892	4668.4	0.308	1010	4668.5	0.300	1890	4669.3	0.256	2893	4670.1	0.221
9/5	37	872	4668.3	0.309	987	4668.4	0.302	1840	4669.2	0.258	3010	4670.2	0.218
9/6	37	870	4668.3	0.309	968	4668.4	0.303	1895	4669.3	0.255	3280	4670.4	0.210
9/7	37	859	4668.3	0.310	978	4668.4	0.302	1945	4669.3	0.253	3619	4670.6	0.202
9/8	37	840	4668.3	0.311	979	4668.4	0.302	1930	4669.3	0.254	3511	4670.6	0.205
9/9	37	854	4668.3	0.310	999	4668.5	0.301	1980	4669.3	0.252	3270	4670.4	0.211
9/10	37	841	4668.3	0.311	1010	4668.5	0.300	2015	4669.4	0.250	3339	4670.4	0.209
9/11	37	865	4668.3	0.310	999	4668.5	0.301	1995	4669.3	0.251	3499	4670.5	0.205
9/12	37	902	4668.4	0.307	991	4668.5	0.301	1930	4669.3	0.254	3342	4670.4	0.209
9/13	37	916	4668.4	0.306	1056	4668.5	0.297	1955	4669.3	0.253	3124	4670.3	0.214
9/14	37	929	4668.4	0.305	1066	4668.5	0.297	1925	4669.3	0.254	3179	4670.3	0.213
9/15	37	856	4668.3	0.310	1070	4668.5	0.297	1950	4669.3	0.253	3295	4670.4	0.210
9/16	37	845	4668.3	0.311	1123	4668.6	0.293	2050	4669.4	0.249	3017	4670.2	0.217
9/17	37	980	4668.4	0.302	1056	4668.5	0.297	1965	4669.3	0.252	3398	4670.5	0.208
9/18	37	916	4668.4	0.306	1142	4668.6	0.292	1945	4669.3	0.253	3224	4670.3	0.212
9/19	37	1096	4668.5	0.295	1202	4668.6	0.289	1945	4669.3	0.253	3121	4670.3	0.215
9/20	37	1086	4668.5	0.296	1232	4668.7	0.287	2080	4669.4	0.248	3258	4670.4	0.211
9/21	37	1054	4668.5	0.298	1256	4668.7	0.286	2020	4669.4	0.250	3458	4670.5	0.206
9/22	37	1053	4668.5	0.298	1194	4668.6	0.289	1850	4669.2	0.257	3384	4670.5	0.208
9/23	37	1035	4668.5	0.299	1197	4668.6	0.289	1825	4669.2	0.258	3311	4670.4	0.210
9/24	37	1099	4668.6	0.295	1186	4668.6	0.290	1925	4669.3	0.254	3659	4670.7	0.201
9/25	37	1116	4668.6	0.294	1353	4668.8	0.281	1840	4669.2	0.258	3507	4670.5	0.205
9/26	37	1130	4668.6	0.293	1376	4668.8	0.279	2010	4669.4	0.251	3577	4670.6	0.203
9/27	37	1047	4668.5	0.298	1272	4668.7	0.285	2020	4669.4	0.250	3207	4670.3	0.212
9/28	37	1023	4668.5	0.299	1283	4668.7	0.284	2020	4669.4	0.250	3379	4670.5	0.208
9/29	37	1005	4668.5	0.301	1165	4668.6	0.291	1915	4669.3	0.254	3371	4670.4	0.208
9/30	37	1004	4668.5	0.301	1203	4668.6	0.289	2000	4669.3	0.251	3739	4670.7	0.200
10/1	20	997	4668.5	0.163	1244	4668.7	0.155	2095	4669.4	0.134	3640	4670.6	0.109
10/2	20	996	4668.5	0.163	1346	4668.8	0.152	1995	4669.3	0.136	3549	4670.6	0.110
10/3	20	1017	4668.5	0.162	1212	4668.7	0.156	2135	4669.5	0.133	3480	4670.5	0.111
10/4	20	1017	4668.5	0.162	1197	4668.6	0.156	2145	4669.5	0.133	3445	4670.5	0.112
10/5	20	1016	4668.5	0.162	1197	4668.6	0.156	2140	4669.5	0.133	3672	4670.7	0.109
10/6	20	1034	4668.5	0.162	1129	4668.6	0.158	2090	4669.4	0.134	3598	4670.6	0.110
10/7	20	1016	4668.5	0.162	1140	4668.6	0.158	2115	4669.4	0.133	3424	4670.5	0.112
10/8	20	1086	4668.5	0.160	1158	4668.6	0.158	2085	4669.4	0.134	3689	4670.7	0.109
10/9	20	1063	4668.5	0.161	1175	4668.6	0.157	2135	4669.5	0.133	3518	4670.6	0.111
10/10	20	1119	4668.6	0.159	1210	4668.7	0.156	2210	4669.5	0.131	3626	4670.6	0.109
10/11	20	1110	4668.6	0.159	1256	4668.7	0.155	2220	4669.5	0.131	3735	4670.7	0.108
10/12	20	1109	4668.6	0.159	1407	4668.8	0.150	2095	4669.4	0.134	3738	4670.7	0.108
10/13	20	1100	4668.6	0.159	1327	4668.8	0.152	2230	4669.5	0.131	3769	4670.7	0.108
10/14	20	1117	4668.6	0.159	1309	4668.7	0.153	2330	4669.6	0.129	4001	4670.9	0.105
10/15	20	1110	4668.6	0.159	1412	4668.8	0.150	2195	4669.5	0.132	4002	4670.9	0.105

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Three Pumps

26 foot Wide Intake at 3-inches (27.57 feet), Invert at 4664.00 feet (0.33 threshold)

DATE:	Pump Flow Rate (cfs)	Intake			Intake			Intake			Intake		
		2% MDF (cfs)	2% WS EL	Velocity (ft/s)	10% MDF (cfs)	10% WS EL	Velocity (ft/s)	50% MDF (cfs)	50% WS EL	Velocity (ft/s)	90% MDF (cfs)	90% WS EL	Velocity (ft/s)
4/15	20	2349	4669.6	0.129	2607	4669.8	0.124	4230	4671.1	0.103	8798	4673.7	0.074
4/16	20	2226	4669.5	0.131	2822	4670.0	0.120	4410	4671.2	0.101	8525	4673.6	0.075
4/17	20	2232	4669.5	0.131	3022	4670.2	0.117	4400	4671.2	0.101	8828	4673.8	0.074
4/18	20	2524	4669.8	0.125	3099	4670.2	0.116	4890	4671.5	0.096	8174	4673.4	0.077
4/19	20	2709	4669.9	0.122	3266	4670.4	0.114	4885	4671.5	0.096	9394	4674.0	0.072
4/20	20	3282	4670.4	0.114	3415	4670.5	0.112	4985	4671.6	0.096	9269	4674.0	0.073
4/21	20	3125	4670.3	0.116	3698	4670.7	0.108	5620	4672.0	0.091	8787	4673.7	0.074
4/22	20	3023	4670.2	0.117	3589	4670.6	0.110	5870	4672.2	0.089	8112	4673.4	0.077
4/23	20	3059	4670.2	0.117	3523	4670.6	0.111	5665	4672.0	0.090	8811	4673.8	0.074
4/24	20	3036	4670.2	0.117	3370	4670.4	0.113	5655	4672.0	0.090	9904	4674.3	0.071
4/25	20	2946	4670.1	0.119	3311	4670.4	0.113	5685	4672.0	0.090	10300	4674.4	0.070
4/26	20	2557	4669.8	0.125	3303	4670.4	0.113	6355	4672.4	0.086	11390	4674.9	0.067
4/27	20	2769	4670.0	0.121	3239	4670.3	0.114	6380	4672.5	0.086	11070	4674.8	0.067
4/28	20	3065	4670.2	0.117	3751	4670.7	0.108	6530	4672.5	0.085	10540	4674.5	0.069
4/29	20	3029	4670.2	0.117	3779	4670.8	0.107	6475	4672.5	0.085	10310	4674.4	0.070
4/30	20	3374	4670.4	0.112	3759	4670.7	0.108	6440	4672.5	0.085	10810	4674.6	0.068
5/1	20	3242	4670.3	0.114	3909	4670.8	0.106	6480	4672.5	0.085	11250	4674.8	0.067
5/2	20	3199	4670.3	0.115	3991	4670.9	0.105	7105	4672.9	0.092	12210	4675.2	0.065
5/3	20	3229	4670.3	0.114	3928	4670.9	0.106	7705	4673.2	0.079	12360	4675.3	0.064
5/4	20	3167	4670.3	0.115	3680	4670.7	0.109	7865	4673.3	0.078	12810	4675.4	0.063
5/5	20	3329	4670.4	0.113	3602	4670.6	0.110	8175	4673.4	0.077	13240	4675.6	0.063
5/6	20	3244	4670.4	0.114	4135	4671.0	0.104	7700	4673.2	0.079	14950	4676.2	0.060
5/7	20	3190	4670.3	0.115	4246	4671.1	0.102	8040	4673.4	0.077	15770	4676.5	0.058
5/8	20	3240	4670.3	0.114	4237	4671.1	0.102	8570	4673.6	0.075	14740	4676.1	0.060
5/9	20	3462	4670.5	0.111	4123	4671.0	0.104	7805	4673.2	0.078	14700	4676.1	0.060
5/10	20	3915	4670.8	0.106	4572	4671.3	0.099	8230	4673.5	0.077	15270	4676.3	0.059
5/11	20	3709	4670.7	0.108	4895	4671.5	0.096	8780	4673.7	0.074	16100	4676.6	0.058
5/12	20	3725	4670.7	0.108	5020	4671.6	0.095	9325	4674.0	0.073	16110	4676.6	0.058
5/13	20	3425	4670.5	0.112	5300	4671.8	0.093	9575	4674.1	0.072	16950	4676.9	0.056
5/14	20	3474	4670.5	0.111	5217	4671.7	0.094	10050	4674.3	0.070	16790	4676.8	0.057
5/15	20	3511	4670.6	0.111	5190	4671.7	0.094	9985	4674.3	0.070	15930	4676.5	0.058
5/16	37	3578	4670.6	0.203	5303	4671.8	0.172	9585	4674.1	0.133	15700	4676.4	0.108
5/17	37	3651	4670.7	0.202	5507	4671.9	0.169	9700	4674.2	0.132	16280	4676.6	0.106
5/18	37	3450	4670.5	0.206	5452	4671.9	0.170	11200	4674.8	0.124	16840	4676.8	0.105
5/19	37	3559	4670.6	0.204	5556	4672.0	0.169	11350	4674.9	0.123	17340	4677.0	0.103
5/20	37	4039	4670.9	0.193	6195	4672.4	0.161	12100	4675.2	0.120	17700	4677.1	0.102
5/21	37	3984	4670.9	0.195	5870	4672.2	0.165	12200	4675.2	0.120	18360	4677.3	0.101
5/22	37	3770	4670.7	0.199	5743	4672.1	0.166	12200	4675.2	0.120	19110	4677.6	0.099
5/23	37	3760	4670.7	0.199	5796	4672.1	0.166	12350	4675.3	0.119	20080	4677.9	0.096
5/24	37	4520	4671.3	0.184	5930	4672.2	0.164	12550	4675.3	0.118	19980	4677.9	0.097
5/25	37	4987	4671.6	0.177	5956	4672.2	0.164	12750	4675.4	0.118	18740	4677.5	0.100
5/26	37	5411	4671.9	0.171	5748	4672.1	0.166	13050	4675.5	0.117	18510	4677.4	0.100
5/27	37	5229	4671.7	0.173	5636	4672.0	0.168	13000	4675.5	0.117	18850	4677.5	0.099
5/28	37	5088	4671.7	0.175	5447	4671.9	0.170	12650	4675.4	0.118	18870	4677.5	0.099
5/29	37	4661	4671.4	0.182	5313	4671.8	0.172	12300	4675.2	0.119	18740	4677.5	0.100
5/30	37	4733	4671.4	0.181	5283	4671.8	0.172	12700	4675.4	0.118	18760	4677.5	0.100
5/31	37	4536	4671.3	0.184	5607	4672.0	0.168	12750	4675.4	0.118	19440	4677.7	0.098
6/1	37	4581	4671.3	0.183	5463	4671.9	0.170	12200	4675.2	0.120	20110	4677.9	0.096
6/2	37	4411	4671.2	0.186	5234	4671.8	0.173	12100	4675.2	0.120	19950	4677.9	0.097
6/3	37	4374	4671.2	0.187	5391	4671.9	0.171	11950	4675.1	0.121	19910	4677.9	0.097
6/4	37	4168	4671.0	0.191	5115	4671.7	0.175	11350	4674.9	0.123	19860	4677.8	0.097
6/5	37	4052	4670.9	0.193	4946	4671.6	0.177	11300	4674.8	0.124	19710	4677.8	0.097
6/6	37	3893	4670.8	0.196	4931	4671.6	0.178	11550	4674.9	0.123	20290	4678.0	0.096
6/7	37	3832	4670.8	0.198	4989	4671.6	0.177	11300	4674.8	0.124	20300	4678.0	0.096
6/8	37	3598	4670.6	0.203	5086	4671.7	0.175	11250	4674.8	0.124	19650	4677.8	0.097
6/9	37	3517	4670.6	0.205	4824	4671.5	0.179	11300	4674.8	0.124	18800	4677.5	0.100

6/10	37	3579	4670.6	0.203	4579	4671.3	0.183	11800	4675.0	0.122	19400	4677.7	0.098
6/11	37	3470	4670.5	0.206	4533	4671.3	0.184	11550	4674.9	0.123	17970	4677.2	0.102
6/12	37	3297	4670.4	0.210	4482	4671.3	0.185	11100	4674.8	0.125	16880	4676.8	0.105
6/13	37	3090	4670.2	0.215	4186	4671.0	0.191	10850	4674.7	0.126	16510	4676.7	0.106
6/14	37	2939	4670.1	0.220	4150	4671.0	0.191	10500	4674.5	0.128	15810	4676.5	0.108
6/15	37	2839	4670.0	0.222	3686	4670.7	0.201	10550	4674.5	0.127	15770	4676.5	0.108
6/16	37	2800	4670.0	0.224	3534	4670.6	0.204	10150	4674.4	0.129	16680	4676.8	0.105
6/17	37	2687	4669.9	0.227	3377	4670.5	0.208	9885	4674.2	0.131	17310	4677.0	0.103
6/18	37	2504	4669.8	0.233	3056	4670.2	0.216	9405	4674.0	0.134	17870	4677.2	0.102
6/19	37	2317	4669.6	0.239	2750	4670.0	0.225	9075	4673.9	0.136	16990	4676.9	0.104
6/20	37	2218	4669.5	0.243	2784	4670.0	0.224	9180	4673.9	0.135	16340	4676.7	0.106
6/21	37	2084	4669.4	0.248	2687	4669.9	0.227	8340	4673.5	0.141	15410	4676.3	0.109
6/22	37	2037	4669.4	0.250	2572	4669.8	0.231	7630	4673.2	0.147	15240	4676.3	0.109
6/23	37	2041	4669.4	0.249	2444	4669.7	0.235	7505	4673.1	0.148	14900	4676.2	0.110
6/24	37	1959	4669.3	0.253	2378	4669.7	0.237	7855	4673.3	0.145	14180	4675.9	0.113
6/25	37	1899	4669.3	0.255	2439	4669.7	0.235	7845	4673.3	0.145	13370	4675.6	0.115
6/26	37	1838	4669.2	0.258	2369	4669.7	0.237	8225	4673.5	0.142	12610	4675.4	0.118
6/27	37	1816	4669.2	0.259	2167	4669.5	0.245	7665	4673.2	0.146	12900	4675.5	0.117
6/28	37	1485	4668.9	0.274	2069	4669.4	0.248	7385	4673.0	0.149	11970	4675.1	0.121
6/29	37	1401	4668.8	0.278	1962	4669.3	0.253	6980	4672.8	0.152	11550	4674.9	0.123
6/30	37	1705	4669.1	0.264	1928	4669.3	0.254	6505	4672.5	0.157	11340	4674.9	0.124
7/1	53	1615	4669.0	0.383	1932	4669.3	0.364	5870	4672.2	0.236	11500	4674.9	0.176
7/2	53	1595	4669.0	0.385	1840	4669.2	0.369	5675	4672.0	0.239	11290	4674.8	0.177
7/3	53	1507	4668.9	0.391	1770	4669.1	0.373	5510	4671.9	0.242	11260	4674.8	0.177
7/4	53	1350	4668.8	0.402	1689	4669.1	0.379	5390	4671.9	0.245	10490	4674.5	0.183
7/5	53	1295	4668.7	0.406	1626	4669.0	0.383	5300	4671.8	0.247	9824	4674.2	0.188
7/6	53	1249	4668.7	0.410	1572	4669.0	0.386	4910	4671.5	0.255	9447	4674.1	0.191
7/7	53	1205	4668.6	0.414	1547	4669.0	0.388	4570	4671.3	0.263	9555	4674.1	0.190
7/8	53	1168	4668.6	0.417	1549	4669.0	0.388	4505	4671.3	0.265	8844	4673.8	0.197
7/9	53	1156	4668.6	0.418	1600	4669.0	0.384	4315	4671.1	0.269	8691	4673.7	0.198
7/10	53	1154	4668.6	0.418	1649	4669.0	0.381	4005	4670.9	0.278	8414	4673.6	0.201
7/11	53	1109	4668.6	0.421	1589	4669.0	0.385	3985	4670.9	0.279	8959	4673.8	0.196
7/12	53	1109	4668.6	0.422	1595	4669.0	0.385	3850	4670.8	0.283	9129	4673.9	0.194
7/13	53	1108	4668.6	0.422	1566	4669.0	0.387	3640	4670.6	0.289	8639	4673.7	0.199
7/14	53	1073	4668.5	0.425	1506	4668.9	0.391	3575	4670.6	0.291	8064	4673.4	0.205
7/15	53	1072	4668.5	0.425	1461	4668.9	0.394	3520	4670.6	0.293	7709	4673.2	0.209
7/16	53	1055	4668.5	0.426	1442	4668.9	0.395	3425	4670.5	0.296	7303	4673.0	0.214
7/17	53	1072	4668.5	0.425	1399	4668.8	0.399	2935	4670.1	0.315	7291	4673.0	0.214
7/18	53	1072	4668.5	0.425	1348	4668.8	0.402	2730	4669.9	0.323	7098	4672.9	0.217
7/19	53	1030	4668.5	0.428	1316	4668.7	0.405	2790	4670.0	0.321	6915	4672.8	0.219
7/20	53	1004	4668.5	0.431	1267	4668.7	0.409	2755	4670.0	0.322	6591	4672.6	0.224
7/21	53	967	4668.4	0.434	1256	4668.7	0.409	2685	4669.9	0.325	6124	4672.3	0.231
7/22	53	935	4668.4	0.437	1244	4668.7	0.410	2585	4669.8	0.330	6110	4672.3	0.232
7/23	53	1053	4668.5	0.426	1248	4668.7	0.410	2670	4669.9	0.326	5722	4672.1	0.238
7/24	53	939	4668.4	0.437	1240	4668.7	0.411	2770	4670.0	0.321	5220	4671.7	0.248
7/25	53	933	4668.4	0.437	1246	4668.7	0.410	2815	4670.0	0.320	5051	4671.6	0.252
7/26	53	936	4668.4	0.437	1248	4668.7	0.410	2575	4669.8	0.330	4642	4671.4	0.261
7/27	53	1006	4668.5	0.430	1172	4668.6	0.416	2820	4670.0	0.319	5269	4671.8	0.247
7/28	53	1029	4668.5	0.428	1238	4668.7	0.411	2585	4669.8	0.330	4758	4671.4	0.258
7/29	53	1021	4668.5	0.429	1193	4668.6	0.415	2565	4669.8	0.331	4753	4671.4	0.259
7/30	53	1002	4668.5	0.431	1241	4668.7	0.411	2500	4669.8	0.334	4528	4671.3	0.264
7/31	53	1004	4668.5	0.431	1213	4668.7	0.413	2460	4669.7	0.336	4179	4671.0	0.273
8/1	53	1004	4668.5	0.431	1179	4668.6	0.416	2310	4669.6	0.343	4045	4670.9	0.277
8/2	53	1006	4668.5	0.430	1177	4668.6	0.416	2270	4669.6	0.345	4099	4671.0	0.276
8/3	53	1034	4668.5	0.428	1177	4668.6	0.416	2310	4669.6	0.343	5048	4671.6	0.252
8/4	53	1035	4668.5	0.428	1150	4668.6	0.418	2200	4669.5	0.349	4849	4671.5	0.256
8/5	53	1034	4668.5	0.428	1145	4668.6	0.418	2240	4669.5	0.346	4547	4671.3	0.264
8/6	53	1032	4668.5	0.428	1153	4668.6	0.418	2175	4669.5	0.350	4430	4671.2	0.266
8/7	53	1013	4668.5	0.430	1162	4668.6	0.417	2180	4669.5	0.350	4333	4671.1	0.269
8/8	53	1014	4668.5	0.430	1126	4668.6	0.420	2150	4669.5	0.351	4291	4671.1	0.270
8/9	53	1011	4668.5	0.430	1153	4668.6	0.418	2220	4669.5	0.348	4192	4671.0	0.273
8/10	53	992	4668.5	0.432	1130	4668.6	0.420	2325	4669.6	0.342	4435	4671.2	0.266
8/11	53	993	4668.5	0.432	1095	4668.5	0.423	2310	4669.6	0.343	4465	4671.2	0.266
8/12	53	984	4668.4	0.432	1096	4668.5	0.423	2220	4669.5	0.348	4242	4671.1	0.271
8/13	53	970	4668.4	0.434	1079	4668.5	0.424	2170	4669.5	0.350	3660	4670.7	0.288

8/14	53	966	4668.4	0.434	1073	4668.5	0.425	2075	4669.4	0.355	3919	4670.9	0.281
8/15	53	953	4668.4	0.435	1051	4668.5	0.426	2075	4669.4	0.355	4480	4671.2	0.265
8/16	37	943	4668.4	0.304	1073	4668.5	0.296	2025	4669.4	0.250	3861	4670.8	0.197
8/17	37	980	4668.4	0.302	1052	4668.5	0.298	2020	4669.4	0.250	4028	4670.9	0.194
8/18	37	970	4668.4	0.303	1031	4668.5	0.299	2145	4669.5	0.245	3965	4670.9	0.195
8/19	37	968	4668.4	0.303	1048	4668.5	0.298	2075	4669.4	0.248	3438	4670.5	0.207
8/20	37	970	4668.4	0.303	1047	4668.5	0.298	2040	4669.4	0.249	3863	4670.8	0.197
8/21	37	959	4668.4	0.303	1051	4668.5	0.298	2055	4669.4	0.249	3625	4670.6	0.202
8/22	37	948	4668.4	0.304	1089	4668.5	0.295	2085	4669.4	0.248	3441	4670.5	0.206
8/23	37	932	4668.4	0.305	1023	4668.5	0.299	2015	4669.4	0.250	3692	4670.7	0.201
8/24	37	951	4668.4	0.304	1043	4668.5	0.298	2245	4669.6	0.242	3372	4670.4	0.208
8/25	37	941	4668.4	0.305	1078	4668.5	0.296	1965	4669.3	0.252	3229	4670.3	0.212
8/26	37	922	4668.4	0.306	1097	4668.5	0.295	2035	4669.4	0.250	3357	4670.4	0.209
8/27	37	921	4668.4	0.306	1026	4668.5	0.299	1990	4669.3	0.251	3538	4670.6	0.204
8/28	37	923	4668.4	0.306	1023	4668.5	0.299	2000	4669.3	0.251	3175	4670.3	0.213
8/29	37	958	4668.4	0.304	1026	4668.5	0.299	1880	4669.2	0.256	3131	4670.3	0.214
8/30	37	931	4668.4	0.305	1010	4668.5	0.300	1900	4669.3	0.255	3330	4670.4	0.209
8/31	37	986	4668.4	0.302	1030	4668.5	0.299	1945	4669.3	0.253	3271	4670.4	0.211
9/1	37	986	4668.4	0.302	1042	4668.5	0.298	2055	4669.4	0.249	3244	4670.4	0.211
9/2	37	893	4668.4	0.308	1010	4668.5	0.300	2025	4669.4	0.250	3097	4670.2	0.215
9/3	37	905	4668.4	0.307	1020	4668.5	0.300	2045	4669.4	0.249	3018	4670.2	0.217
9/4	37	892	4668.4	0.308	1010	4668.5	0.300	1890	4669.3	0.256	2893	4670.1	0.221
9/5	37	872	4668.3	0.309	987	4668.4	0.302	1840	4669.2	0.258	3010	4670.2	0.218
9/6	37	870	4668.3	0.309	968	4668.4	0.303	1895	4669.3	0.255	3280	4670.4	0.210
9/7	37	859	4668.3	0.310	978	4668.4	0.302	1945	4669.3	0.253	3619	4670.6	0.202
9/8	37	840	4668.3	0.311	979	4668.4	0.302	1930	4669.3	0.254	3511	4670.6	0.205
9/9	37	854	4668.3	0.310	999	4668.5	0.301	1980	4669.3	0.252	3270	4670.4	0.211
9/10	37	841	4668.3	0.311	1010	4668.5	0.300	2015	4669.4	0.250	3339	4670.4	0.209
9/11	37	865	4668.3	0.310	999	4668.5	0.301	1995	4669.3	0.251	3499	4670.5	0.205
9/12	37	902	4668.4	0.307	991	4668.5	0.301	1930	4669.3	0.254	3342	4670.4	0.209
9/13	37	916	4668.4	0.306	1056	4668.5	0.297	1955	4669.3	0.253	3124	4670.3	0.214
9/14	37	929	4668.4	0.305	1066	4668.5	0.297	1925	4669.3	0.254	3179	4670.3	0.213
9/15	37	856	4668.3	0.310	1070	4668.5	0.297	1950	4669.3	0.253	3295	4670.4	0.210
9/16	37	845	4668.3	0.311	1123	4668.6	0.293	2050	4669.4	0.249	3017	4670.2	0.217
9/17	37	980	4668.4	0.302	1056	4668.5	0.297	1965	4669.3	0.252	3398	4670.5	0.208
9/18	37	916	4668.4	0.306	1142	4668.6	0.292	1945	4669.3	0.253	3224	4670.3	0.212
9/19	37	1096	4668.5	0.295	1202	4668.6	0.289	1945	4669.3	0.253	3121	4670.3	0.215
9/20	37	1086	4668.5	0.296	1232	4668.7	0.287	2080	4669.4	0.248	3258	4670.4	0.211
9/21	37	1054	4668.5	0.298	1256	4668.7	0.286	2020	4669.4	0.250	3458	4670.5	0.206
9/22	37	1053	4668.5	0.298	1194	4668.6	0.289	1850	4669.2	0.257	3384	4670.5	0.208
9/23	37	1035	4668.5	0.299	1197	4668.6	0.289	1825	4669.2	0.258	3311	4670.4	0.210
9/24	37	1099	4668.6	0.295	1186	4668.6	0.290	1925	4669.3	0.254	3659	4670.7	0.201
9/25	37	1116	4668.6	0.294	1353	4668.8	0.281	1840	4669.2	0.258	3507	4670.5	0.205
9/26	37	1130	4668.6	0.293	1376	4668.8	0.279	2010	4669.4	0.251	3577	4670.6	0.203
9/27	37	1047	4668.5	0.298	1272	4668.7	0.285	2020	4669.4	0.250	3207	4670.3	0.212
9/28	37	1023	4668.5	0.299	1283	4668.7	0.284	2020	4669.4	0.250	3379	4670.5	0.208
9/29	37	1005	4668.5	0.301	1165	4668.6	0.291	1915	4669.3	0.254	3371	4670.4	0.208
9/30	37	1004	4668.5	0.301	1203	4668.6	0.289	2000	4669.3	0.251	3739	4670.7	0.200
10/1	20	997	4668.5	0.163	1244	4668.7	0.155	2095	4669.4	0.134	3640	4670.6	0.109
10/2	20	996	4668.5	0.163	1346	4668.8	0.152	1995	4669.3	0.136	3549	4670.6	0.110
10/3	20	1017	4668.5	0.162	1212	4668.7	0.156	2135	4669.5	0.133	3480	4670.5	0.111
10/4	20	1017	4668.5	0.162	1197	4668.6	0.156	2145	4669.5	0.133	3445	4670.5	0.112
10/5	20	1016	4668.5	0.162	1197	4668.6	0.156	2140	4669.5	0.133	3672	4670.7	0.109
10/6	20	1034	4668.5	0.162	1129	4668.6	0.158	2090	4669.4	0.134	3598	4670.6	0.110
10/7	20	1016	4668.5	0.162	1140	4668.6	0.158	2115	4669.4	0.133	3424	4670.5	0.112
10/8	20	1086	4668.5	0.160	1158	4668.6	0.158	2085	4669.4	0.134	3689	4670.7	0.109
10/9	20	1063	4668.5	0.161	1175	4668.6	0.157	2135	4669.5	0.133	3518	4670.6	0.111
10/10	20	1119	4668.6	0.159	1210	4668.7	0.156	2210	4669.5	0.131	3626	4670.6	0.109
10/11	20	1110	4668.6	0.159	1256	4668.7	0.155	2220	4669.5	0.131	3735	4670.7	0.108
10/12	20	1109	4668.6	0.159	1407	4668.8	0.150	2095	4669.4	0.134	3738	4670.7	0.108
10/13	20	1100	4668.6	0.159	1327	4668.8	0.152	2230	4669.5	0.131	3769	4670.7	0.108
10/14	20	1117	4668.6	0.159	1309	4668.7	0.153	2330	4669.6	0.129	4001	4670.9	0.105
10/15	20	1110	4668.6	0.159	1412	4668.8	0.150	2195	4669.5	0.132	4002	4670.9	0.105

Green River Pumping Plant

Full Project (10,000 af/yr) - Three Pumps

26 foot Wide Intake at 3-inches (27.57 feet), Invert at 4664.00 feet (0.33 threshold)

DATE:	Pump Flow Rate (cfs)	2% MDF		Intake Velocity (ft/s)	10% MDF (cfs)	10% WS EL	Intake Velocity (ft/s)	50% MDF (cfs)	50% WS EL	Intake Velocity (ft/s)	90% MDF (cfs)	90% WS EL	Intake Velocity (ft/s)
		(cfs)	2% WS EL										
4/15	20	2349	4669.6	0.129	2607	4669.8	0.124	4230	4671.1	0.103	8798	4673.7	0.074
4/16	20	2226	4669.5	0.131	2822	4670.0	0.120	4410	4671.2	0.101	8525	4673.6	0.075
4/17	20	2232	4669.5	0.131	3022	4670.2	0.117	4400	4671.2	0.101	8828	4673.8	0.074
4/18	20	2524	4669.8	0.125	3099	4670.2	0.116	4890	4671.5	0.096	8174	4673.4	0.077
4/19	20	2709	4669.9	0.122	3266	4670.4	0.114	4885	4671.5	0.096	9394	4674.0	0.072
4/20	20	3282	4670.4	0.114	3415	4670.5	0.112	4985	4671.6	0.096	9269	4674.0	0.073
4/21	20	3125	4670.3	0.116	3698	4670.7	0.108	5620	4672.0	0.091	8787	4673.7	0.074
4/22	20	3023	4670.2	0.117	3589	4670.6	0.110	5870	4672.2	0.089	8112	4673.4	0.077
4/23	20	3059	4670.2	0.117	3523	4670.6	0.111	5665	4672.0	0.090	8811	4673.8	0.074
4/24	20	3036	4670.2	0.117	3370	4670.4	0.113	5655	4672.0	0.090	9904	4674.3	0.071
4/25	20	2946	4670.1	0.119	3311	4670.4	0.113	5685	4672.0	0.090	10300	4674.4	0.070
4/26	20	2557	4669.8	0.125	3303	4670.4	0.113	6355	4672.4	0.086	11390	4674.9	0.067
4/27	20	2769	4670.0	0.121	3239	4670.3	0.114	6380	4672.5	0.086	11070	4674.8	0.067
4/28	20	3065	4670.2	0.117	3751	4670.7	0.108	6530	4672.5	0.085	10540	4674.5	0.069
4/29	20	3029	4670.2	0.117	3779	4670.8	0.107	6475	4672.5	0.085	10310	4674.4	0.070
4/30	20	3374	4670.4	0.112	3759	4670.7	0.108	6440	4672.5	0.085	10810	4674.6	0.068
5/1	37	3242	4670.3	0.211	3909	4670.8	0.196	6480	4672.5	0.158	11250	4674.8	0.124
5/2	37	3199	4670.3	0.212	3991	4670.9	0.194	7105	4672.9	0.151	12210	4675.2	0.120
5/3	37	3229	4670.3	0.212	3928	4670.9	0.196	7705	4673.2	0.146	12360	4675.3	0.119
5/4	37	3167	4670.3	0.213	3680	4670.7	0.201	7865	4673.3	0.145	12810	4675.4	0.117
5/5	37	3329	4670.4	0.209	3602	4670.6	0.203	8175	4673.4	0.142	13240	4675.6	0.116
5/6	37	3244	4670.4	0.211	4135	4671.0	0.192	7700	4673.2	0.146	14950	4676.2	0.110
5/7	37	3190	4670.3	0.213	4246	4671.1	0.189	8040	4673.4	0.143	15770	4676.5	0.108
5/8	37	3240	4670.3	0.211	4237	4671.1	0.190	8570	4673.6	0.139	14740	4676.1	0.111
5/9	37	3462	4670.5	0.206	4123	4671.0	0.192	7805	4673.2	0.145	14700	4676.1	0.111
5/10	37	3915	4670.8	0.196	4572	4671.3	0.184	8230	4673.5	0.142	15270	4676.3	0.109
5/11	37	3709	4670.7	0.200	4895	4671.5	0.178	8780	4673.7	0.138	16100	4676.6	0.107
5/12	37	3725	4670.7	0.200	5020	4671.6	0.176	9325	4674.0	0.134	16110	4676.6	0.107
5/13	37	3425	4670.5	0.207	5300	4671.8	0.172	9575	4674.1	0.133	16950	4676.9	0.104
5/14	37	3474	4670.5	0.206	5217	4671.7	0.173	10050	4674.3	0.130	16790	4676.8	0.105
5/15	37	3511	4670.6	0.205	5190	4671.7	0.174	9985	4674.3	0.130	15930	4676.5	0.107
5/16	37	3578	4670.6	0.203	5303	4671.8	0.172	9585	4674.1	0.133	15700	4676.4	0.108
5/17	37	3651	4670.7	0.202	5507	4671.9	0.169	9700	4674.2	0.132	16280	4676.6	0.106
5/18	37	3450	4670.5	0.206	5452	4671.9	0.170	11200	4674.8	0.124	16840	4676.8	0.105
5/19	37	3559	4670.6	0.204	5556	4672.0	0.169	11350	4674.9	0.123	17340	4677.0	0.103
5/20	37	4039	4670.9	0.193	6195	4672.4	0.161	12100	4675.2	0.120	17700	4677.1	0.102
5/21	37	3984	4670.9	0.195	5870	4672.2	0.165	12200	4675.2	0.120	18360	4677.3	0.101
5/22	37	3770	4670.7	0.199	5743	4672.1	0.166	12200	4675.2	0.120	19110	4677.6	0.099
5/23	37	3760	4670.7	0.199	5796	4672.1	0.166	12350	4675.3	0.119	20080	4677.9	0.096
5/24	37	4520	4671.3	0.184	5930	4672.2	0.164	12550	4675.3	0.118	19980	4677.9	0.097
5/25	37	4987	4671.6	0.177	5956	4672.2	0.164	12750	4675.4	0.118	18740	4677.5	0.100
5/26	37	5411	4671.9	0.171	5748	4672.1	0.166	13050	4675.5	0.117	18510	4677.4	0.100
5/27	37	5229	4671.7	0.173	5636	4672.0	0.168	13000	4675.5	0.117	18850	4677.5	0.099
5/28	37	5088	4671.7	0.175	5447	4671.9	0.170	12650	4675.4	0.118	18870	4677.5	0.099
5/29	37	4661	4671.4	0.182	5313	4671.8	0.172	12300	4675.2	0.119	18740	4677.5	0.100
5/30	37	4733	4671.4	0.181	5283	4671.8	0.172	12700	4675.4	0.118	18760	4677.5	0.100
5/31	37	4536	4671.3	0.184	5607	4672.0	0.168	12750	4675.4	0.118	19440	4677.7	0.098
6/1	53	4581	4671.3	0.263	5463	4671.9	0.243	12200	4675.2	0.172	20110	4677.9	0.138
6/2	53	4411	4671.2	0.267	5234	4671.8	0.248	12100	4675.2	0.172	19950	4677.9	0.138
6/3	53	4374	4671.2	0.268	5391	4671.9	0.245	11950	4675.1	0.173	19910	4677.9	0.139
6/4	53	4168	4671.0	0.273	5115	4671.7	0.250	11350	4674.9	0.177	19860	4677.8	0.139
6/5	53	4052	4670.9	0.277	4946	4671.6	0.254	11300	4674.8	0.177	19710	4677.8	0.139
6/6	53	3893	4670.8	0.281	4931	4671.6	0.254	11550	4674.9	0.176	20290	4678.0	0.137
6/7	53	3832	4670.8	0.283	4989	4671.6	0.253	11300	4674.8	0.177	20300	4678.0	0.137
6/8	53	3598	4670.6	0.291	5086	4671.7	0.251	11250	4674.8	0.178	19650	4677.8	0.140
6/9	53	3517	4670.6	0.293	4824	4671.5	0.257	11300	4674.8	0.177	18800	4677.5	0.143

6/10	53	3579	4670.6	0.291	4579	4671.3	0.263	11800	4675.0	0.174	19400	4677.7	0.140
6/11	53	3470	4670.5	0.295	4533	4671.3	0.264	11550	4674.9	0.176	17970	4677.2	0.146
6/12	53	3297	4670.4	0.301	4482	4671.3	0.265	11100	4674.8	0.179	16880	4676.8	0.150
6/13	53	3090	4670.2	0.308	4186	4671.0	0.273	10850	4674.7	0.180	16510	4676.7	0.151
6/14	53	2939	4670.1	0.314	4150	4671.0	0.274	10500	4674.5	0.183	15810	4676.5	0.154
6/15	53	2839	4670.0	0.319	3686	4670.7	0.288	10550	4674.5	0.182	15770	4676.5	0.154
6/16	53	2800	4670.0	0.320	3534	4670.6	0.293	10150	4674.4	0.185	16680	4676.8	0.151
6/17	53	2687	4669.9	0.325	3377	4670.5	0.298	9885	4674.2	0.188	17310	4677.0	0.148
6/18	53	2504	4669.8	0.333	3056	4670.2	0.310	9405	4674.0	0.192	17870	4677.2	0.146
6/19	53	2317	4669.6	0.343	2750	4670.0	0.322	9075	4673.9	0.195	16990	4676.9	0.149
6/20	53	2218	4669.5	0.348	2784	4670.0	0.321	9180	4673.9	0.194	16340	4676.7	0.152
6/21	53	2084	4669.4	0.355	2687	4669.9	0.325	8340	4673.5	0.202	15410	4676.3	0.156
6/22	53	2037	4669.4	0.357	2572	4669.8	0.330	7630	4673.2	0.210	15240	4676.3	0.157
6/23	53	2041	4669.4	0.357	2444	4669.7	0.336	7505	4673.1	0.211	14900	4676.2	0.158
6/24	53	1959	4669.3	0.362	2378	4669.7	0.339	7855	4673.3	0.207	14180	4675.9	0.161
6/25	53	1899	4669.3	0.365	2439	4669.7	0.337	7845	4673.3	0.207	13370	4675.6	0.165
6/26	53	1838	4669.2	0.369	2369	4669.7	0.340	8225	4673.5	0.203	12610	4675.4	0.169
6/27	53	1816	4669.2	0.370	2167	4669.5	0.350	7665	4673.2	0.210	12900	4675.5	0.168
6/28	53	1485	4668.9	0.392	2069	4669.4	0.356	7385	4673.0	0.213	11970	4675.1	0.173
6/29	53	1401	4668.8	0.398	1962	4669.3	0.362	6980	4672.8	0.218	11550	4674.9	0.176
6/30	53	1705	4669.1	0.377	1928	4669.3	0.364	6505	4672.5	0.225	11340	4674.9	0.177
7/1	53	1615	4669.0	0.383	1932	4669.3	0.364	5870	4672.2	0.236	11500	4674.9	0.176
7/2	53	1595	4669.0	0.385	1840	4669.2	0.369	5675	4672.0	0.239	11290	4674.8	0.177
7/3	53	1507	4668.9	0.391	1770	4669.1	0.373	5510	4671.9	0.242	11260	4674.8	0.177
7/4	53	1350	4668.8	0.402	1689	4669.1	0.379	5390	4671.9	0.245	10490	4674.5	0.183
7/5	53	1295	4668.7	0.406	1626	4669.0	0.383	5300	4671.8	0.247	9824	4674.2	0.188
7/6	53	1249	4668.7	0.410	1572	4669.0	0.386	4910	4671.5	0.255	9447	4674.1	0.191
7/7	53	1205	4668.6	0.414	1547	4669.0	0.388	4570	4671.3	0.263	9555	4674.1	0.190
7/8	53	1168	4668.6	0.417	1549	4669.0	0.388	4505	4671.3	0.265	8844	4673.8	0.197
7/9	53	1156	4668.6	0.418	1600	4669.0	0.384	4315	4671.1	0.269	8691	4673.7	0.198
7/10	53	1154	4668.6	0.418	1649	4669.0	0.381	4005	4670.9	0.278	8414	4673.6	0.201
7/11	53	1109	4668.6	0.421	1589	4669.0	0.385	3985	4670.9	0.279	8959	4673.8	0.196
7/12	53	1109	4668.6	0.422	1595	4669.0	0.385	3850	4670.8	0.283	9129	4673.9	0.194
7/13	53	1108	4668.6	0.422	1566	4669.0	0.387	3640	4670.6	0.289	8639	4673.7	0.199
7/14	53	1073	4668.5	0.425	1506	4668.9	0.391	3575	4670.6	0.291	8064	4673.4	0.205
7/15	53	1072	4668.5	0.425	1461	4668.9	0.394	3520	4670.6	0.293	7709	4673.2	0.209
7/16	53	1055	4668.5	0.426	1442	4668.9	0.395	3425	4670.5	0.296	7303	4673.0	0.214
7/17	53	1072	4668.5	0.425	1399	4668.8	0.399	2935	4670.1	0.315	7291	4673.0	0.214
7/18	53	1072	4668.5	0.425	1348	4668.8	0.402	2730	4669.9	0.323	7098	4672.9	0.217
7/19	53	1030	4668.5	0.428	1316	4668.7	0.405	2790	4670.0	0.321	6915	4672.8	0.219
7/20	53	1004	4668.5	0.431	1267	4668.7	0.409	2755	4670.0	0.322	6591	4672.6	0.224
7/21	53	967	4668.4	0.434	1256	4668.7	0.409	2685	4669.9	0.325	6124	4672.3	0.231
7/22	53	935	4668.4	0.437	1244	4668.7	0.410	2585	4669.8	0.330	6110	4672.3	0.232
7/23	53	1053	4668.5	0.426	1248	4668.7	0.410	2670	4669.9	0.326	5722	4672.1	0.238
7/24	53	939	4668.4	0.437	1240	4668.7	0.411	2770	4670.0	0.321	5220	4671.7	0.248
7/25	53	933	4668.4	0.437	1246	4668.7	0.410	2815	4670.0	0.320	5051	4671.6	0.252
7/26	53	936	4668.4	0.437	1248	4668.7	0.410	2575	4669.8	0.330	4642	4671.4	0.261
7/27	53	1006	4668.5	0.430	1172	4668.6	0.416	2820	4670.0	0.319	5269	4671.8	0.247
7/28	53	1029	4668.5	0.428	1238	4668.7	0.411	2585	4669.8	0.330	4758	4671.4	0.258
7/29	53	1021	4668.5	0.429	1193	4668.6	0.415	2565	4669.8	0.331	4753	4671.4	0.259
7/30	53	1002	4668.5	0.431	1241	4668.7	0.411	2500	4669.8	0.334	4528	4671.3	0.264
7/31	53	1004	4668.5	0.431	1213	4668.7	0.413	2460	4669.7	0.336	4179	4671.0	0.273
8/1	53	1004	4668.5	0.431	1179	4668.6	0.416	2310	4669.6	0.343	4045	4670.9	0.277
8/2	53	1006	4668.5	0.430	1177	4668.6	0.416	2270	4669.6	0.345	4093	4671.0	0.276
8/3	53	1034	4668.5	0.428	1177	4668.6	0.416	2310	4669.6	0.343	5048	4671.6	0.252
8/4	53	1035	4668.5	0.428	1150	4668.6	0.418	2200	4669.5	0.349	4849	4671.5	0.256
8/5	53	1034	4668.5	0.428	1145	4668.6	0.418	2240	4669.5	0.346	4547	4671.3	0.264
8/6	53	1032	4668.5	0.428	1153	4668.6	0.418	2175	4669.5	0.350	4430	4671.2	0.266
8/7	53	1013	4668.5	0.430	1162	4668.6	0.417	2180	4669.5	0.350	4333	4671.1	0.269
8/8	53	1014	4668.5	0.430	1126	4668.6	0.420	2150	4669.5	0.351	4291	4671.1	0.270
8/9	53	1011	4668.5	0.430	1153	4668.6	0.418	2220	4669.5	0.348	4192	4671.0	0.273
8/10	53	992	4668.5	0.432	1130	4668.6	0.420	2325	4669.6	0.342	4435	4671.2	0.266
8/11	53	993	4668.5	0.432	1095	4668.5	0.423	2310	4669.6	0.343	4465	4671.2	0.266
8/12	53	984	4668.4	0.432	1096	4668.5	0.423	2220	4669.5	0.348	4242	4671.1	0.271
8/13	53	970	4668.4	0.434	1079	4668.5	0.424	2170	4669.5	0.350	3660	4670.7	0.288

8/14	53	966	4668.4	0.434	1073	4668.5	0.425	2075	4669.4	0.355	3919	4670.9	0.281
8/15	53	953	4668.4	0.435	1051	4668.5	0.426	2075	4669.4	0.355	4480	4671.2	0.265
8/16	53	943	4668.4	0.436	1073	4668.5	0.425	2025	4669.4	0.358	3861	4670.8	0.282
8/17	53	980	4668.4	0.433	1052	4668.5	0.426	2020	4669.4	0.358	4028	4670.9	0.277
8/18	53	970	4668.4	0.434	1031	4668.5	0.428	2145	4669.5	0.352	3965	4670.9	0.279
8/19	53	968	4668.4	0.434	1048	4668.5	0.427	2075	4669.4	0.355	3438	4670.5	0.296
8/20	53	970	4668.4	0.434	1047	4668.5	0.427	2040	4669.4	0.357	3863	4670.8	0.282
8/21	53	959	4668.4	0.435	1051	4668.5	0.426	2055	4669.4	0.356	3625	4670.6	0.290
8/22	53	948	4668.4	0.436	1089	4668.5	0.423	2085	4669.4	0.355	3441	4670.5	0.296
8/23	53	932	4668.4	0.437	1023	4668.5	0.429	2015	4669.4	0.359	3692	4670.7	0.287
8/24	53	951	4668.4	0.435	1043	4668.5	0.427	2245	4669.6	0.346	3372	4670.4	0.298
8/25	53	941	4668.4	0.436	1078	4668.5	0.424	1965	4669.3	0.362	3229	4670.3	0.303
8/26	53	922	4668.4	0.438	1097	4668.5	0.423	2035	4669.4	0.358	3357	4670.4	0.299
8/27	53	921	4668.4	0.438	1026	4668.5	0.429	1990	4669.3	0.360	3538	4670.6	0.292
8/28	53	923	4668.4	0.438	1023	4668.5	0.429	2000	4669.3	0.360	3175	4670.3	0.305
8/29	53	958	4668.4	0.435	1026	4668.5	0.429	1880	4669.2	0.367	3131	4670.3	0.307
8/30	53	931	4668.4	0.437	1010	4668.5	0.430	1900	4669.3	0.365	3330	4670.4	0.300
8/31	53	986	4668.4	0.432	1030	4668.5	0.428	1945	4669.3	0.363	3271	4670.4	0.302
9/1	37	986	4668.4	0.302	1042	4668.5	0.298	2055	4669.4	0.249	3244	4670.4	0.211
9/2	37	893	4668.4	0.308	1010	4668.5	0.300	2025	4669.4	0.250	3097	4670.2	0.215
9/3	37	905	4668.4	0.307	1020	4668.5	0.300	2045	4669.4	0.249	3018	4670.2	0.217
9/4	37	892	4668.4	0.308	1010	4668.5	0.300	1890	4669.3	0.256	2893	4670.1	0.221
9/5	37	872	4668.3	0.309	987	4668.4	0.302	1840	4669.2	0.258	3010	4670.2	0.218
9/6	37	870	4668.3	0.309	968	4668.4	0.303	1895	4669.3	0.255	3280	4670.4	0.210
9/7	37	859	4668.3	0.310	978	4668.4	0.302	1945	4669.3	0.253	3619	4670.6	0.202
9/8	37	840	4668.3	0.311	979	4668.4	0.302	1930	4669.3	0.254	3511	4670.6	0.205
9/9	37	854	4668.3	0.310	999	4668.5	0.301	1980	4669.3	0.252	3270	4670.4	0.211
9/10	37	841	4668.3	0.311	1010	4668.5	0.300	2015	4669.4	0.250	3339	4670.4	0.209
9/11	37	865	4668.3	0.310	999	4668.5	0.301	1995	4669.3	0.251	3499	4670.5	0.205
9/12	37	902	4668.4	0.307	991	4668.5	0.301	1930	4669.3	0.254	3342	4670.4	0.209
9/13	37	916	4668.4	0.306	1056	4668.5	0.297	1955	4669.3	0.253	3124	4670.3	0.214
9/14	37	929	4668.4	0.305	1066	4668.5	0.297	1925	4669.3	0.254	3179	4670.3	0.213
9/15	37	856	4668.3	0.310	1070	4668.5	0.297	1950	4669.3	0.253	3295	4670.4	0.210
9/16	37	845	4668.3	0.311	1123	4668.6	0.293	2050	4669.4	0.249	3017	4670.2	0.217
9/17	37	980	4668.4	0.302	1056	4668.5	0.297	1965	4669.3	0.252	3398	4670.5	0.208
9/18	37	916	4668.4	0.306	1142	4668.6	0.292	1945	4669.3	0.253	3224	4670.3	0.212
9/19	37	1096	4668.5	0.295	1202	4668.6	0.289	1945	4669.3	0.253	3121	4670.3	0.215
9/20	37	1086	4668.5	0.296	1232	4668.7	0.287	2080	4669.4	0.248	3258	4670.4	0.211
9/21	37	1054	4668.5	0.298	1256	4668.7	0.286	2020	4669.4	0.250	3458	4670.5	0.206
9/22	37	1053	4668.5	0.298	1194	4668.6	0.289	1850	4669.2	0.257	3384	4670.5	0.208
9/23	37	1035	4668.5	0.299	1197	4668.6	0.289	1825	4669.2	0.258	3311	4670.4	0.210
9/24	37	1099	4668.6	0.295	1186	4668.6	0.290	1925	4669.3	0.254	3659	4670.7	0.201
9/25	37	1116	4668.6	0.294	1353	4668.8	0.281	1840	4669.2	0.258	3507	4670.5	0.205
9/26	37	1130	4668.6	0.293	1376	4668.8	0.279	2010	4669.4	0.251	3577	4670.6	0.203
9/27	37	1047	4668.5	0.298	1272	4668.7	0.285	2020	4669.4	0.250	3207	4670.3	0.212
9/28	37	1023	4668.5	0.299	1283	4668.7	0.284	2020	4669.4	0.250	3379	4670.5	0.208
9/29	37	1005	4668.5	0.301	1165	4668.6	0.291	1915	4669.3	0.254	3371	4670.4	0.208
9/30	37	1004	4668.5	0.301	1203	4668.6	0.289	2000	4669.3	0.251	3739	4670.7	0.200
10/1	20	997	4668.5	0.163	1244	4668.7	0.155	2095	4669.4	0.134	3640	4670.6	0.109
10/2	20	996	4668.5	0.163	1346	4668.8	0.152	1995	4669.3	0.136	3549	4670.6	0.110
10/3	20	1017	4668.5	0.162	1212	4668.7	0.156	2135	4669.5	0.133	3480	4670.5	0.111
10/4	20	1017	4668.5	0.162	1197	4668.6	0.156	2145	4669.5	0.133	3445	4670.5	0.112
10/5	20	1016	4668.5	0.162	1197	4668.6	0.156	2140	4669.5	0.133	3672	4670.7	0.109
10/6	20	1034	4668.5	0.162	1129	4668.6	0.158	2090	4669.4	0.134	3598	4670.6	0.110
10/7	20	1016	4668.5	0.162	1140	4668.6	0.158	2115	4669.4	0.133	3424	4670.5	0.112
10/8	20	1086	4668.5	0.160	1158	4668.6	0.158	2085	4669.4	0.134	3689	4670.7	0.109
10/9	20	1063	4668.5	0.161	1175	4668.6	0.157	2135	4669.5	0.133	3518	4670.6	0.111
10/10	20	1119	4668.6	0.159	1210	4668.7	0.156	2210	4669.5	0.131	3626	4670.6	0.109
10/11	20	1110	4668.6	0.159	1256	4668.7	0.155	2220	4669.5	0.131	3735	4670.7	0.108
10/12	20	1109	4668.6	0.159	1407	4668.8	0.150	2095	4669.4	0.134	3738	4670.7	0.108
10/13	20	1100	4668.6	0.159	1327	4668.8	0.152	2230	4669.5	0.131	3769	4670.7	0.108
10/14	20	1117	4668.6	0.159	1309	4668.7	0.153	2330	4669.6	0.129	4001	4670.9	0.105
10/15	20	1110	4668.6	0.159	1412	4668.8	0.150	2195	4669.5	0.132	4002	4670.9	0.105

Intake Approach Velocity

Summary Tables

(2%, 10%, 25% and 90%)

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

Intake Approach Velocities

Units: feet per second (fps)

Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	10			10
May 1-15	0.106	0.115	0.093	0.110	0.070	0.085	0.056	0.067	16			16
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		11		11
June 1-15	0.183	0.222	0.170	0.201	0.120	0.128	0.096	0.108	16			16
June 16-30	0.224	0.278	0.204	0.254	0.129	0.157	0.102	0.124	19			19
July 1-15	0.268	0.296	0.254	0.275	0.165	0.205	0.123	0.146	21			21
July 16-31	0.296	0.305	0.276	0.291	0.207	0.234	0.149	0.191	20			20
Aug 1-15	0.299	0.304	0.290	0.298	0.239	0.248	0.176	0.201	20			20
Aug 16-31	0.302	0.306	0.295	0.300	0.242	0.256	0.194	0.214	9	13		22
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	15	9		24
Sept 16-30	0.293	0.311	0.200	0.297	0.248	0.258	0.200	0.217	20	4		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	19			19

 Indicates exceedence of 0.33 fps threshold during third pump operation

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Three Pumps

Intake Approach Velocities

Units: feet per second (fps)

Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	10			10
May 1-15	0.106	0.115	0.093	0.110	0.070	0.085	0.056	0.067	16			16
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		11		11
June 1-15	0.183	0.222	0.170	0.201	0.120	0.128	0.096	0.108		16		16
June 16-30	0.224	0.278	0.204	0.254	0.129	0.157	0.102	0.124		19		19
July 1-15	0.383	0.425	0.364	0.394	0.236	0.293	0.176	0.209	8		12	20
July 16-31	0.425	0.437	0.395	0.416	0.296	0.336	0.214	0.273	8		12	20
Aug 1-15	0.428	0.435	0.416	0.426	0.342	0.355	0.252	0.288	8		12	20
Aug 16-31	0.302	0.306	0.295	0.300	0.242	0.256	0.194	0.214	9	13		22
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	15	9		24
Sept 16-30	0.293	0.311	0.279	0.297	0.248	0.258	0.200	0.217	20	4		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	19			19

Indicates exceedence of 0.33 fps threshold during third pump operation

Green River Pumping Plant

Full Project (10,000 af/yr) - Three Pumps

Intake Approach Velocities

Units: feet per second (fps)

Period	2% MDF		10% MDF		50% MDF		90% MDF		Hr/day/pump			
	Min	Max	Min	Max	Min	Max	Min	Max	1	2	3	T
Apr 16-30	0.112	0.131	0.107	0.124	0.085	0.103	0.067	0.077	12			
May 1-15	0.196	0.213	0.172	0.203	0.130	0.158	0.104	0.124		11		
May 16-31	0.171	0.206	0.161	0.172	0.117	0.133	0.096	0.108		14		
June 1-15	0.263	0.319	0.243	0.288	0.172	0.183	0.137	0.154		13	4	17
June 16-30	0.320	0.398	0.293	0.364	0.185	0.225	0.146	0.177			16	16
July 1-15	0.383	0.425	0.364	0.394	0.236	0.293	0.176	0.209	10		12	22
July 16-31	0.425	0.437	0.395	0.416	0.296	0.336	0.214	0.273	10		12	22
Aug 1-15	0.428	0.435	0.416	0.426	0.342	0.355	0.252	0.288	10		12	22
Aug 16-31	0.432	0.438	0.423	0.430	0.346	0.367	0.277	0.307	9		12	21
Sept 1-15	0.302	0.311	0.297	0.303	0.249	0.258	0.202	0.221	8	16		24
Sept 16-30	0.293	0.311	0.279	0.297	0.248	0.258	0.200	0.217	15	9		24
Oct 1-15	0.159	0.163	0.150	0.158	0.129	0.136	0.105	0.112	24			24

Indicates exceedence of 0.33 fps threshold during third pump operation

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

Pump Plant Intake Approach Velocities

2% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.114	0.183	0.268	0.301	0.302	0.163
2		0.115	0.186	0.269	0.301	0.308	0.163
3		0.114	0.187	0.273	0.299	0.307	0.162
4		0.115	0.191	0.281	0.299	0.308	0.162
5		0.113	0.193	0.284	0.299	0.309	0.162
6		0.114	0.196	0.286	0.299	0.309	0.162
7		0.115	0.198	0.289	0.300	0.310	0.162
8		0.114	0.203	0.291	0.300	0.311	0.160
9		0.111	0.205	0.292	0.300	0.310	0.161
10		0.106	0.203	0.292	0.301	0.311	0.159
11		0.108	0.206	0.294	0.301	0.310	0.159
12		0.108	0.210	0.294	0.302	0.307	0.159
13		0.112	0.215	0.294	0.303	0.306	0.159
14		0.111	0.220	0.296	0.303	0.305	0.159
15	0.129	0.111	0.222	0.296	0.304	0.310	0.159
16	0.131	0.203	0.224	0.297	0.304	0.311	
17	0.131	0.202	0.227	0.296	0.302	0.302	
18	0.125	0.206	0.233	0.296	0.303	0.306	
19	0.122	0.204	0.239	0.299	0.303	0.295	
20	0.114	0.193	0.243	0.301	0.303	0.296	
21	0.116	0.195	0.248	0.303	0.303	0.298	
22	0.117	0.199	0.250	0.305	0.304	0.298	
23	0.117	0.199	0.249	0.298	0.305	0.299	
24	0.117	0.184	0.253	0.305	0.304	0.295	
25	0.119	0.177	0.255	0.305	0.305	0.294	
26	0.125	0.171	0.258	0.305	0.306	0.293	
27	0.121	0.173	0.259	0.300	0.306	0.298	
28	0.117	0.175	0.274	0.299	0.306	0.299	
29	0.117	0.182	0.278	0.300	0.304	0.301	
30	0.112	0.181	0.264	0.301	0.305	0.301	
31		0.184		0.301	0.302		

Green River Pumping Plant
Initial Phase (8,500 af/yr) - Three Pumps
Pump Plant Intake Approach Velocities
2% Green River MDF
Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.114	0.183	0.383	0.431	0.302	0.163
2		0.115	0.186	0.385	0.430	0.308	0.163
3		0.114	0.187	0.391	0.428	0.307	0.162
4		0.115	0.191	0.402	0.428	0.308	0.162
5		0.113	0.193	0.406	0.428	0.309	0.162
6		0.114	0.196	0.410	0.428	0.309	0.162
7		0.115	0.198	0.414	0.430	0.310	0.162
8		0.114	0.203	0.417	0.430	0.311	0.160
9		0.111	0.205	0.418	0.430	0.310	0.161
10		0.106	0.203	0.418	0.432	0.311	0.159
11		0.108	0.206	0.421	0.432	0.310	0.159
12		0.108	0.210	0.422	0.432	0.307	0.159
13		0.112	0.215	0.422	0.434	0.306	0.159
14		0.111	0.220	0.425	0.434	0.305	0.159
15	0.129	0.111	0.222	0.425	0.435	0.310	0.159
16	0.131	0.203	0.224	0.426	0.304	0.311	
17	0.131	0.202	0.227	0.425	0.302	0.302	
18	0.125	0.206	0.233	0.425	0.303	0.306	
19	0.122	0.204	0.239	0.428	0.303	0.295	
20	0.114	0.193	0.243	0.431	0.303	0.296	
21	0.116	0.195	0.248	0.434	0.303	0.298	
22	0.117	0.199	0.250	0.437	0.304	0.298	
23	0.117	0.199	0.249	0.426	0.305	0.299	
24	0.117	0.184	0.253	0.437	0.304	0.295	
25	0.119	0.177	0.255	0.437	0.305	0.294	
26	0.125	0.171	0.258	0.437	0.306	0.293	
27	0.121	0.173	0.259	0.430	0.306	0.298	
28	0.117	0.175	0.274	0.428	0.306	0.299	
29	0.117	0.182	0.278	0.429	0.304	0.301	
30	0.112	0.181	0.264	0.431	0.305	0.301	
31		0.184		0.431	0.302		

Green River Pumping Plant
 Full Project (10,000 af/yr) - Three Pumps
 Pump Plant Intake Approach Velocities
 2% Green River MDF
 Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.211	0.263	0.383	0.431	0.302	0.163
2		0.212	0.267	0.385	0.430	0.308	0.163
3		0.212	0.268	0.391	0.428	0.307	0.162
4		0.213	0.273	0.402	0.428	0.308	0.162
5		0.209	0.277	0.406	0.428	0.309	0.162
6		0.211	0.281	0.410	0.428	0.309	0.162
7		0.213	0.283	0.414	0.430	0.310	0.162
8		0.211	0.291	0.417	0.430	0.311	0.160
9		0.206	0.293	0.418	0.430	0.310	0.161
10		0.196	0.291	0.418	0.432	0.311	0.159
11		0.200	0.295	0.421	0.432	0.310	0.159
12		0.200	0.301	0.422	0.432	0.307	0.159
13		0.207	0.308	0.422	0.434	0.306	0.159
14		0.206	0.314	0.425	0.434	0.305	0.159
15	0.129	0.205	0.319	0.425	0.435	0.310	0.159
16	0.131	0.203	0.320	0.426	0.436	0.311	
17	0.131	0.202	0.325	0.425	0.433	0.302	
18	0.125	0.206	0.333	0.425	0.434	0.306	
19	0.122	0.204	0.343	0.428	0.434	0.295	
20	0.114	0.193	0.348	0.431	0.434	0.296	
21	0.116	0.195	0.355	0.434	0.435	0.298	
22	0.117	0.199	0.357	0.437	0.436	0.298	
23	0.117	0.199	0.357	0.426	0.437	0.299	
24	0.117	0.184	0.362	0.437	0.435	0.295	
25	0.119	0.177	0.365	0.437	0.436	0.294	
26	0.125	0.171	0.369	0.437	0.438	0.293	
27	0.121	0.173	0.370	0.430	0.438	0.298	
28	0.117	0.175	0.392	0.428	0.438	0.299	
29	0.117	0.182	0.398	0.429	0.435	0.301	
30	0.112	0.181	0.377	0.431	0.437	0.301	
31		0.184		0.431	0.432		

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

Pump Plant Intake Approach Velocities

10% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.106	0.170	0.254	0.290	0.298	0.155
2		0.105	0.173	0.258	0.290	0.300	0.152
3		0.106	0.171	0.261	0.290	0.300	0.156
4		0.109	0.175	0.264	0.292	0.300	0.156
5		0.110	0.177	0.267	0.292	0.302	0.156
6		0.104	0.178	0.270	0.292	0.303	0.158
7		0.102	0.177	0.271	0.291	0.302	0.158
8		0.102	0.175	0.271	0.293	0.302	0.158
9		0.104	0.179	0.268	0.292	0.301	0.157
10		0.099	0.183	0.266	0.293	0.300	0.156
11		0.096	0.184	0.269	0.295	0.301	0.155
12		0.095	0.185	0.269	0.295	0.301	0.150
13		0.093	0.191	0.270	0.296	0.297	0.152
14		0.094	0.191	0.273	0.296	0.297	0.153
15	0.124	0.094	0.201	0.275	0.298	0.297	0.150
16	0.120	0.172	0.204	0.276	0.296	0.293	
17	0.117	0.169	0.208	0.278	0.298	0.297	
18	0.116	0.170	0.216	0.281	0.299	0.292	
19	0.114	0.169	0.225	0.283	0.298	0.289	
20	0.112	0.161	0.224	0.285	0.298	0.287	
21	0.108	0.165	0.227	0.286	0.298	0.286	
22	0.110	0.166	0.231	0.287	0.295	0.289	
23	0.111	0.166	0.235	0.286	0.299	0.289	
24	0.113	0.164	0.237	0.287	0.298	0.290	
25	0.113	0.164	0.235	0.286	0.296	0.281	
26	0.113	0.166	0.237	0.286	0.295	0.279	
27	0.114	0.168	0.245	0.291	0.299	0.285	
28	0.108	0.170	0.248	0.287	0.299	0.284	
29	0.107	0.172	0.253	0.289	0.299	0.291	
30	0.108	0.172	0.254	0.287	0.300	0.200	
31		0.168		0.288	0.299		

Green River Pumping Plant
 Initial Phase (8,500 af/yr) - Three Pumps
 Pump Plant Intake Approach Velocities
 10% Green River MDF
 Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.106	0.170	0.364	0.416	0.298	0.155
2		0.105	0.173	0.369	0.416	0.300	0.152
3		0.106	0.171	0.373	0.416	0.300	0.156
4		0.109	0.175	0.379	0.418	0.300	0.156
5		0.110	0.177	0.383	0.418	0.302	0.156
6		0.104	0.178	0.386	0.418	0.303	0.158
7		0.102	0.177	0.388	0.417	0.302	0.158
8		0.102	0.175	0.388	0.420	0.302	0.158
9		0.104	0.179	0.384	0.418	0.301	0.157
10		0.099	0.183	0.381	0.420	0.300	0.156
11		0.096	0.184	0.385	0.423	0.301	0.155
12		0.095	0.185	0.385	0.423	0.301	0.150
13		0.093	0.191	0.387	0.424	0.297	0.152
14		0.094	0.191	0.391	0.425	0.297	0.153
15	0.124	0.094	0.201	0.394	0.426	0.297	0.150
16	0.120	0.172	0.204	0.395	0.296	0.293	
17	0.117	0.169	0.208	0.399	0.298	0.297	
18	0.116	0.170	0.216	0.402	0.299	0.292	
19	0.114	0.169	0.225	0.405	0.298	0.289	
20	0.112	0.161	0.224	0.409	0.298	0.287	
21	0.108	0.165	0.227	0.409	0.298	0.286	
22	0.110	0.166	0.231	0.410	0.295	0.289	
23	0.111	0.166	0.235	0.410	0.299	0.289	
24	0.113	0.164	0.237	0.411	0.298	0.290	
25	0.113	0.164	0.235	0.410	0.296	0.281	
26	0.113	0.166	0.237	0.410	0.295	0.279	
27	0.114	0.168	0.245	0.416	0.299	0.285	
28	0.108	0.170	0.248	0.411	0.299	0.284	
29	0.107	0.172	0.253	0.415	0.299	0.291	
30	0.108	0.172	0.254	0.411	0.300	0.289	
31		0.168		0.413	0.299		

Green River Pumping Plant

Full Project (10,000 af/yr) - Three Pumps

Pump Plant Intake Approach Velocities

10% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.196	0.243	0.364	0.416	0.298	0.155
2		0.194	0.248	0.369	0.416	0.300	0.152
3		0.196	0.245	0.373	0.416	0.300	0.156
4		0.201	0.250	0.379	0.418	0.300	0.156
5		0.203	0.254	0.383	0.418	0.302	0.156
6		0.192	0.254	0.386	0.418	0.303	0.158
7		0.189	0.253	0.388	0.417	0.302	0.158
8		0.190	0.251	0.388	0.420	0.302	0.158
9		0.192	0.257	0.384	0.418	0.301	0.157
10		0.184	0.263	0.381	0.420	0.300	0.156
11		0.178	0.264	0.385	0.423	0.301	0.155
12		0.176	0.265	0.385	0.423	0.301	0.150
13		0.172	0.273	0.387	0.424	0.297	0.152
14		0.173	0.274	0.391	0.425	0.297	0.153
15	0.124	0.174	0.288	0.394	0.426	0.297	0.150
16	0.120	0.172	0.293	0.395	0.425	0.293	
17	0.117	0.169	0.298	0.399	0.426	0.297	
18	0.116	0.170	0.310	0.402	0.428	0.292	
19	0.114	0.169	0.322	0.405	0.427	0.289	
20	0.112	0.161	0.321	0.409	0.427	0.287	
21	0.108	0.165	0.325	0.409	0.426	0.286	
22	0.110	0.166	0.330	0.410	0.423	0.289	
23	0.111	0.166	0.336	0.410	0.429	0.289	
24	0.113	0.164	0.339	0.411	0.427	0.290	
25	0.113	0.164	0.337	0.410	0.424	0.281	
26	0.113	0.166	0.340	0.410	0.423	0.279	
27	0.114	0.168	0.350	0.416	0.429	0.285	
28	0.108	0.170	0.356	0.411	0.429	0.284	
29	0.107	0.172	0.362	0.415	0.429	0.291	
30	0.108	0.172	0.364	0.411	0.430	0.289	
31		0.168		0.413	0.428		

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

Pump Plant Intake Approach Velocities

50% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.085	0.120	0.165	0.239	0.249	0.134
2		0.082	0.120	0.167	0.241	0.250	0.136
3		0.079	0.121	0.169	0.239	0.249	0.133
4		0.078	0.123	0.171	0.243	0.256	0.133
5		0.077	0.124	0.172	0.242	0.258	0.133
6		0.079	0.123	0.178	0.244	0.255	0.134
7		0.077	0.124	0.184	0.244	0.253	0.133
8		0.075	0.124	0.185	0.245	0.254	0.134
9		0.078	0.124	0.188	0.243	0.252	0.133
10		0.077	0.122	0.194	0.239	0.250	0.131
11		0.074	0.123	0.194	0.239	0.251	0.131
12		0.073	0.125	0.197	0.243	0.254	0.134
13		0.072	0.126	0.202	0.244	0.253	0.131
14		0.070	0.128	0.203	0.248	0.254	0.129
15	0.103	0.070	0.127	0.205	0.248	0.253	0.132
16	0.101	0.133	0.129	0.207	0.250	0.249	
17	0.101	0.132	0.131	0.220	0.250	0.252	
18	0.096	0.124	0.134	0.226	0.245	0.253	
19	0.096	0.123	0.136	0.224	0.248	0.253	
20	0.096	0.120	0.135	0.225	0.249	0.248	
21	0.091	0.120	0.141	0.227	0.249	0.250	
22	0.089	0.120	0.147	0.230	0.248	0.257	
23	0.090	0.119	0.148	0.227	0.250	0.258	
24	0.090	0.118	0.145	0.224	0.242	0.254	
25	0.090	0.118	0.145	0.223	0.252	0.258	
26	0.086	0.117	0.142	0.230	0.250	0.251	
27	0.086	0.117	0.146	0.223	0.251	0.250	
28	0.085	0.118	0.149	0.230	0.251	0.250	
29	0.085	0.119	0.152	0.231	0.256	0.254	
30	0.085	0.118	0.157	0.233	0.255	0.251	
31		0.118		0.234	0.253		

Green River Pumping Plant
 Initial Phase (8,500 af/yr) - Three Pumps
 Pump Plant Intake Approach Velocities
 50% Green River MDF
 Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.085	0.120	0.236	0.343	0.249	0.134
2		0.082	0.120	0.239	0.345	0.250	0.136
3		0.079	0.121	0.242	0.343	0.249	0.133
4		0.078	0.123	0.245	0.349	0.256	0.133
5		0.077	0.124	0.247	0.346	0.258	0.133
6		0.079	0.123	0.255	0.350	0.255	0.134
7		0.077	0.124	0.263	0.350	0.253	0.133
8		0.075	0.124	0.265	0.351	0.254	0.134
9		0.078	0.124	0.269	0.348	0.252	0.133
10		0.077	0.122	0.278	0.342	0.250	0.131
11		0.074	0.123	0.279	0.343	0.251	0.131
12		0.073	0.125	0.283	0.348	0.254	0.134
13		0.072	0.126	0.289	0.350	0.253	0.131
14		0.070	0.128	0.291	0.355	0.254	0.129
15	0.103	0.070	0.127	0.293	0.355	0.253	0.132
16	0.101	0.133	0.129	0.296	0.250	0.249	
17	0.101	0.132	0.131	0.315	0.250	0.252	
18	0.096	0.124	0.134	0.323	0.245	0.253	
19	0.096	0.123	0.136	0.321	0.248	0.253	
20	0.096	0.120	0.135	0.322	0.249	0.248	
21	0.091	0.120	0.141	0.325	0.249	0.250	
22	0.089	0.120	0.147	0.330	0.248	0.257	
23	0.090	0.119	0.148	0.326	0.250	0.258	
24	0.090	0.118	0.145	0.321	0.242	0.254	
25	0.090	0.118	0.145	0.320	0.252	0.258	
26	0.086	0.117	0.142	0.330	0.250	0.251	
27	0.086	0.117	0.146	0.319	0.251	0.250	
28	0.085	0.118	0.149	0.330	0.251	0.250	
29	0.085	0.119	0.152	0.331	0.256	0.254	
30	0.085	0.118	0.157	0.334	0.255	0.251	
31		0.118		0.336	0.253		

Green River Pumping Plant
Full Project (10,000 af/yr) - Three Pumps
Pump Plant Intake Approach Velocities
50% Green River MDF
 Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.158	0.172	0.236	0.343	0.249	0.134
2		0.151	0.172	0.239	0.345	0.250	0.136
3		0.146	0.173	0.242	0.343	0.249	0.133
4		0.145	0.177	0.245	0.349	0.256	0.133
5		0.142	0.177	0.247	0.346	0.258	0.133
6		0.146	0.176	0.255	0.350	0.255	0.134
7		0.143	0.177	0.263	0.350	0.253	0.133
8		0.139	0.178	0.265	0.351	0.254	0.134
9		0.145	0.177	0.269	0.348	0.252	0.133
10		0.142	0.174	0.278	0.342	0.250	0.131
11		0.138	0.176	0.279	0.343	0.251	0.131
12		0.134	0.179	0.283	0.348	0.254	0.134
13		0.133	0.180	0.289	0.350	0.253	0.131
14		0.130	0.183	0.291	0.355	0.254	0.129
15	0.103	0.130	0.182	0.293	0.355	0.253	0.132
16	0.101	0.133	0.185	0.296	0.358	0.249	
17	0.101	0.132	0.188	0.315	0.358	0.252	
18	0.096	0.124	0.192	0.323	0.352	0.253	
19	0.096	0.123	0.195	0.321	0.355	0.253	
20	0.096	0.120	0.194	0.322	0.357	0.248	
21	0.091	0.120	0.202	0.325	0.356	0.250	
22	0.089	0.120	0.210	0.330	0.355	0.257	
23	0.090	0.119	0.211	0.326	0.359	0.258	
24	0.090	0.118	0.207	0.321	0.346	0.254	
25	0.090	0.118	0.207	0.320	0.362	0.258	
26	0.086	0.117	0.203	0.330	0.358	0.251	
27	0.086	0.117	0.210	0.319	0.360	0.250	
28	0.085	0.118	0.213	0.330	0.360	0.250	
29	0.085	0.119	0.218	0.331	0.367	0.254	
30	0.085	0.118	0.225	0.334	0.365	0.251	
31		0.118		0.336	0.363		

Green River Pumping Plant

Initial Phase (8,500 af/yr) - Two Pumps

Pump Plant Intake Approach Velocities

90% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.067	0.096	0.123	0.193	0.211	0.109
2		0.065	0.097	0.124	0.192	0.215	0.110
3		0.064	0.097	0.124	0.176	0.217	0.111
4		0.063	0.097	0.128	0.179	0.221	0.112
5		0.063	0.097	0.131	0.184	0.218	0.109
6		0.060	0.096	0.134	0.186	0.210	0.110
7		0.058	0.096	0.133	0.188	0.202	0.112
8		0.060	0.097	0.137	0.189	0.205	0.109
9		0.060	0.100	0.138	0.190	0.211	0.111
10		0.059	0.098	0.140	0.186	0.209	0.109
11		0.058	0.102	0.137	0.185	0.205	0.108
12		0.058	0.105	0.136	0.189	0.209	0.108
13		0.056	0.106	0.139	0.201	0.214	0.108
14		0.057	0.108	0.143	0.196	0.213	0.105
15	0.074	0.058	0.108	0.146	0.185	0.210	0.105
16	0.075	0.108	0.105	0.149	0.197	0.217	
17	0.074	0.106	0.103	0.150	0.194	0.208	
18	0.077	0.105	0.102	0.151	0.195	0.212	
19	0.072	0.103	0.104	0.153	0.207	0.215	
20	0.073	0.102	0.106	0.156	0.197	0.211	
21	0.074	0.101	0.109	0.162	0.202	0.206	
22	0.077	0.099	0.109	0.162	0.206	0.208	
23	0.074	0.096	0.110	0.166	0.201	0.210	
24	0.071	0.097	0.113	0.173	0.208	0.201	
25	0.070	0.100	0.115	0.176	0.212	0.205	
26	0.067	0.100	0.118	0.182	0.209	0.203	
27	0.067	0.099	0.117	0.173	0.204	0.212	
28	0.069	0.099	0.121	0.180	0.213	0.208	
29	0.070	0.100	0.123	0.180	0.214	0.208	
30	0.068	0.100	0.124	0.184	0.209	0.200	
31		0.098		0.191	0.211		

Green River Pumping Plant
 Initial Phase (8,500 af/yr) - Three Pumps
 Pump Plant Intake Approach Velocities
 90% Green River MDF
 Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.067	0.096	0.176	0.277	0.211	0.109
2		0.065	0.097	0.177	0.276	0.215	0.110
3		0.064	0.097	0.177	0.252	0.217	0.111
4		0.063	0.097	0.183	0.256	0.221	0.112
5		0.063	0.097	0.188	0.264	0.218	0.109
6		0.060	0.096	0.191	0.266	0.210	0.110
7		0.058	0.096	0.190	0.269	0.202	0.112
8		0.060	0.097	0.197	0.270	0.205	0.109
9		0.060	0.100	0.198	0.273	0.211	0.111
10		0.059	0.098	0.201	0.266	0.209	0.109
11		0.058	0.102	0.196	0.266	0.205	0.108
12		0.058	0.105	0.194	0.271	0.209	0.108
13		0.056	0.106	0.199	0.288	0.214	0.108
14		0.057	0.108	0.205	0.281	0.213	0.105
15	0.074	0.058	0.108	0.209	0.265	0.210	0.105
16	0.075	0.108	0.105	0.214	0.197	0.217	
17	0.074	0.106	0.103	0.214	0.194	0.208	
18	0.077	0.105	0.102	0.217	0.195	0.212	
19	0.072	0.103	0.104	0.219	0.207	0.215	
20	0.073	0.102	0.106	0.224	0.197	0.211	
21	0.074	0.101	0.109	0.231	0.202	0.206	
22	0.077	0.099	0.109	0.232	0.206	0.208	
23	0.074	0.096	0.110	0.238	0.201	0.210	
24	0.071	0.097	0.113	0.248	0.208	0.201	
25	0.070	0.100	0.115	0.252	0.212	0.205	
26	0.067	0.100	0.118	0.261	0.209	0.203	
27	0.067	0.099	0.117	0.247	0.204	0.212	
28	0.069	0.099	0.121	0.258	0.213	0.208	
29	0.070	0.100	0.123	0.259	0.214	0.208	
30	0.068	0.100	0.124	0.264	0.209	0.200	
31		0.098		0.273	0.211		

Green River Pumping Plant

Full Project (10,000 af/yr) - Three Pumps

Pump Plant Intake Approach Velocities

90% Green River MDF

Units: feet per second (fps)

Day	April	May	June	July	Aug	Sep	Oct
1		0.124	0.138	0.176	0.277	0.211	0.109
2		0.120	0.138	0.177	0.276	0.215	0.110
3		0.119	0.139	0.177	0.252	0.217	0.111
4		0.117	0.139	0.183	0.256	0.221	0.112
5		0.116	0.139	0.188	0.264	0.218	0.109
6		0.110	0.137	0.191	0.266	0.210	0.110
7		0.108	0.137	0.190	0.269	0.202	0.112
8		0.111	0.140	0.197	0.270	0.205	0.109
9		0.111	0.143	0.198	0.273	0.211	0.111
10		0.109	0.140	0.201	0.266	0.209	0.109
11		0.107	0.146	0.196	0.266	0.205	0.108
12		0.107	0.150	0.194	0.271	0.209	0.108
13		0.104	0.151	0.199	0.288	0.214	0.108
14		0.105	0.154	0.205	0.281	0.213	0.105
15	0.074	0.107	0.154	0.209	0.265	0.210	0.105
16	0.075	0.108	0.151	0.214	0.282	0.217	
17	0.074	0.106	0.148	0.214	0.277	0.208	
18	0.077	0.105	0.146	0.217	0.279	0.212	
19	0.072	0.103	0.149	0.219	0.296	0.215	
20	0.073	0.102	0.152	0.224	0.282	0.211	
21	0.074	0.101	0.156	0.231	0.290	0.206	
22	0.077	0.099	0.157	0.232	0.296	0.208	
23	0.074	0.096	0.158	0.238	0.287	0.210	
24	0.071	0.097	0.161	0.248	0.298	0.201	
25	0.070	0.100	0.165	0.252	0.303	0.205	
26	0.067	0.100	0.169	0.261	0.299	0.203	
27	0.067	0.099	0.168	0.247	0.292	0.212	
28	0.069	0.099	0.173	0.258	0.305	0.208	
29	0.070	0.100	0.176	0.259	0.307	0.208	
30	0.068	0.100	0.177	0.264	0.300	0.200	
31		0.098		0.273	0.302		

Intake Approach Velocity

Temperature and Swim Speed Analysis

Green River Pumping Plant

Three Pump Operation - Green River 2% MDF

Swim Speed/Intake Approach Velocity Comparison

Day	June			July			August		
	Average Temp Deg C	Swim Speed (fps)	Intake Vel (2%) (fps)	Average Temp Deg C	Swim Speed (fps)	Intake Vel (2%) (fps)	Average Temp Deg C	Swim Speed (fps)	Intake Vel (2%) (fps)
	1	16.32	0.388	0.263	22.20	0.433	0.383	23.90	0.433
2	16.59	0.391	0.267	22.36	0.433	0.385	23.80	0.433	0.430
3	16.68	0.392	0.268	22.30	0.433	0.391	23.74	0.433	0.428
4	16.72	0.393	0.273	22.52	0.433	0.402	23.59	0.433	0.428
5	16.89	0.395	0.277	22.59	0.433	0.406	23.65	0.433	0.428
6	16.91	0.395	0.281	22.80	0.433	0.410	23.60	0.433	0.428
7	16.88	0.395	0.283	22.80	0.433	0.414	23.53	0.433	0.430
8	16.92	0.395	0.291	23.23	0.433	0.417	23.50	0.433	0.430
9	16.99	0.396	0.293	23.06	0.433	0.418	23.56	0.433	0.430
10	17.12	0.397	0.291	23.17	0.433	0.418	23.22	0.433	0.432
11	17.47	0.402	0.295	23.54	0.433	0.421	23.31	0.433	0.432
12	17.63	0.404	0.301	23.54	0.433	0.422	23.35	0.433	0.432
13	17.73	0.405	0.308	23.70	0.433	0.422	23.45	0.433	0.434
14	17.93	0.407	0.314	23.82	0.433	0.425	23.27	0.433	0.434
15	18.27	0.411	0.319	23.81	0.433	0.425	23.04	0.433	0.435
16	18.44	0.414	0.320	23.78	0.433	0.426	22.79	0.433	0.304
17	18.52	0.415	0.325	23.79	0.433	0.425	22.75	0.433	0.302
18	18.70	0.417	0.333	23.93	0.433	0.425	22.66	0.433	0.303
19	18.99	0.421	0.343	24.28	0.433	0.428	22.63	0.433	0.303
20	19.38	0.426	0.348	24.29	0.433	0.431	22.80	0.433	0.303
21	19.66	0.429	0.355	24.53	0.433	0.434	22.81	0.433	0.303
22	20.06	0.433	0.357	24.58	0.433	0.437	22.71	0.433	0.304
23	20.41	0.433	0.357	24.19	0.433	0.426	22.57	0.433	0.305
24	20.65	0.433	0.362	24.24	0.433	0.437	22.56	0.433	0.304
25	20.84	0.433	0.365	24.29	0.433	0.437	22.53	0.433	0.305
26	20.90	0.433	0.369	24.05	0.433	0.437	22.44	0.433	0.306
27	20.99	0.433	0.370	24.01	0.433	0.430	22.02	0.433	0.306
28	21.41	0.433	0.392	24.12	0.433	0.428	22.11	0.433	0.306
29	21.85	0.433	0.398	24.34	0.433	0.429	22.37	0.433	0.304
30	22.10	0.433	0.377	24.29	0.433	0.431	22.24	0.433	0.305
31				24.05	0.433	0.431	21.85	0.433	0.302

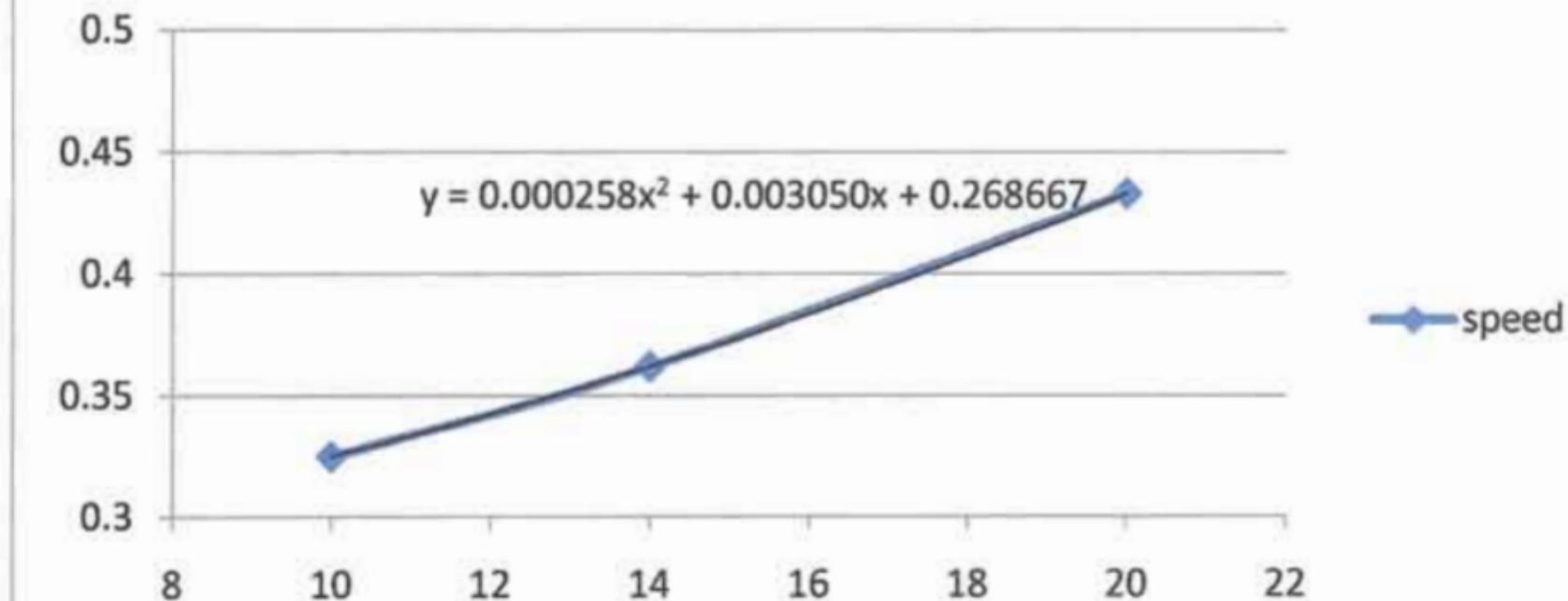
Notes:

1. Temperatures taken from Green River at Ouray Refuge USGS Gage (1991 to 2009 average)
2. Swim speed taken from "Temperature Effects of Swimming Performance on Larvae and Juvenile Colorado Squawfish; Implications for Survival and Species Recovery (Childs and Clarkson, 1986)
3. Intake Velocity for 2% Mean Daily Flow (MDF) Green River at the Jensen Gage

swim speed vs. temp

Low 95% CI

temp	speed
10	0.325
14	0.362
20	0.433



Green River Water Temperature

Green River at Ouray Gage

Date	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Ave	Lowest	Greatest	Date
4/15	8.30		10.60		9.80					12.65	9.71	13.01		12.13	11.78	13.18	12.90	12.18	10.75	11.23	8.30	13.18	4/15
4/16	9.50		10.80		10.00					12.62	11.00	11.39		12.78	13.04	13.25	11.57	10.01	10.29	11.36	9.50	13.25	4/16
4/17	9.90		11.00		10.70					12.91	12.44	10.65		13.52	14.12	11.81	11.78	9.79	10.05	11.56	9.79	14.12	4/17
4/18	10.10		11.10		10.50					12.40	13.70	9.90		12.81	14.12	9.74	12.50	10.60	9.29	11.40	9.29	14.12	4/18
4/19	10.50		9.70		10.70	8.40				10.87	14.17	10.91		11.92	13.44	9.94	11.43	10.61	9.97	10.97	8.40	14.17	4/19
4/20	10.80		10.40		10.40	8.50				11.64	12.74	10.20		11.56	12.38	9.73	11.26	10.50	11.14	10.87	8.50	12.74	4/20
4/21	10.50		11.20		10.70	8.10				12.17	11.16	9.28		11.60	11.75	10.17	11.17	9.78	12.59	10.81	8.10	12.59	4/21
4/22	10.20		11.80		11.30	8.70		11.20		11.81	11.12	10.86		10.59	11.46	11.48	11.52	9.92	13.61	11.10	8.70	13.61	4/22
4/23	11.10		12.00		11.40	9.60	10.40	12.70		11.98	10.51	12.34		9.64	11.54	12.77	11.24	10.43	14.81	11.49	9.60	14.81	4/23
4/24	11.40	12.80	11.90		10.80	11.10	9.30	13.10		12.94	10.67	12.75		11.64	11.52	12.45	10.82	10.07	14.52	11.74	9.30	14.52	4/24
4/25	10.80	14.10	12.30		11.60	11.90	9.50	12.70		12.96	12.99	13.89		13.22	11.63	12.89	11.15	9.42	13.62	12.16	9.42	14.10	4/25
4/26	8.40	14.90	13.00		11.90	12.50	9.90	12.60		13.69	14.39	14.92		14.02	13.05	13.48	11.80	9.58	12.79	12.56	8.40	14.92	4/26
4/27	7.60	16.00	13.20	11.10	12.90	12.20	10.70	11.70		14.28	15.68	13.70		15.16	13.46	13.47	12.39	9.77	11.89	12.63	7.60	16.00	4/27
4/28	8.00	16.80	13.40	10.20	12.00	10.50	11.50	11.70		15.00	16.77	13.52		14.53	12.97	13.16	12.89	10.01	11.76	12.63	8.00	16.80	4/28
4/29	7.80	17.90	13.70	10.30	11.90	9.90	11.60	11.90		15.15	15.41	14.42		12.44	11.96	13.31	13.33	10.73	11.51	12.59	7.80	17.90	4/29
4/30	7.80	18.30	13.40	10.80	12.30	10.10	11.60	12.70		14.81	15.59	15.35		10.83	11.99	13.68	14.40	11.31	11.82	12.74	7.80	18.30	4/30
5/1	9.50	17.60	13.00	11.30	12.60	10.50	10.80	13.30		14.92	15.72	14.50		11.92	11.22	13.14	14.99	10.80	12.41	12.84	9.50	17.60	5/1
5/2	9.80	16.90	12.90	12.70	12.10	11.70	10.60	13.60		14.89	12.49	14.34	13.28	14.62	10.88	13.67	15.46	10.43	12.96	12.96	9.80	16.90	5/2
5/3	9.30	17.20	13.10	13.60	11.70	11.80	10.00	13.80		15.38	10.37	14.80	13.09	15.31	11.28	13.77	16.00	9.98	13.02	12.97	9.30	17.20	5/3
5/4	9.60	17.00	13.00	16.50	11.70	11.30	9.80	13.60		16.37	9.71	15.08	12.60	16.26	12.50	13.50	13.81	9.68	13.34	13.08	9.60	17.00	5/4
5/5	10.70	17.30	12.20	19.10	11.90	11.90	10.10	13.00		16.58	9.46	15.51	12.59	17.80	13.20	13.43	12.41	10.10	13.27	13.32	9.46	19.10	5/5
5/6	11.50	17.30	11.80	18.70	10.70	12.20	11.10	12.90		16.12	10.14	16.19	12.69	18.46	13.64	13.66	11.40	11.20	12.95	13.39	10.14	18.46	5/6
5/7	12.40	17.20	11.80	16.30	10.70	12.70	12.40	12.60		15.68	11.87	16.66	12.19	18.00	13.36	13.89	11.99	12.41	13.17	13.68	10.70	18.00	5/7
5/8	13.60	17.00	11.80	16.30	10.80	13.30	14.30	12.50		14.04	13.67	14.46	12.45	18.67	13.30	14.11	12.84	12.97	13.62	13.87	10.60	18.67	5/8
5/9	13.70	16.20	11.60	16.30	11.40	12.80	14.30	12.10		13.45	14.64	14.58	11.84	18.56	14.97	14.09	14.10	13.44	13.97	14.01	11.40	18.56	5/9
5/10	12.90	15.00	11.70	16.40	11.90	12.90	14.10	12.00		13.78	15.41	14.58	11.41	17.69	13.96	14.16	16.04	13.06	14.10	13.95	11.41	17.69	5/10
5/11	12.40	14.90	12.10	17.20	11.40	12.90	13.90	11.60	18.10	13.39	15.75	13.88	12.69	15.91	12.51	14.14	17.94	12.47	14.21	14.13	11.40	19.10	5/11
5/12	12.00	14.70	15.20	17.40	11.10	13.60	13.70	11.90	18.80	12.35	16.50	13.70	14.48	14.45	12.45	14.46	19.13	11.60	14.73	14.40	11.10	19.80	5/12
5/13	11.80	14.50	17.20	17.20	10.90	14.10	13.80	11.80	16.10	12.10	16.63	15.37	15.52	13.26	12.74	15.09	19.06	10.92	14.49	14.30	10.90	19.06	5/13
5/14	11.80	14.80	18.10	16.90	11.40	14.90	13.70	11.80	11.90	11.83	16.54	17.01	16.62	12.60	14.05	16.13	18.73	10.94	14.37	14.41	10.94	18.73	5/14
5/15	11.40	18.20	18.80	15.90	12.00	14.90	13.70	11.80	12.30	12.92	16.43	17.49	16.80	13.61	14.92	17.12	18.14	11.17	13.79	14.64	11.17	18.60	5/15
5/16	12.10	15.50	17.90	15.20	12.30	15.10	14.00	11.90	11.89	13.94	15.73	17.02	17.54	14.40	15.92	17.81	17.13	11.53	13.90	14.78	11.53	17.90	5/16
5/17	12.60	15.90	16.90	14.10	12.80	14.90	14.40	12.60	11.80	13.90	14.82	17.57	18.17	15.08	15.14	18.35	15.84	12.44	14.25	14.80	11.60	18.35	5/17
5/18	11.60	16.50	15.70	14.10	12.80	14.60	14.80	13.30	11.70	14.09	14.10	18.65	17.26	15.95	15.02	18.56	15.66	13.71	14.99	14.90	11.60	18.65	5/18
5/19	12.40	16.80	16.30	14.40	13.20	14.00	14.80	14.20	12.90	14.12	13.91	19.08	16.24	16.03	15.70	17.80	16.07	14.87	15.04	15.13	12.40	19.08	5/19
5/20	13.70	16.90	16.20	14.40	13.30	13.80	14.30	15.10	14.20	14.22	14.03	18.92	15.69	15.99	15.56	17.47	16.44	15.79	15.72	15.30	13.30	18.92	5/20
5/21	14.20	16.70	16.50	14.70	13.60	13.30	13.80	15.20	15.30	15.20	13.45	16.78	15.07	16.70	15.77	17.48	16.27	15.69	15.85	15.30	13.30	17.48	5/21
5/22	14.30	16.90	16.00	15.10	14.20	13.30	13.70	13.90	15.70	16.35	13.72	14.70	16.37	16.19	17.00	15.34	14.52	15.92	15.11	13.30	17.00	5/22	
5/23	13.90	17.30	15.90	15.60	14.20	13.20	13.80	13.60	16.10	17.14	14.19	13.67	15.20	16.13	16.75	16.15	14.67	13.98	15.74	15.13	13.20	17.30	5/23
5/24	13.80	18.10	15.70	16.20	12.80	12.30	13.10	13.40	16.10	17.87	15.19	13.80	16.31	18.07	16.77	15.92	14.05	13.24	15.44	15.05	12.30	18.10	5/24
5/25	14.00	18.50	15.70	16.70	11.90	11.50	12.20	13.50	16.10	17.51	16.32	14.41	16.76	16.27	16.46	15.53	14.34	12.60	15.31	15.03	11.50	18.50	5/25
5/26	13.30	18.80	15.80	16.90	11.60	11.60	12.00	13.70	16.00	16.89	16.32	15.50	16.96	16.11	16.05	15.76	15.32	12.11	15.15	15.05	11.60	18.80	5/26
5/27	13.60	18.40	13.80	17.10	11.70	12.30	12.40	13.90	15.70	16.30	16.42	16.76	17.13	16.59	15.88	15.69	16.42	11.92	15.06	15.21	11.70	18.40	5/27
5/28	13.80	17.90	15.90	18.10	11.70	12.70	12.80	14.40	16.00	16.37	16.41	17.80	17.41	17.59	15.90	15.09	17.70	12.69	15.08	15.47	11.70	17.90	5/28
5/29	14.00	17.90	16.00	17.00	11.80	12.70	13.40	14.70	16.20	16.79	16.14	18.40	17.55	16.67	15.78	14.81	18.10	13.12	15.17	15.59	11.60	18.40	5/29
5/30	13.20	17.80	16.10	17.50	12.10	13.40	13.70	14.70	15.40	17.13	16.84	18.77	17.86	15.85	15.08	14.88	17.89	13.59	15.19	15.52	12.10	18.77	5/30
5/31		17.20	16.60	17.10	12.70	14.00	14.50	15.30	14.80	17.70	17.14	20.26	18.07	16.37	14.53	14.93	18.50	14.20	15.44	16.08	12.70	20.26	5/31
6/1		16.60	16.60	16.40	13.30	14.50	15.60	15.70	14.60	17.28	16.24	20.55	18.30	17.20	14.05	15.73	18.85	14.63	15.70	16.32	13.30	20.55	6/1
6/2		16.70	16.80	17.00	13.80	15.30	16.20	16.00	14.10	17.40	16.53	19.44	18.11	18.34	13.50	16.73	19.62	15.07	15.89	16.59	13.50	19.62	6/2
6/3		17.20	15.90	17.40	13.50	16.40	15.70	16.20	13.60	17.48	18.08	15.95	17.64	19.84	12.98	17.71	19.44	15.42	15.95	18.68	12.98	18.64	6/3
6/4		17.60	14.60	17.90	14.16	17.20	17.10	16.40	13.50	18.02	16.66	18.57	17.25	21.08	12.77	18.63	19.86	15.03	16.09	16.72	12.77	21.08	6/4
6/5		17.50	14.20	18.10	14.60	17.70	17.10	15.00	13.00	18.50	16.86	19.76	18.95	21.64	13.14	19.96	20.04	14.11	16.24	16.89	13.00	21.64	6/5
6/6		17.40	13.90	18.																			

6/16		16.80	17.60			17.50	18.30	14.70	15.80	18.36	19.04	23.61	20.71	20.96	17.46	19.04	23.59	17.24	16.55	18.44	14.70	23.83	6/16
6/17		17.00	17.20			17.90	16.90	13.00	15.50	18.72	20.30	23.47	20.71	19.00	18.05	19.94	23.58	18.21	16.91	18.52	13.00	23.58	6/17
6/18		18.50	16.70			18.00	16.80	13.30	15.50	19.42	20.50	22.71	21.30	19.36	18.26	20.84	21.63	19.09	17.19	18.70	13.30	22.71	6/18
6/19		19.00	17.10			17.90	16.10	14.20	16.30	18.44	20.45	23.08	21.44	20.65	18.94	21.98	21.82	19.31	17.07	18.99	14.20	23.08	6/19
6/20		19.60	17.30			17.50	16.70	4.60	18.80	18.68	21.80	23.84	20.40	20.90	19.52	22.05	23.58	19.20	17.39	19.38	14.60	23.84	6/20
6/21		20.00	17.90			17.40	17.40	5.90	17.40	20.45	22.71	23.10	19.89	20.22	19.95	22.04	23.69	19.43	17.65	19.66	15.90	23.69	6/21
6/22		20.30	18.10			18.00	17.80	17.50	17.40	21.51	23.63	22.44	19.88	20.57	20.38	22.76	24.12	19.98	17.25	20.55	17.25	24.12	6/22
6/23		20.60	18.30			18.20	18.00	18.30	17.90	21.64	23.40	23.44	18.78	21.77	20.29	23.31	25.09	19.41	18.20	20.41	17.90	25.09	6/23
6/24		20.80	17.70			18.20	18.50	18.70	18.30	21.04	23.58	24.69	17.80	22.29	20.31	23.87	25.20	19.52	19.22	20.65	17.90	25.20	6/24
6/25		20.10	18.30			17.90	18.90	18.90	19.20	22.24	23.40	25.52	17.97	21.47	20.39	24.13	25.07	20.04	20.18	20.84	17.90	25.52	6/25
6/26		19.90	18.90			17.70	19.10	18.20	19.60	21.30	22.96	25.86	19.64	21.57	20.29	23.89	24.11	20.36	20.37	20.90	17.70	25.86	6/26
6/27		19.40	19.80			17.00	19.70	18.00	20.00	21.28	22.82	25.30	20.67	21.19	20.28	23.98	24.29	20.59	20.57	20.99	17.00	25.30	6/27
6/28		20.80	20.60			17.70	19.60	19.20	20.00	22.25	24.40	24.86	21.69	21.12	19.04	24.49	24.47	21.04	21.35	21.41	17.70	24.86	6/28
6/29		20.60	20.70			19.20	19.70	20.40	20.20	23.36	25.72	24.77	22.61	21.43	18.47	25.02	24.43	21.40	21.56	21.65	18.47	25.72	6/29
6/30		19.30	21.00			20.30	19.00	21.40	20.10	23.55	25.82	24.90	23.95	21.63	19.55	24.98	24.41	21.77	21.99	22.10	19.00	25.82	6/30
7/1		18.20	21.20			21.30	17.70	22.40	20.50	22.92	25.01	25.71	24.61	22.27	20.33	24.65	24.35	21.67	22.34	22.20	17.70	25.71	7/1
7/2		17.80	21.20			22.30	18.00	22.90	20.80	23.33	24.89	25.90	24.28	23.22	20.96	24.75	23.73	21.75	22.02	22.38	17.80	25.90	7/2
7/3		18.70	19.70			23.90	18.20	22.80	20.10	23.25	25.48	24.60	24.65	23.09	21.02	24.32	22.90	22.04	22.30	22.30	18.20	25.48	7/3
7/4		19.70	18.20			23.90	19.20	23.20	21.10	22.40	26.70	25.17	24.68	22.20	21.40	24.61	22.70	22.54	22.66	22.52	18.20	26.70	7/4
7/5		19.70	18.50			23.80	19.60	22.70	21.50	22.25	27.26	25.96	24.81	21.71	21.36	24.45	22.72	22.31	22.85	22.59	18.50	27.26	7/5
7/6		20.00	18.70			24.00	18.80	22.80	22.40	22.29	28.90	26.27	25.15	22.08	21.29	23.93	22.89	21.76	22.50	22.80	18.70	28.90	7/6
7/7		18.90	19.40			24.40	19.80	21.40	23.10	22.47	25.58	26.16	25.25	21.97	22.90	24.31	23.18	22.32	22.48	22.80	18.90	26.16	7/7
7/8		19.20	20.30			23.90	20.30	23.40	23.40	22.61	28.93	27.24	24.80	21.85	22.93	24.30	23.25	23.34	22.11	23.23	19.20	28.93	7/8
7/9		19.40	20.70			23.50	20.80	23.80	23.10	22.40	28.24	27.79	23.61	22.08	23.31	24.30	23.07	23.92	21.89	23.01	19.40	27.79	7/9
7/10		18.60	21.70			23.10	21.00	21.70	22.50	22.58	25.42	27.65	24.92	23.26	23.22	23.63	22.98	24.10	22.95	23.17	18.60	27.65	7/10
7/11		19.20	22.50			24.40	20.30	22.80	23.20	24.13	26.17	27.81	25.76	24.36	23.23	23.58		24.09	22.63	23.54	19.20	27.81	7/11
7/12		18.70	22.90			24.40	19.10	22.70	22.40	25.05	24.62	27.66	25.80	25.26	24.05	23.90	23.64	23.97	22.90	23.54	18.70	27.66	7/12
7/13		18.80	22.50			24.50	18.30	22.90	22.90	25.81	23.68	27.43	26.26	25.71	25.02	24.33	24.38	24.05	23.05	23.70	18.80	27.43	7/13
7/14		19.50	22.90	22.80		24.60	19.00	23.90	21.80	25.95	22.22	27.20	26.90	24.91	25.70	24.95	25.54	24.35	22.99	23.82	19.00	27.20	7/14
7/15		19.00	23.10	22.50		24.10	19.90	23.50	21.30	25.54	22.68	26.74	27.18	25.44	25.87	25.17	25.43	24.05	22.27	23.81	19.00	27.19	7/15
7/16		19.00	22.80	21.40		23.90	20.70	24.00	21.00	25.36	22.71	26.23	26.83	25.78	26.08	27.01	24.76	23.74	22.88	23.78	19.00	27.03	7/16
7/17		19.30	23.20	21.80		23.70	21.10	24.20	21.00	24.77	22.67	25.62	27.62	25.58	24.91	27.03	25.47	23.48	23.12	23.79	19.30	27.62	7/17
7/18		19.90	23.50	22.80		24.70	21.40	24.60	22.10	24.45	22.65		27.87	25.76	23.20	26.67	26.01	24.00	23.81	23.93	19.90	27.87	7/18
7/19		20.40		22.90		25.50	21.10	24.60	22.40	24.45	22.81		27.11	25.42	24.44	26.52	27.38	24.64	24.51	24.28	20.40	27.38	7/19
7/20		19.90		22.80		25.50	21.00	24.00	22.20	24.91	22.97		26.76	25.33	25.72	26.43	27.75	24.77	24.26	24.26	19.90	27.75	7/20
7/21		20.00		23.60		24.80	21.80	24.40	22.90	25.08	23.26		27.20	24.83	26.41	27.50	27.12	25.13	24.12	24.53	20.00	27.50	7/21
7/22		19.30		24.10		24.80	22.40	23.60	23.10	24.89	23.60		28.10	24.44	26.54	27.25	27.29	25.25	23.91	24.98	19.30	28.10	7/22
7/23		19.80	19.50	23.00		24.70	22.60	23.80	23.80	24.54	23.87		27.81	23.43	25.24	27.71	27.83	26.10	24.01	24.19	19.80	27.71	7/23
7/24		20.10	19.60	24.30		25.20	22.70	23.40	24.90	23.37	24.14		27.05	23.33	24.87	27.59	27.53	25.89	24.25	24.24	19.60	27.59	7/24
7/25		19.80	21.00	24.70		25.10		22.30	24.30	22.89	24.15		27.21	24.18	24.78	27.00	27.44	25.73	24.11	24.29	19.80	27.44	7/25
7/26		19.90	20.70	25.20		24.40	24.10	21.90	24.00	23.76	23.15		27.51	23.86	24.00	26.37	26.52	25.73	23.65	24.05	19.90	27.51	7/26
7/27		20.20	19.60	25.60		24.60	24.30	22.30	24.20	24.76	23.12		27.72	22.40	24.16	26.41	26.61	24.80	23.24	24.01	19.60	27.72	7/27
7/28		20.50	21.60	24.50		23.20	22.80	22.70	24.30	25.31	24.19		27.47	22.04	24.11	27.46	27.17	24.70	23.53	24.12	20.50	27.47	7/28
7/29		20.50	22.50	24.40		23.90	22.70	23.20	24.70	25.41	24.56		26.67	22.23	24.96	27.78	27.41	25.47	23.58	24.34	20.50	27.78	7/29
7/30		19.90	23.50	25.10		24.40	22.70	23.00	23.90	25.61	24.27		26.90	22.67	24.82	26.90	27.14	25.00	22.99	24.29	19.90	27.14	7/30
7/31		19.80	23.80	24.30		25.00	22.40	23.10	22.80	25.70	24.41		25.76	22.78	24.60	25.53	27.35	24.49	23.01	24.05	19.80	27.35	7/31
8/1		20.00	23.50	23.70		24.00	23.00	23.10	22.90	25.51	24.98		25.50	22.66	23.95	24.80	27.03	25.26	22.91	23.90	20.00	27.03	8/1
8/2		20.60	23.80	23.50		23.40	24.10	23.00	22.90	24.53	25.58		25.71	21.64	23.77	23.70	26.25	24.91	23.50	23.80	20.60	26.25	8/2
8/3		20.50	23.90	24.10		23.00	24.10	23.10	22.60	24.30	25.49		24.89	21.59	24.21	23.92	26.19	24.09	23.79	23.74	20.50	26.19	8/3
8/4		20.30	22.70	25.10		21.80	22.90	22.60	22.30	24.44	25.31		25.68	22.65	24.33	22.67	26.25	24.99	23.46	23.59	20.30	26.25	8/4
8/5		20.90	21.60	24.60		20.90	22.90	22.90	22.88	24.19	25.83		26.03	23.88	24.73	22.94	26.17	25.04	23.36	23.60	20.90	26.17	8/5
8/6		20.90	22.00	24.00		21.10	22.50	23.10	22.88	24.72	25.88		26.04	22.48	24.91	24.30	26.54	24.23	22.78	23.60	20.90	26.04	8/6
8/7		20.60	23.00	24.50		20.70	22.30	23.80	23.29	24.99	25.58		24.18	23.22	24.72	23.74	25.88	24.16	21.91	23.53	20.60	25.88	8/7
8/8		21.00	22.40	23.80		21.70	22.90	23.90	23.29	24.70	25.51		24.03	23.67	24.95	23.87	25.26	23.92	21.13	23.50	21.00	25.51	8/8
8/9		21.70	22.60	21.80		22.90	22.20	24.00	22.89	25.03	26.05		25.40	24.32	24.22	24.80	24.87	24.21	20.59	23.66	20.59	26.05	8/9
8/10	21.00																						

8/12	20.80	21.70	23.30	24.10	22.90	24.10	19.90	22.00	21.80	25.67	25.22	26.21	24.28	23.00	24.70	25.07	22.77	22.91	23.38	19.90	26.21	8/12
8/13	21.90	21.40	23.40	24.30	23.00	24.90	20.90	22.80	22.20	21.51	23.43	26.50	24.18	22.18	24.64	25.80	23.40	22.92	23.45	20.00	26.50	8/13
8/14	21.90	20.90	22.70	24.40	22.90	24.10	20.60	23.50	21.60	24.75	23.04	27.40	24.02	21.75	24.02	26.00	23.79	22.64	23.27	20.90	27.40	8/14
8/15	21.10	21.30	21.90	25.10	23.10	23.20	20.20	23.70	21.00	24.64	22.92	28.31	24.15	22.68	24.70	26.08	22.58	21.80	23.04	20.20	28.31	8/15
8/16	21.30	21.80	21.10	25.20	23.40	23.90	20.60	23.70	21.50	24.74	22.72	24.39	24.17	22.39	23.29	26.85	20.37	20.57	22.79	20.37	25.65	8/16
8/17	21.40	21.30	21.10	25.00	22.80	23.30	21.10	23.80	22.50	22.71	23.55	24.21	22.91	22.26	24.31	26.06	21.12	20.13	22.75	20.13	26.06	8/17
8/18	20.80	20.60	21.80	24.30	22.80	22.40	21.30	23.30	22.70	22.51	23.94	23.65	21.91	23.08	24.57	25.21	22.35	20.53	22.66	20.53	25.21	8/18
8/19	20.50	20.90	21.90	23.10	23.00	22.80	21.80	22.90	22.72	23.05	23.71	23.95	21.55	22.68	24.67	25.07	22.78	20.54	22.03	20.50	25.07	8/19
8/20	21.00	21.30	21.40	23.50	23.30	23.00	22.10	22.40	22.74	21.83	22.64	24.59	22.61	22.49	24.63	24.21	23.26	21.20	22.80	21.00	24.66	8/20
8/21	21.60	21.00	22.10	23.40	23.70	23.90	22.30	21.40	22.34	23.65	21.53	25.24	22.31	22.42	24.31	24.85	22.76	21.93	22.81	21.00	25.24	8/21
8/22	20.60	19.90	21.90	23.20	24.50	22.80	22.90	21.10	23.07	22.09	22.22	25.36	22.21	22.43	24.81	23.97	23.01	22.95	22.71	19.90	25.36	8/22
8/23	19.50	19.20	22.10	23.00	25.30	22.70	22.70	21.30	23.68	21.72	22.70	25.45	21.45	22.30	24.21	22.28	23.61	23.09	22.67	19.20	25.45	8/23
8/24	20.00	19.00	22.70	23.50	25.30	22.70	23.00	23.00	23.63	22.42	22.84	25.44	18.91	21.87	23.07	22.24	23.79	22.73	22.96	18.91	25.44	8/24
8/25	20.40	17.60	21.90	24.30	25.10	22.70	23.10	23.10	23.10	24.23	22.88	25.90	18.42	22.81	22.17	22.93	23.65	22.16	22.53	17.60	25.90	8/25
8/26	20.80	16.10	21.40	24.20	25.20	22.50	23.20	21.90	22.95	23.26	23.32	26.05	19.28	23.25	21.11	23.43	23.52	21.81	22.44	16.10	26.05	8/26
8/27	20.90	15.60	21.10	22.50	25.30	22.80	23.20	21.70	22.82	23.31	23.72	24.51	18.47	23.18	20.31	22.64	22.21	22.07	22.02	15.60	25.30	8/27
8/28	20.90	16.60	21.80	22.30	25.00	23.80	22.90	21.50	22.40	22.98	21.77	23.35	19.29	22.44	21.61	23.23	21.73	22.36	22.11	16.60	25.00	8/28
8/29	21.50	17.40	21.60	22.40	25.00	22.80	22.80	21.20	22.99	22.83	23.85	23.58	20.05	22.85	22.78	24.03	22.27	22.51	22.37	17.40	25.00	8/29
8/30	21.80	18.30	19.70	21.90	25.00	22.70	22.50	21.50	23.61	22.69	23.17	22.43	20.67	21.62	22.94	24.75	22.50	22.12	22.24	18.30	25.00	8/30
8/31	21.30	18.30	19.80	21.00	24.90	22.40	21.80	21.70	23.41	21.61	22.65	22.04	21.43	19.59	22.68	24.77	21.95	22.03	21.85	18.30	24.90	8/31
9/1	21.00	18.00	20.40	21.10	24.70	21.70	21.10	21.60	22.32	21.30	22.43	22.86	21.45	19.98	21.54	24.44	19.89	21.16	21.55	18.00	24.70	9/1
9/2	20.60	18.20	20.50	21.40	24.30	21.10	21.90	21.90	21.14	20.68	22.34	22.70	20.88	20.71	21.93	24.29	17.67	21.03	21.27	17.67	24.30	9/2
9/3	20.60	18.00	20.20	21.50	24.70	20.90	21.20	21.70	20.06	20.30	22.49	22.83	19.20	21.10	21.93	23.82	18.05	21.11	21.11	18.00	24.70	9/3
9/4	20.90	17.20	20.00	20.80	25.20	21.40	20.80	22.40	19.28	20.10	22.85	23.60	17.05	20.98	22.25	23.95	18.40	21.02	21.00	17.00	25.20	9/4
9/5	20.40	16.10	19.90	20.20	24.70	20.90	21.70	22.90	19.35	19.73	22.79	23.01	16.87	21.57	22.01	23.05	18.67	21.31	20.84	16.10	24.70	9/5
9/6	19.30	16.30	19.30	20.10	24.10	19.80	21.80	23.30	19.67	19.55	22.65	21.29	18.21	21.37	21.34	21.98	18.43	21.19	20.54	16.30	24.10	9/6
9/7	18.30	16.50	19.50	20.10	24.10	19.50	21.10	23.20	19.11	18.73	21.71	20.89	19.61	21.48	20.84	22.19	19.33	21.69	20.44	16.50	24.10	9/7
9/8	18.60	16.30	19.70	20.90	23.20	19.80	20.90	23.10	18.48	19.23	20.29	21.42	20.75	21.81	19.91	22.27	19.07	21.67	20.39	16.30	23.20	9/8
9/9	18.40	16.30	19.90	21.50	22.60	19.90	21.50	22.20	18.87	19.08	18.95	20.59	20.46	21.15	19.36	21.45	18.48	21.69	20.13	16.30	22.60	9/9
9/10	17.80	16.40	20.20	20.70	22.30	20.20	21.40	20.80	19.32	18.94	18.56	19.15	20.80	19.70	19.48	19.95	18.38	21.51	19.76	16.40	22.30	9/10
9/11	17.30	16.60	20.30	19.80	22.30	19.00	21.00	19.10	19.23	19.03	18.87	18.38	20.94	18.29	19.68	19.40	17.09	21.43	19.32	16.60	22.30	9/11
9/12	17.10	17.00	19.20	19.50	21.80	19.20	20.80	18.10	18.83	19.16	19.72	18.74	20.95	17.77	20.92	20.05	16.24	21.36	19.25	16.24	21.80	9/12
9/13	17.10	16.10	16.50	19.30	21.90	19.50	20.50	18.00	18.95	19.71	20.31	17.77	20.08	16.66	21.31	20.39	17.33	20.59	19.00	16.10	21.90	9/13
9/14	15.90	16.20	15.20	18.00	21.90	19.00	20.10	18.70	18.68	20.98	20.43	17.22	18.40	17.15	20.74	20.29	18.34	18.67	18.67	15.20	21.90	9/14
9/15	13.30	17.60	15.80	17.10	21.60	18.60	19.70	19.40	18.04	20.37	20.62	17.72	15.85	16.95	19.01	20.32	18.76	19.06	18.32	13.30	21.60	9/15
9/16	13.60	17.70	16.00	17.80	21.70	17.10	19.20	19.80	17.81	20.52	20.61	18.68	16.52	17.33	15.10	20.39	19.07	19.00	18.21	13.60	21.70	9/16
9/17	14.60	16.20	15.80	18.40	21.50	14.80	18.70	19.90	18.20	20.22	19.69	16.78	17.75	17.29	13.12	19.54	18.88	19.44	17.95	13.12	21.50	9/17
9/18	15.00	17.80	15.70	18.90	20.90	13.90	18.50	19.90	18.43	19.69	19.25	14.05	17.80	17.36	13.97	18.36	18.60	19.96	17.67	13.90	20.90	9/18
9/19	15.10	17.70	15.50	18.70	20.90	13.70	17.60	19.60	17.77	19.52	19.55	14.77	17.01	17.43	14.75	17.90	18.66	20.30	17.59	13.70	20.90	9/19
9/20	15.50	17.50	16.10	17.50	20.80	14.10	18.40	18.70	16.60	18.79	19.72	15.77	15.82	17.22	14.61	17.95	18.94	19.96	17.35	14.10	20.80	9/20
9/21	16.50	16.80	16.70	17.20	18.40	15.10	16.30	17.50	17.11	17.62	19.71	16.49	14.27	17.62	12.37	18.10	15.73	19.16	16.93	12.37	19.71	9/21
9/22	14.40	16.90	17.10	16.90	17.10	15.90	16.40	16.80	17.24	16.91	19.85	16.89	13.59	17.19	11.61	18.49	16.06	17.63	16.58	11.61	19.85	9/22
9/23	13.60	17.30	17.00	16.90	16.80	16.20	15.70	16.90	17.06	15.63	19.73	17.27	14.31	17.52	11.81	18.08	16.62	16.95	16.42	11.81	19.73	9/23
9/24	13.80	17.70	16.70	17.30	16.30	17.10	14.70	17.40	16.67	13.91	19.53	17.48	15.70	17.98	12.86	15.51	16.46	16.81	16.33	12.86	19.53	9/24
9/25	14.10	15.60	16.00	17.40	16.00	15.70	14.70	17.00	16.61	13.86	19.58	17.33	15.90	17.47	13.32	14.21	17.36	17.09	16.07	13.32	19.58	9/25
9/26	14.80	13.80	15.70	17.30	16.50	13.10	14.90	16.50	15.73	14.60	19.54	17.66	16.19	16.03	13.91	14.74	18.02	17.44	15.90	13.10	19.54	9/26
9/27	15.90	13.50	16.70	17.40	17.00	12.00	15.70	15.80	14.14	14.75	19.47	17.94	16.58	16.98	14.54	15.41	17.93	17.67	15.94	12.00	19.47	9/27
9/28	16.40	13.80	15.50	17.40	17.10	12.70	15.80	15.80	13.29	14.79	19.13	16.38	16.36	16.11	14.92	14.94	16.59	17.69	15.98	12.70	19.13	9/28
9/29	15.10	13.90	15.10	16.80	16.40	13.40	15.60	16.00	12.52	14.97	18.71	16.67	16.07	16.11	15.24	13.96	18.87	17.75	15.84	12.52	18.07	9/29
9/30	14.90	14.00	14.90	16.70	15.80	14.10	15.70	15.70	12.57	15.17	18.21	18.53	15.68	16.47	15.54	12.65	18.38	17.31	15.68	12.57	18.53	9/30
10/1	15.20	13.90	14.80	16.30	16.50	14.80	15.90	17.00	12.76	15.47	16.58	18.46	15.62	16.48	15.63	12.95	18.18	15.79	12.76	15.62	18.58	10/1
10/2	15.00	13.90	15.30	15.30	16.70	15.20	16.30	15.90	12.49	15.68	18.63	17.98	16.29	16.38	15.93	13.11	18.00	15.73	12.40	15.68	18.63	10/2
10/3	13.80	13.70	15.80	14.00	16.90	15.20	16.20	15.10	12.41	15.76	18.55	17.65	16.42	16.10	16.41	13.24	17.63	15.51	12.41	15.76	18.55	10/3
10/4	11																					

Appendix E

Green River Elevation Impact Analysis

Green River Pumping Project

Percentile of Mean Daily Flows

Month	Date	0.02	0.05	0.10	0.25	0.50	0.75	0.90
April	16	2226	2668	2822	3138	4410	6273	8525
	17	2232	2612	3022	3363	4400	6420	8828
	18	2524	2668	3099	3640	4890	6423	8174
	19	2709	2820	3266	3925	4885	6673	9394
	20	3282	3305	3415	4225	4985	6900	9269
	21	3125	3497	3698	4345	5620	7103	8787
	22	3023	3470	3589	4383	5870	7285	8112
	23	3059	3259	3523	4325	5665	7223	8811
	24	3036	3241	3370	3978	5655	7413	9904
	25	2946	3233	3311	4295	5685	7770	10300
	26	2557	3104	3303	4555	6355	8543	11390
	27	2769	2860	3239	4630	6380	10025	11070
	28	3065	3213	3751	4650	6530	9113	10540
	29	3029	3372	3779	5108	6475	8723	10310
30	3374	3673	3759	5225	6440	8955	10810	
May	1	3242	3494	3909	5123	6480	8680	11250
	2	3199	3617	3991	5425	7105	8695	12210
	3	3229	3559	3928	5973	7705	9303	12360
	4	3167	3391	3680	5548	7865	10350	12810
	5	3329	3380	3602	5938	8175	10725	13240
	6	3244	3863	4135	5820	7700	10950	14950
	7	3190	3538	4246	6108	8040	11600	15770
	8	3240	3443	4237	6203	8570	11950	14740
	9	3462	3728	4123	5850	7805	11825	14700
	10	3915	4351	4572	5650	8230	11100	15270
	11	3709	4181	4895	6168	8780	11700	16100
	12	3725	3954	5020	6178	9325	12075	16110
	13	3425	3957	5300	6488	9575	12050	16950
	14	3474	4002	5217	7053	10050	12175	16790
	15	3511	3891	5190	7080	9985	12925	15930
	16	3578	4189	5303	7448	9585	12550	15700
17	3651	3994	5507	7545	9700	12575	16280	
18	3450	3997	5452	8153	11200	12200	16840	
19	3559	3736	5556	8013	11350	14400	17340	
20	4039	4195	6195	8468	12100	13850	17700	
21	3984	5052	5870	8640	12200	14625	18360	
22	3770	4478	5743	9105	12200	15850	19110	
23	3760	4550	5796	8938	12350	16275	20080	
24	4520	5403	5930	9768	12550	16350	19980	
25	4987	5710	5956	9598	12750	17725	18740	
26	5411	5496	5748	9068	13050	17300	18510	
27	5229	5289	5636	9008	13000	16350	18850	
28	5088	5247	5447	9375	12650	16550	18870	
29	4661	4824	5313	9265	12300	15925	18740	
30	4733	4934	5283	9148	12700	16600	18760	

	31	4536	4946	5607	8580	12750	16250	19440
June	1	4581	4873	5463	8160	12200	16775	20110
	2	4411	4979	5234	8425	12100	16225	19950
	3	4374	4756	5391	8395	11950	14725	19910
	4	4168	4578	5115	7920	11350	15175	19860
	5	4052	4142	4946	8093	11300	15625	19710
	6	3893	4130	4931	8320	11550	14900	20290
	7	3832	3999	4989	7720	11300	14675	20300
	8	3598	3946	5086	7355	11250	15200	19650
	9	3517	3849	4824	7683	11300	14700	18800
	10	3579	3914	4579	7063	11800	13875	19400
	11	3470	4325	4533	6688	11550	14300	17970
	12	3297	4002	4482	6625	11100	14675	16880
	13	3090	4000	4186	5903	10850	14350	16510
	14	2939	3539	4150	5465	10500	14100	15810
	15	2839	3602	3686	4970	10550	13575	15770
	16	2800	3381	3534	4503	10150	13750	16680
	17	2687	3053	3377	4113	9885	14075	17310
	18	2504	2691	3056	3998	9405	14400	17870
	19	2317	2490	2750	3800	9075	13800	16990
	20	2218	2340	2784	3795	9180	13575	16340
	21	2084	2292	2687	3833	8340	12350	15410
	22	2037	2242	2572	3868	7630	11725	15240
	23	2041	2188	2444	3693	7505	11800	14900
	24	1959	2225	2378	3425	7855	11900	14180
	25	1899	2216	2439	3195	7845	11475	13370
	26	1838	1986	2369	3278	8225	10725	12610
	27	1816	2022	2167	3048	7665	10450	12900
	28	1485	1914	2069	2823	7385	10600	11970
	29	1401	1923	1962	2898	6980	10100	11550
	30	1705	1822	1928	2750	6505	9805	11340
July	1	1615	1768	1932	2690	5870	9550	11500
	2	1595	1733	1840	2685	5675	8800	11290
	3	1507	1642	1770	2793	5510	8008	11260
	4	1350	1560	1689	2520	5390	7725	10490
	5	1295	1551	1626	2510	5300	6785	9824
	6	1249	1482	1572	2423	4910	6753	9447
	7	1205	1351	1547	2345	4570	6783	9555
	8	1168	1288	1549	2163	4505	6650	8844
	9	1156	1268	1600	2040	4315	6038	8691
	10	1154	1241	1649	2033	4005	5975	8414
	11	1109	1314	1589	1995	3985	5733	8959
	12	1109	1200	1595	1985	3850	5603	9129
	13	1108	1180	1566	2303	3640	5588	8639
	14	1073	1158	1506	2060	3575	5290	8064
	15	1072	1130	1461	1980	3520	4980	7709
	16	1055	1128	1442	1990	3425	4685	7303
	17	1072	1209	1399	1888	2935	4450	7291
	18	1072	1145	1348	1903	2730	4258	7098
	19	1030	1092	1316	1960	2790	4003	6915
	20	1004	1084	1267	1933	2755	3730	6591

	21	967	1065	1256	1880	2685	3690	6124
	22	935	1125	1244	1818	2585	3840	6110
	23	1053	1106	1248	1760	2670	4043	5722
	24	939	1081	1240	1838	2770	3883	5220
	25	933	1062	1246	1818	2815	3945	5051
	26	936	1061	1248	1810	2575	3823	4642
	27	1006	1071	1172	1650	2820	3568	5269
	28	1029	1132	1238	1603	2585	3550	4758
	29	1021	1113	1193	1585	2565	3353	4753
	30	1002	1102	1241	1655	2500	3273	4528
	31	1004	1081	1213	1625	2460	3598	4179
August	1	1004	1062	1179	1798	2310	3220	4045
	2	1006	1058	1177	1655	2270	3455	4093
	3	1034	1122	1177	1620	2310	3360	5048
	4	1035	1110	1150	1615	2200	3343	4849
	5	1034	1088	1145	1575	2240	3055	4547
	6	1032	1083	1153	1568	2175	3015	4430
	7	1013	1080	1162	1585	2180	3045	4333
	8	1014	1059	1126	1505	2150	3045	4291
	9	1011	1095	1153	1588	2220	2960	4192
	10	992	1045	1130	1448	2325	2985	4435
	11	993	1043	1095	1473	2310	3058	4465
	12	984	1022	1096	1590	2220	2975	4242
	13	970	1023	1079	1413	2170	2893	3660
	14	966	1052	1073	1395	2075	2820	3919
	15	953	1012	1051	1480	2075	3053	4480
	16	943	992	1073	1298	2025	2748	3861
	17	980	1003	1052	1453	2020	2890	4028
	18	970	996	1031	1470	2145	2798	3965
	19	968	996	1048	1593	2075	2918	3438
	20	970	1010	1047	1633	2040	2660	3863
	21	959	1000	1051	1583	2055	2638	3625
	22	948	987	1089	1413	2085	2748	3441
	23	932	1010	1023	1550	2015	2630	3692
	24	951	1012	1043	1545	2245	2763	3372
	25	941	1006	1078	1500	1965	2773	3229
	26	922	995	1097	1585	2035	2725	3357
	27	921	987	1026	1590	1990	2588	3538
	28	923	984	1023	1528	2000	2615	3175
	29	958	979	1026	1505	1880	2583	3131
	30	931	998	1010	1480	1900	2348	3330
	31	986	1020	1030	1560	1945	2533	3271
Sept	1	986	1022	1042	1485	2055	2665	3244
	2	893	969	1010	1485	2025	2548	3097
	3	905	992	1020	1433	2045	2553	3018
	4	892	973	1010	1420	1890	2420	2893
	5	872	904	987	1440	1840	2410	3010
	6	870	907	968	1473	1895	2443	3280
	7	859	909	978	1450	1945	2415	3619
	8	840	880	979	1490	1930	2658	3511
	9	854	921	999	1435	1980	2633	3270

	10	841	912	1010	1455	2015	2518	3339
	11	865	917	999	1470	1995	2588	3499
	12	902	962	991	1473	1930	2648	3342
	13	916	954	1056	1513	1955	2583	3124
	14	929	942	1066	1385	1925	2480	3179
	15	856	963	1070	1310	1950	2543	3295
	16	845	1052	1123	1408	2050	2645	3017
	17	980	1032	1056	1385	1965	2730	3398
	18	916	1052	1142	1438	1945	2715	3224
	19	1096	1133	1202	1418	1945	2685	3121
	20	1086	1126	1232	1538	2080	2710	3258
	21	1054	1109	1256	1485	2020	2693	3458
	22	1053	1089	1194	1395	1850	2438	3384
	23	1035	1118	1197	1415	1825	2438	3311
	24	1099	1113	1186	1435	1925	2500	3659
	25	1116	1208	1353	1598	1840	2688	3507
	26	1130	1167	1376	1613	2010	2665	3577
	27	1047	1144	1272	1588	2020	2423	3207
	28	1023	1118	1283	1583	2020	2590	3379
	29	1005	1103	1165	1608	1915	2738	3371
	30	1004	1113	1203	1603	2000	3033	3739
Oct	1	997	1109	1244	1660	2095	3105	3640
	2	996	1126	1346	1505	1995	2703	3549
	3	1017	1126	1212	1485	2135	2725	3480
	4	1017	1106	1197	1655	2145	2668	3445
	5	1016	1115	1197	1515	2140	2663	3672
	6	1034	1092	1129	1500	2090	2728	3598
	7	1016	1085	1140	1520	2115	2668	3424
	8	1086	1113	1158	1465	2085	2905	3689
	9	1063	1115	1175	1548	2135	2720	3518
	10	1119	1143	1210	1690	2210	2865	3626
	11	1110	1132	1256	1758	2220	2920	3735
	12	1109	1181	1407	1655	2095	2995	3738
	13	1100	1118	1327	1665	2230	3110	3769
	14	1117	1146	1309	1565	2330	3110	4001
	15	1110	1162	1412	1628	2195	3083	4002

Green River Pumping Project

Elevation Pre-GRPP (Feet above MSL)

Month	Date	0.02	0.05	0.10	0.25	0.50	0.75	0.90
April	16	4669.5	4669.9	4670.0	4670.3	4671.2	4672.4	4673.6
	17	4669.5	4669.9	4670.2	4670.4	4671.2	4672.5	4673.8
	18	4669.8	4669.9	4670.2	4670.6	4671.5	4672.5	4673.4
	19	4669.9	4670.0	4670.4	4670.9	4671.5	4672.6	4674.0
	20	4670.4	4670.4	4670.5	4671.1	4671.6	4672.8	4674.0
	21	4670.3	4670.5	4670.7	4671.2	4672.0	4672.9	4673.7
	22	4670.2	4670.5	4670.6	4671.2	4672.2	4673.0	4673.4
	23	4670.2	4670.4	4670.6	4671.1	4672.0	4672.9	4673.8
	24	4670.2	4670.3	4670.4	4670.9	4672.0	4673.0	4674.3
	25	4670.1	4670.3	4670.4	4671.1	4672.0	4673.2	4674.4
	26	4669.8	4670.2	4670.4	4671.3	4672.4	4673.6	4674.9
	27	4670.0	4670.1	4670.3	4671.4	4672.5	4674.3	4674.8
	28	4670.2	4670.3	4670.7	4671.4	4672.5	4673.9	4674.5
	29	4670.2	4670.4	4670.8	4671.7	4672.5	4673.7	4674.4
30	4670.4	4670.7	4670.7	4671.7	4672.5	4673.8	4674.6	
May	1	4670.3	4670.5	4670.8	4671.7	4672.5	4673.7	4674.8
	2	4670.3	4670.6	4670.9	4671.9	4672.9	4673.7	4675.2
	3	4670.3	4670.6	4670.9	4672.2	4673.2	4674.0	4675.3
	4	4670.3	4670.5	4670.7	4672.0	4673.3	4674.5	4675.4
	5	4670.4	4670.5	4670.6	4672.2	4673.4	4674.6	4675.6
	6	4670.4	4670.8	4671.0	4672.1	4673.2	4674.7	4676.2
	7	4670.3	4670.6	4671.1	4672.3	4673.4	4675.0	4676.5
	8	4670.3	4670.5	4671.1	4672.4	4673.6	4675.1	4676.1
	9	4670.5	4670.7	4671.0	4672.1	4673.2	4675.1	4676.1
	10	4670.8	4671.2	4671.3	4672.0	4673.5	4674.8	4676.3
	11	4670.7	4671.0	4671.5	4672.3	4673.7	4675.0	4676.6
	12	4670.7	4670.9	4671.6	4672.3	4674.0	4675.2	4676.6
	13	4670.5	4670.9	4671.8	4672.5	4674.1	4675.1	4676.9
	14	4670.5	4670.9	4671.7	4672.8	4674.3	4675.2	4676.8
	15	4670.6	4670.8	4671.7	4672.9	4674.3	4675.5	4676.5
	16	4670.6	4671.0	4671.8	4673.1	4674.1	4675.3	4676.4
17	4670.7	4670.9	4671.9	4673.1	4674.2	4675.3	4676.6	
18	4670.5	4670.9	4671.9	4673.4	4674.8	4675.2	4676.8	
19	4670.6	4670.7	4672.0	4673.4	4674.9	4676.0	4677.0	
20	4670.9	4671.1	4672.4	4673.6	4675.2	4675.8	4677.1	
21	4670.9	4671.6	4672.2	4673.7	4675.2	4676.1	4677.3	
22	4670.7	4671.2	4672.1	4673.9	4675.2	4676.5	4677.6	
23	4670.7	4671.3	4672.1	4673.8	4675.3	4676.6	4677.9	
24	4671.3	4671.9	4672.2	4674.2	4675.3	4676.7	4677.9	
25	4671.6	4672.1	4672.2	4674.1	4675.4	4677.1	4677.5	
26	4671.9	4671.9	4672.1	4673.9	4675.5	4677.0	4677.4	
27	4671.7	4671.8	4672.0	4673.8	4675.5	4676.7	4677.5	
28	4671.7	4671.8	4671.9	4674.0	4675.4	4676.7	4677.5	
29	4671.4	4671.5	4671.8	4674.0	4675.2	4676.5	4677.5	
30	4671.4	4671.6	4671.8	4673.9	4675.4	4676.7	4677.5	

	31	4671.3	4671.6	4672.0	4673.6	4675.4	4676.6	4677.7
June	1	4671.3	4671.5	4671.9	4673.4	4675.2	4676.8	4677.9
	2	4671.2	4671.6	4671.8	4673.6	4675.2	4676.6	4677.9
	3	4671.2	4671.4	4671.9	4673.5	4675.1	4676.1	4677.9
	4	4671.0	4671.3	4671.7	4673.3	4674.9	4676.3	4677.8
	5	4670.9	4671.0	4671.6	4673.4	4674.8	4676.4	4677.8
	6	4670.8	4671.0	4671.6	4673.5	4674.9	4676.2	4678.0
	7	4670.8	4670.9	4671.6	4673.2	4674.8	4676.1	4678.0
	8	4670.6	4670.9	4671.7	4673.0	4674.8	4676.3	4677.8
	9	4670.6	4670.8	4671.5	4673.2	4674.8	4676.1	4677.5
	10	4670.6	4670.8	4671.3	4672.8	4675.0	4675.8	4677.7
	11	4670.5	4671.1	4671.3	4672.6	4674.9	4676.0	4677.2
	12	4670.4	4670.9	4671.3	4672.6	4674.8	4676.1	4676.8
	13	4670.2	4670.9	4671.0	4672.2	4674.7	4676.0	4676.7
	14	4670.1	4670.6	4671.0	4671.9	4674.5	4675.9	4676.5
	15	4670.0	4670.6	4670.7	4671.6	4674.5	4675.7	4676.5
	16	4670.0	4670.5	4670.6	4671.3	4674.4	4675.8	4676.8
	17	4669.9	4670.2	4670.5	4671.0	4674.2	4675.9	4677.0
	18	4669.8	4669.9	4670.2	4670.9	4674.0	4676.0	4677.2
	19	4669.6	4669.8	4670.0	4670.8	4673.9	4675.8	4676.9
	20	4669.5	4669.6	4670.0	4670.8	4673.9	4675.7	4676.7
	21	4669.4	4669.6	4669.9	4670.8	4673.5	4675.3	4676.3
	22	4669.4	4669.5	4669.8	4670.8	4673.2	4675.0	4676.3
	23	4669.4	4669.5	4669.7	4670.7	4673.1	4675.0	4676.2
	24	4669.3	4669.5	4669.7	4670.5	4673.3	4675.1	4675.9
	25	4669.3	4669.5	4669.7	4670.3	4673.3	4674.9	4675.6
	26	4669.2	4669.3	4669.7	4670.4	4673.5	4674.6	4675.4
	27	4669.2	4669.4	4669.5	4670.2	4673.2	4674.5	4675.5
	28	4668.9	4669.3	4669.4	4670.0	4673.0	4674.6	4675.1
	29	4668.8	4669.3	4669.3	4670.1	4672.8	4674.3	4674.9
	30	4669.1	4669.2	4669.3	4670.0	4672.5	4674.2	4674.9
July	1	4669.0	4669.1	4669.3	4669.9	4672.2	4674.1	4674.9
	2	4669.0	4669.1	4669.2	4669.9	4672.0	4673.7	4674.8
	3	4668.9	4669.0	4669.1	4670.0	4671.9	4673.4	4674.8
	4	4668.8	4669.0	4669.1	4669.8	4671.9	4673.2	4674.5
	5	4668.7	4669.0	4669.0	4669.8	4671.8	4672.7	4674.2
	6	4668.7	4668.9	4669.0	4669.7	4671.5	4672.7	4674.1
	7	4668.6	4668.8	4669.0	4669.6	4671.3	4672.7	4674.1
	8	4668.6	4668.7	4669.0	4669.5	4671.3	4672.6	4673.8
	9	4668.6	4668.7	4669.0	4669.4	4671.1	4672.3	4673.7
	10	4668.6	4668.7	4669.0	4669.4	4670.9	4672.2	4673.6
	11	4668.6	4668.7	4669.0	4669.3	4670.9	4672.1	4673.8
	12	4668.6	4668.6	4669.0	4669.3	4670.8	4672.0	4673.9
	13	4668.6	4668.6	4669.0	4669.6	4670.6	4672.0	4673.7
	14	4668.5	4668.6	4668.9	4669.4	4670.6	4671.8	4673.4
	15	4668.5	4668.6	4668.9	4669.3	4670.6	4671.6	4673.2
	16	4668.5	4668.6	4668.9	4669.3	4670.5	4671.4	4673.0
	17	4668.5	4668.7	4668.8	4669.3	4670.1	4671.2	4673.0
	18	4668.5	4668.6	4668.8	4669.3	4669.9	4671.1	4672.9
	19	4668.5	4668.5	4668.7	4669.3	4670.0	4670.9	4672.8
	20	4668.5	4668.5	4668.7	4669.3	4670.0	4670.7	4672.6

	21	4668.4	4668.5	4668.7	4669.2	4669.9	4670.7	4672.3
	22	4668.4	4668.6	4668.7	4669.2	4669.8	4670.8	4672.3
	23	4668.5	4668.6	4668.7	4669.1	4669.9	4670.9	4672.1
	24	4668.4	4668.5	4668.7	4669.2	4670.0	4670.8	4671.7
	25	4668.4	4668.5	4668.7	4669.2	4670.0	4670.9	4671.6
	26	4668.4	4668.5	4668.7	4669.2	4669.8	4670.8	4671.4
	27	4668.5	4668.5	4668.6	4669.0	4670.0	4670.6	4671.8
	28	4668.5	4668.6	4668.7	4669.0	4669.8	4670.6	4671.4
	29	4668.5	4668.6	4668.6	4669.0	4669.8	4670.4	4671.4
	30	4668.5	4668.6	4668.7	4669.0	4669.8	4670.4	4671.3
	31	4668.5	4668.5	4668.7	4669.0	4669.7	4670.6	4671.0
August	1	4668.5	4668.5	4668.6	4669.2	4669.6	4670.3	4670.9
	2	4668.5	4668.5	4668.6	4669.0	4669.6	4670.5	4671.0
	3	4668.5	4668.6	4668.6	4669.0	4669.6	4670.4	4671.6
	4	4668.5	4668.6	4668.6	4669.0	4669.5	4670.4	4671.5
	5	4668.5	4668.5	4668.6	4669.0	4669.5	4670.2	4671.3
	6	4668.5	4668.5	4668.6	4669.0	4669.5	4670.2	4671.2
	7	4668.5	4668.5	4668.6	4669.0	4669.5	4670.2	4671.1
	8	4668.5	4668.5	4668.6	4668.9	4669.5	4670.2	4671.1
	9	4668.5	4668.5	4668.6	4669.0	4669.5	4670.1	4671.0
	10	4668.5	4668.5	4668.6	4668.9	4669.6	4670.1	4671.2
	11	4668.5	4668.5	4668.5	4668.9	4669.6	4670.2	4671.2
	12	4668.4	4668.5	4668.5	4669.0	4669.5	4670.1	4671.1
	13	4668.4	4668.5	4668.5	4668.8	4669.5	4670.1	4670.7
	14	4668.4	4668.5	4668.5	4668.8	4669.4	4670.0	4670.9
	15	4668.4	4668.5	4668.5	4668.9	4669.4	4670.2	4671.2
	16	4668.4	4668.5	4668.5	4668.7	4669.4	4670.0	4670.8
	17	4668.4	4668.5	4668.5	4668.9	4669.4	4670.1	4670.9
	18	4668.4	4668.5	4668.5	4668.9	4669.5	4670.0	4670.9
	19	4668.4	4668.5	4668.5	4669.0	4669.4	4670.1	4670.5
	20	4668.4	4668.5	4668.5	4669.0	4669.4	4669.9	4670.8
	21	4668.4	4668.5	4668.5	4669.0	4669.4	4669.9	4670.6
	22	4668.4	4668.4	4668.5	4668.8	4669.4	4670.0	4670.5
	23	4668.4	4668.5	4668.5	4669.0	4669.4	4669.9	4670.7
	24	4668.4	4668.5	4668.5	4669.0	4669.6	4670.0	4670.4
	25	4668.4	4668.5	4668.5	4668.9	4669.3	4670.0	4670.3
	26	4668.4	4668.5	4668.5	4669.0	4669.4	4669.9	4670.4
	27	4668.4	4668.4	4668.5	4669.0	4669.3	4669.8	4670.6
	28	4668.4	4668.4	4668.5	4668.9	4669.3	4669.9	4670.3
	29	4668.4	4668.4	4668.5	4668.9	4669.2	4669.8	4670.3
	30	4668.4	4668.5	4668.5	4668.9	4669.3	4669.6	4670.4
	31	4668.4	4668.5	4668.5	4669.0	4669.3	4669.8	4670.4
Sept	1	4668.4	4668.5	4668.5	4668.9	4669.4	4669.9	4670.4
	2	4668.4	4668.4	4668.5	4668.9	4669.4	4669.8	4670.2
	3	4668.4	4668.5	4668.5	4668.9	4669.4	4669.8	4670.2
	4	4668.4	4668.4	4668.5	4668.8	4669.3	4669.7	4670.1
	5	4668.3	4668.4	4668.4	4668.9	4669.2	4669.7	4670.2
	6	4668.3	4668.4	4668.4	4668.9	4669.3	4669.7	4670.4
	7	4668.3	4668.4	4668.4	4668.9	4669.3	4669.7	4670.6
	8	4668.3	4668.3	4668.4	4668.9	4669.3	4669.9	4670.6
	9	4668.3	4668.4	4668.5	4668.9	4669.3	4669.9	4670.4

	10	4668.3	4668.4	4668.5	4668.9	4669.4	4669.8	4670.4
	11	4668.3	4668.4	4668.5	4668.9	4669.3	4669.8	4670.5
	12	4668.4	4668.4	4668.5	4668.9	4669.3	4669.9	4670.4
	13	4668.4	4668.4	4668.5	4668.9	4669.3	4669.8	4670.3
	14	4668.4	4668.4	4668.5	4668.8	4669.3	4669.7	4670.3
	15	4668.3	4668.4	4668.5	4668.7	4669.3	4669.8	4670.4
	16	4668.3	4668.5	4668.6	4668.8	4669.4	4669.9	4670.2
	17	4668.4	4668.5	4668.5	4668.8	4669.3	4669.9	4670.5
	18	4668.4	4668.5	4668.6	4668.9	4669.3	4669.9	4670.3
	19	4668.5	4668.6	4668.6	4668.8	4669.3	4669.9	4670.3
	20	4668.5	4668.6	4668.7	4668.9	4669.4	4669.9	4670.4
	21	4668.5	4668.6	4668.7	4668.9	4669.4	4669.9	4670.5
	22	4668.5	4668.5	4668.6	4668.8	4669.2	4669.7	4670.5
	23	4668.5	4668.6	4668.6	4668.8	4669.2	4669.7	4670.4
	24	4668.6	4668.6	4668.6	4668.9	4669.3	4669.8	4670.7
	25	4668.6	4668.7	4668.8	4669.0	4669.2	4669.9	4670.5
	26	4668.6	4668.6	4668.8	4669.0	4669.4	4669.9	4670.6
	27	4668.5	4668.6	4668.7	4669.0	4669.4	4669.7	4670.3
	28	4668.5	4668.6	4668.7	4669.0	4669.4	4669.8	4670.5
	29	4668.5	4668.6	4668.6	4669.0	4669.3	4670.0	4670.4
	30	4668.5	4668.6	4668.6	4669.0	4669.3	4670.2	4670.7
Oct	1	4668.5	4668.6	4668.7	4669.1	4669.4	4670.2	4670.6
	2	4668.5	4668.6	4668.8	4668.9	4669.3	4669.9	4670.6
	3	4668.5	4668.6	4668.7	4668.9	4669.5	4669.9	4670.5
	4	4668.5	4668.6	4668.6	4669.0	4669.5	4669.9	4670.5
	5	4668.5	4668.6	4668.6	4668.9	4669.5	4669.9	4670.7
	6	4668.5	4668.5	4668.6	4668.9	4669.4	4669.9	4670.6
	7	4668.5	4668.5	4668.6	4668.9	4669.4	4669.9	4670.5
	8	4668.5	4668.6	4668.6	4668.9	4669.4	4670.1	4670.7
	9	4668.5	4668.6	4668.6	4669.0	4669.5	4669.9	4670.6
	10	4668.6	4668.6	4668.7	4669.1	4669.5	4670.1	4670.6
	11	4668.6	4668.6	4668.7	4669.1	4669.5	4670.1	4670.7
	12	4668.6	4668.6	4668.8	4669.0	4669.4	4670.2	4670.7
	13	4668.6	4668.6	4668.8	4669.1	4669.5	4670.2	4670.7
	14	4668.6	4668.6	4668.7	4669.0	4669.6	4670.2	4670.9
	15	4668.6	4668.6	4668.8	4669.0	4669.5	4670.2	4670.9

Green River Pumping Project

Full Project - 10,000 af/yr

Change in Elevation (feet)

Month	Date	Flow (cfs)	0.02	0.05	0.10	0.25	0.50	0.75	0.90
April	16	20	-0.017	-0.016	-0.016	-0.015	-0.014	-0.012	-0.010
	17	20	-0.017	-0.016	-0.016	-0.015	-0.014	-0.012	-0.010
	18	20	-0.016	-0.016	-0.016	-0.015	-0.013	-0.012	-0.010
	19	20	-0.016	-0.016	-0.015	-0.014	-0.013	-0.011	-0.009
	20	20	-0.015	-0.015	-0.015	-0.014	-0.013	-0.011	-0.009
	21	20	-0.015	-0.015	-0.015	-0.014	-0.013	-0.011	-0.010
	22	20	-0.016	-0.015	-0.015	-0.014	-0.012	-0.011	-0.010
	23	20	-0.016	-0.015	-0.015	-0.014	-0.012	-0.011	-0.010
	24	20	-0.016	-0.015	-0.015	-0.014	-0.012	-0.011	-0.009
	25	20	-0.016	-0.015	-0.015	-0.014	-0.012	-0.010	-0.009
	26	20	-0.016	-0.016	-0.015	-0.014	-0.012	-0.010	-0.008
	27	20	-0.016	-0.016	-0.015	-0.014	-0.012	-0.009	-0.008
	28	20	-0.016	-0.015	-0.015	-0.014	-0.012	-0.009	-0.008
	29	20	-0.016	-0.015	-0.015	-0.013	-0.012	-0.010	-0.009
30	20	-0.015	-0.015	-0.015	-0.013	-0.012	-0.010	-0.008	
May	1	37	-0.028	-0.028	-0.027	-0.024	-0.022	-0.018	-0.015
	2	37	-0.028	-0.027	-0.027	-0.024	-0.020	-0.018	-0.014
	3	37	-0.028	-0.028	-0.027	-0.023	-0.019	-0.017	-0.014
	4	37	-0.029	-0.028	-0.027	-0.023	-0.019	-0.016	-0.014
	5	37	-0.028	-0.028	-0.028	-0.023	-0.019	-0.015	-0.013
	6	37	-0.028	-0.027	-0.026	-0.023	-0.020	-0.015	-0.013
	7	37	-0.029	-0.028	-0.026	-0.022	-0.019	-0.015	-0.012
	8	37	-0.028	-0.028	-0.026	-0.022	-0.018	-0.014	-0.013
	9	37	-0.028	-0.027	-0.026	-0.023	-0.019	-0.014	-0.013
	10	37	-0.027	-0.026	-0.025	-0.023	-0.019	-0.015	-0.013
	11	37	-0.027	-0.026	-0.025	-0.022	-0.018	-0.015	-0.012
	12	37	-0.027	-0.027	-0.024	-0.022	-0.017	-0.014	-0.012
	13	37	-0.028	-0.027	-0.024	-0.022	-0.017	-0.014	-0.012
	14	37	-0.028	-0.027	-0.024	-0.021	-0.016	-0.014	-0.012
	15	37	-0.028	-0.027	-0.024	-0.021	-0.016	-0.014	-0.012
	16	37	-0.028	-0.026	-0.024	-0.020	-0.017	-0.014	-0.012
17	37	-0.027	-0.027	-0.023	-0.020	-0.017	-0.014	-0.012	
18	37	-0.028	-0.027	-0.024	-0.019	-0.015	-0.014	-0.012	
19	37	-0.028	-0.027	-0.023	-0.019	-0.015	-0.013	-0.012	
20	37	-0.027	-0.026	-0.022	-0.018	-0.014	-0.013	-0.012	
21	37	-0.027	-0.024	-0.023	-0.018	-0.014	-0.013	-0.013	
22	37	-0.027	-0.026	-0.023	-0.017	-0.014	-0.012	-0.013	
23	37	-0.027	-0.025	-0.023	-0.018	-0.014	-0.012	-0.013	
24	37	-0.025	-0.024	-0.023	-0.017	-0.014	-0.012	-0.013	
25	37	-0.024	-0.023	-0.023	-0.017	-0.014	-0.012	-0.013	
26	37	-0.024	-0.023	-0.023	-0.017	-0.014	-0.012	-0.013	
27	37	-0.024	-0.024	-0.023	-0.018	-0.014	-0.012	-0.013	
28	37	-0.024	-0.024	-0.024	-0.017	-0.014	-0.012	-0.013	
29	37	-0.025	-0.025	-0.024	-0.017	-0.014	-0.012	-0.013	
30	37	-0.025	-0.025	-0.024	-0.017	-0.014	-0.012	-0.013	

	31	37	-0.025	-0.025	-0.023	-0.018	-0.014	-0.012	-0.013
June	1	53	-0.036	-0.035	-0.034	-0.027	-0.020	-0.018	-0.019
	2	53	-0.037	-0.035	-0.034	-0.026	-0.020	-0.018	-0.019
	3	53	-0.037	-0.036	-0.034	-0.026	-0.021	-0.018	-0.019
	4	53	-0.038	-0.036	-0.035	-0.027	-0.021	-0.018	-0.019
	5	53	-0.038	-0.038	-0.035	-0.027	-0.021	-0.018	-0.019
	6	53	-0.039	-0.038	-0.035	-0.027	-0.021	-0.018	-0.019
	7	53	-0.039	-0.038	-0.035	-0.028	-0.021	-0.018	-0.019
	8	53	-0.039	-0.038	-0.035	-0.029	-0.021	-0.018	-0.019
	9	53	-0.040	-0.039	-0.036	-0.028	-0.021	-0.018	-0.018
	10	53	-0.040	-0.038	-0.036	-0.029	-0.021	-0.019	-0.019
	11	53	-0.040	-0.037	-0.036	-0.030	-0.021	-0.018	-0.018
	12	53	-0.040	-0.038	-0.037	-0.031	-0.022	-0.018	-0.018
	13	53	-0.041	-0.038	-0.038	-0.032	-0.022	-0.018	-0.018
	14	53	-0.042	-0.040	-0.038	-0.034	-0.023	-0.019	-0.018
	15	53	-0.042	-0.039	-0.039	-0.035	-0.022	-0.019	-0.018
	16	53	-0.042	-0.040	-0.040	-0.037	-0.023	-0.019	-0.018
	17	53	-0.043	-0.041	-0.040	-0.038	-0.024	-0.019	-0.018
	18	53	-0.043	-0.043	-0.041	-0.038	-0.024	-0.018	-0.018
	19	53	-0.044	-0.043	-0.042	-0.039	-0.025	-0.019	-0.018
	20	53	-0.044	-0.044	-0.042	-0.039	-0.025	-0.019	-0.018
	21	53	-0.045	-0.044	-0.043	-0.039	-0.027	-0.020	-0.018
	22	53	-0.045	-0.044	-0.043	-0.039	-0.028	-0.021	-0.018
	23	53	-0.045	-0.044	-0.043	-0.039	-0.028	-0.021	-0.018
	24	53	-0.045	-0.044	-0.044	-0.040	-0.028	-0.021	-0.018
	25	53	-0.046	-0.044	-0.044	-0.041	-0.028	-0.021	-0.019
	26	53	-0.046	-0.045	-0.044	-0.041	-0.027	-0.022	-0.020
	27	53	-0.046	-0.045	-0.045	-0.041	-0.028	-0.023	-0.019
	28	53	-0.047	-0.045	-0.045	-0.042	-0.029	-0.022	-0.021
	29	53	-0.047	-0.045	-0.045	-0.042	-0.030	-0.023	-0.021
	30	53	-0.046	-0.046	-0.045	-0.042	-0.031	-0.024	-0.021
July	1	53	-0.047	-0.046	-0.045	-0.043	-0.033	-0.024	-0.021
	2	53	-0.047	-0.046	-0.046	-0.043	-0.033	-0.026	-0.021
	3	53	-0.047	-0.046	-0.046	-0.042	-0.034	-0.027	-0.021
	4	53	-0.048	-0.047	-0.046	-0.043	-0.034	-0.028	-0.023
	5	53	-0.048	-0.047	-0.047	-0.043	-0.034	-0.030	-0.024
	6	53	-0.048	-0.047	-0.047	-0.044	-0.035	-0.030	-0.024
	7	53	-0.048	-0.048	-0.047	-0.044	-0.036	-0.030	-0.024
	8	53	-0.048	-0.048	-0.047	-0.045	-0.037	-0.030	-0.026
	9	53	-0.048	-0.048	-0.047	-0.045	-0.037	-0.032	-0.026
	10	53	-0.048	-0.048	-0.046	-0.045	-0.038	-0.032	-0.026
	11	53	-0.049	-0.048	-0.047	-0.045	-0.038	-0.033	-0.025
	12	53	-0.049	-0.048	-0.047	-0.045	-0.039	-0.033	-0.025
	13	53	-0.049	-0.048	-0.047	-0.044	-0.039	-0.033	-0.026
	14	53	-0.049	-0.048	-0.047	-0.045	-0.040	-0.034	-0.027
	15	53	-0.049	-0.048	-0.047	-0.045	-0.040	-0.035	-0.028
	16	53	-0.049	-0.048	-0.047	-0.045	-0.040	-0.036	-0.029
	17	53	-0.049	-0.048	-0.047	-0.046	-0.042	-0.037	-0.029
	18	53	-0.049	-0.048	-0.048	-0.045	-0.042	-0.037	-0.029
	19	53	-0.049	-0.049	-0.048	-0.045	-0.042	-0.038	-0.030
	20	53	-0.049	-0.049	-0.048	-0.045	-0.042	-0.039	-0.031

	21	53	-0.049	-0.049	-0.048	-0.046	-0.043	-0.039	-0.032
	22	53	-0.049	-0.048	-0.048	-0.046	-0.043	-0.039	-0.032
	23	53	-0.049	-0.049	-0.048	-0.046	-0.043	-0.038	-0.033
	24	53	-0.049	-0.049	-0.048	-0.046	-0.042	-0.039	-0.034
	25	53	-0.049	-0.049	-0.048	-0.046	-0.042	-0.038	-0.035
	26	53	-0.049	-0.049	-0.048	-0.046	-0.043	-0.039	-0.036
	27	53	-0.049	-0.049	-0.048	-0.046	-0.042	-0.040	-0.034
	28	53	-0.049	-0.048	-0.048	-0.047	-0.043	-0.040	-0.036
	29	53	-0.049	-0.049	-0.048	-0.047	-0.043	-0.040	-0.036
	30	53	-0.049	-0.049	-0.048	-0.046	-0.043	-0.041	-0.036
	31	53	-0.049	-0.049	-0.048	-0.047	-0.043	-0.039	-0.038
August	1	53	-0.049	-0.049	-0.048	-0.046	-0.044	-0.041	-0.038
	2	53	-0.049	-0.049	-0.048	-0.046	-0.044	-0.040	-0.038
	3	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.040	-0.035
	4	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.040	-0.036
	5	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.041	-0.036
	6	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.041	-0.037
	7	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.041	-0.037
	8	53	-0.049	-0.049	-0.048	-0.047	-0.045	-0.041	-0.037
	9	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.042	-0.038
	10	53	-0.049	-0.049	-0.048	-0.047	-0.044	-0.042	-0.037
	11	53	-0.049	-0.049	-0.049	-0.047	-0.044	-0.041	-0.037
	12	53	-0.049	-0.049	-0.049	-0.047	-0.044	-0.042	-0.037
	13	53	-0.049	-0.049	-0.049	-0.047	-0.044	-0.042	-0.039
	14	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.038
	15	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.041	-0.037
	16	53	-0.049	-0.049	-0.049	-0.048	-0.045	-0.042	-0.039
	17	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.038
	18	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.038
	19	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.040
	20	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.039
	21	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.039
	22	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.040
	23	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.039
	24	53	-0.049	-0.049	-0.049	-0.047	-0.044	-0.042	-0.040
	25	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.041
	26	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.042	-0.040
	27	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.040
	28	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.041
	29	53	-0.049	-0.049	-0.049	-0.047	-0.046	-0.043	-0.041
	30	53	-0.049	-0.049	-0.049	-0.047	-0.046	-0.044	-0.040
	31	53	-0.049	-0.049	-0.049	-0.047	-0.045	-0.043	-0.041
Sept	1	37	-0.034	-0.034	-0.034	-0.033	-0.031	-0.030	-0.028
	2	37	-0.034	-0.034	-0.034	-0.033	-0.031	-0.030	-0.029
	3	37	-0.034	-0.034	-0.034	-0.033	-0.031	-0.030	-0.029
	4	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.029
	5	37	-0.035	-0.034	-0.034	-0.033	-0.032	-0.030	-0.029
	6	37	-0.035	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
	7	37	-0.035	-0.034	-0.034	-0.033	-0.032	-0.030	-0.027
	8	37	-0.035	-0.035	-0.034	-0.033	-0.032	-0.030	-0.028
	9	37	-0.035	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028

10	37	-0.035	-0.034	-0.034	-0.033	-0.031	-0.030	-0.028
11	37	-0.035	-0.034	-0.034	-0.033	-0.031	-0.030	-0.028
12	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
13	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.029
14	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.029
15	37	-0.035	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
16	37	-0.035	-0.034	-0.034	-0.033	-0.031	-0.030	-0.029
17	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
18	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
19	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.029
20	37	-0.034	-0.034	-0.034	-0.033	-0.031	-0.030	-0.028
21	37	-0.034	-0.034	-0.033	-0.033	-0.031	-0.030	-0.028
22	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
23	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
24	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.027
25	37	-0.034	-0.034	-0.033	-0.033	-0.032	-0.030	-0.028
26	37	-0.034	-0.034	-0.033	-0.033	-0.031	-0.030	-0.028
27	37	-0.034	-0.034	-0.033	-0.033	-0.031	-0.030	-0.028
28	37	-0.034	-0.034	-0.033	-0.033	-0.031	-0.030	-0.028
29	37	-0.034	-0.034	-0.034	-0.033	-0.032	-0.030	-0.028
30	37	-0.034	-0.034	-0.034	-0.033	-0.031	-0.029	-0.027

Oct	1	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	2	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	3	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	4	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	5	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	6	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	7	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	8	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	9	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.015
	10	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	11	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	12	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	13	20	-0.018	-0.018	-0.018	-0.017	-0.017	-0.016	-0.015
	14	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.014
	15	20	-0.018	-0.018	-0.018	-0.018	-0.017	-0.016	-0.014

Green River Pumping Project

Full Project - 10,000 af/yr

Change in Elevation (Inches)

Month	Date	Flow (cfs)	0.02	0.05	0.10	0.25	0.50	0.75	0.90
April	16	37	-0.20	-0.19	-0.19	-0.19	-0.17	-0.14	-0.12
	17	37	-0.20	-0.19	-0.19	-0.18	-0.17	-0.14	-0.12
	18	37	-0.20	-0.19	-0.19	-0.18	-0.16	-0.14	-0.12
	19	37	-0.19	-0.19	-0.18	-0.17	-0.16	-0.14	-0.11
	20	37	-0.18	-0.18	-0.18	-0.17	-0.16	-0.14	-0.11
	21	37	-0.19	-0.18	-0.18	-0.17	-0.15	-0.13	-0.12
	22	37	-0.19	-0.18	-0.18	-0.17	-0.15	-0.13	-0.12
	23	37	-0.19	-0.18	-0.18	-0.17	-0.15	-0.13	-0.12
	24	37	-0.19	-0.18	-0.18	-0.17	-0.15	-0.13	-0.11
	25	37	-0.19	-0.18	-0.18	-0.17	-0.15	-0.13	-0.10
	26	37	-0.19	-0.19	-0.18	-0.16	-0.14	-0.12	-0.10
	27	37	-0.19	-0.19	-0.18	-0.16	-0.14	-0.11	-0.10
	28	37	-0.19	-0.18	-0.18	-0.16	-0.14	-0.11	-0.10
	29	37	-0.19	-0.18	-0.18	-0.16	-0.14	-0.12	-0.10
30	37	-0.18	-0.18	-0.18	-0.16	-0.14	-0.11	-0.10	
May	1	53	-0.34	-0.33	-0.32	-0.29	-0.26	-0.22	-0.18
	2	53	-0.34	-0.33	-0.32	-0.28	-0.25	-0.22	-0.17
	3	53	-0.34	-0.33	-0.32	-0.27	-0.23	-0.21	-0.17
	4	53	-0.34	-0.34	-0.33	-0.28	-0.23	-0.19	-0.16
	5	53	-0.34	-0.34	-0.33	-0.27	-0.23	-0.19	-0.16
	6	53	-0.34	-0.32	-0.32	-0.27	-0.23	-0.18	-0.15
	7	53	-0.34	-0.33	-0.31	-0.27	-0.23	-0.18	-0.15
	8	53	-0.34	-0.33	-0.31	-0.27	-0.22	-0.17	-0.15
	9	53	-0.33	-0.33	-0.32	-0.27	-0.23	-0.17	-0.15
	10	53	-0.32	-0.31	-0.30	-0.28	-0.22	-0.18	-0.15
	11	53	-0.33	-0.31	-0.30	-0.27	-0.21	-0.17	-0.15
	12	53	-0.33	-0.32	-0.29	-0.27	-0.21	-0.17	-0.15
	13	53	-0.34	-0.32	-0.29	-0.26	-0.20	-0.17	-0.15
	14	53	-0.33	-0.32	-0.29	-0.25	-0.19	-0.17	-0.15
	15	53	-0.33	-0.32	-0.29	-0.25	-0.20	-0.16	-0.15
	16	53	-0.33	-0.31	-0.29	-0.24	-0.20	-0.17	-0.15
17	53	-0.33	-0.32	-0.28	-0.24	-0.20	-0.17	-0.15	
18	53	-0.33	-0.32	-0.28	-0.23	-0.18	-0.17	-0.15	
19	53	-0.33	-0.33	-0.28	-0.23	-0.18	-0.15	-0.15	
20	53	-0.32	-0.31	-0.27	-0.22	-0.17	-0.16	-0.15	
21	53	-0.32	-0.29	-0.27	-0.22	-0.17	-0.15	-0.15	
22	53	-0.33	-0.31	-0.28	-0.21	-0.17	-0.15	-0.15	
23	53	-0.33	-0.30	-0.27	-0.21	-0.17	-0.15	-0.16	
24	53	-0.31	-0.28	-0.27	-0.20	-0.17	-0.15	-0.16	
25	53	-0.29	-0.28	-0.27	-0.20	-0.16	-0.15	-0.15	
26	53	-0.28	-0.28	-0.28	-0.21	-0.16	-0.15	-0.15	
27	53	-0.29	-0.29	-0.28	-0.21	-0.16	-0.15	-0.15	
28	53	-0.29	-0.29	-0.28	-0.20	-0.17	-0.15	-0.15	
29	53	-0.30	-0.30	-0.29	-0.21	-0.17	-0.15	-0.15	
30	53	-0.30	-0.30	-0.29	-0.21	-0.16	-0.15	-0.15	

	31	53	-0.31	-0.29	-0.28	-0.22	-0.16	-0.15	-0.16
June	1	53	-0.44	-0.43	-0.40	-0.32	-0.24	-0.21	-0.23
	2	53	-0.44	-0.42	-0.41	-0.32	-0.24	-0.21	-0.23
	3	53	-0.44	-0.43	-0.41	-0.32	-0.25	-0.22	-0.23
	4	53	-0.45	-0.44	-0.42	-0.33	-0.26	-0.22	-0.23
	5	53	-0.46	-0.45	-0.42	-0.32	-0.26	-0.21	-0.23
	6	53	-0.46	-0.45	-0.42	-0.32	-0.25	-0.22	-0.23
	7	53	-0.46	-0.46	-0.42	-0.33	-0.26	-0.22	-0.23
	8	53	-0.47	-0.46	-0.42	-0.35	-0.26	-0.22	-0.23
	9	53	-0.48	-0.46	-0.43	-0.34	-0.26	-0.22	-0.22
	10	53	-0.47	-0.46	-0.44	-0.35	-0.25	-0.22	-0.22
	11	53	-0.48	-0.45	-0.44	-0.36	-0.25	-0.22	-0.21
	12	53	-0.49	-0.46	-0.44	-0.37	-0.26	-0.22	-0.21
	13	53	-0.49	-0.46	-0.45	-0.39	-0.26	-0.22	-0.21
	14	53	-0.50	-0.48	-0.45	-0.40	-0.27	-0.22	-0.21
	15	53	-0.50	-0.47	-0.47	-0.42	-0.27	-0.23	-0.21
	16	53	-0.51	-0.48	-0.48	-0.44	-0.28	-0.23	-0.21
	17	53	-0.51	-0.50	-0.48	-0.45	-0.28	-0.22	-0.21
	18	53	-0.52	-0.51	-0.50	-0.46	-0.29	-0.22	-0.21
	19	53	-0.53	-0.52	-0.51	-0.47	-0.30	-0.22	-0.21
	20	53	-0.53	-0.53	-0.51	-0.47	-0.30	-0.23	-0.21
	21	53	-0.54	-0.53	-0.51	-0.46	-0.32	-0.24	-0.21
	22	53	-0.54	-0.53	-0.52	-0.46	-0.34	-0.25	-0.22
	23	53	-0.54	-0.53	-0.52	-0.47	-0.34	-0.25	-0.22
	24	53	-0.54	-0.53	-0.52	-0.48	-0.33	-0.25	-0.22
	25	53	-0.55	-0.53	-0.52	-0.49	-0.33	-0.25	-0.23
	26	53	-0.55	-0.54	-0.53	-0.49	-0.32	-0.27	-0.24
	27	53	-0.55	-0.54	-0.53	-0.50	-0.34	-0.27	-0.23
	28	53	-0.57	-0.55	-0.54	-0.51	-0.34	-0.27	-0.25
	29	53	-0.57	-0.54	-0.54	-0.50	-0.36	-0.28	-0.25
	30	53	-0.55	-0.55	-0.54	-0.51	-0.37	-0.28	-0.26
July	1	53	-0.56	-0.55	-0.54	-0.51	-0.39	-0.29	-0.25
	2	53	-0.56	-0.55	-0.55	-0.51	-0.40	-0.31	-0.26
	3	53	-0.56	-0.56	-0.55	-0.51	-0.40	-0.33	-0.26
	4	53	-0.57	-0.56	-0.56	-0.52	-0.41	-0.33	-0.27
	5	53	-0.57	-0.56	-0.56	-0.52	-0.41	-0.36	-0.28
	6	53	-0.58	-0.57	-0.56	-0.52	-0.42	-0.36	-0.29
	7	53	-0.58	-0.57	-0.56	-0.53	-0.44	-0.36	-0.29
	8	53	-0.58	-0.57	-0.56	-0.53	-0.44	-0.37	-0.31
	9	53	-0.58	-0.58	-0.56	-0.54	-0.45	-0.39	-0.31
	10	53	-0.58	-0.58	-0.56	-0.54	-0.46	-0.39	-0.32
	11	53	-0.58	-0.57	-0.56	-0.54	-0.46	-0.40	-0.30
	12	53	-0.58	-0.58	-0.56	-0.54	-0.46	-0.40	-0.30
	13	53	-0.58	-0.58	-0.56	-0.53	-0.47	-0.40	-0.31
	14	53	-0.58	-0.58	-0.56	-0.54	-0.47	-0.41	-0.33
	15	53	-0.58	-0.58	-0.57	-0.54	-0.48	-0.42	-0.34
	16	53	-0.59	-0.58	-0.57	-0.54	-0.48	-0.43	-0.35
	17	53	-0.58	-0.58	-0.57	-0.55	-0.50	-0.44	-0.35
	18	53	-0.58	-0.58	-0.57	-0.55	-0.51	-0.45	-0.35
	19	53	-0.59	-0.58	-0.57	-0.54	-0.51	-0.46	-0.36
	20	53	-0.59	-0.58	-0.58	-0.54	-0.51	-0.47	-0.37

	21	53	-0.59	-0.58	-0.58	-0.55	-0.51	-0.47	-0.38
	22	53	-0.59	-0.58	-0.58	-0.55	-0.52	-0.46	-0.38
	23	53	-0.59	-0.58	-0.58	-0.55	-0.51	-0.46	-0.40
	24	53	-0.59	-0.58	-0.58	-0.55	-0.51	-0.46	-0.41
	25	53	-0.59	-0.58	-0.58	-0.55	-0.51	-0.46	-0.42
	26	53	-0.59	-0.59	-0.58	-0.55	-0.52	-0.46	-0.43
	27	53	-0.59	-0.58	-0.58	-0.56	-0.51	-0.47	-0.41
	28	53	-0.59	-0.58	-0.58	-0.56	-0.52	-0.48	-0.43
	29	53	-0.59	-0.58	-0.58	-0.56	-0.52	-0.48	-0.43
	30	53	-0.59	-0.58	-0.58	-0.56	-0.52	-0.49	-0.44
	31	53	-0.59	-0.58	-0.58	-0.56	-0.52	-0.47	-0.45
August	1	53	-0.59	-0.58	-0.58	-0.55	-0.53	-0.49	-0.46
	2	53	-0.59	-0.59	-0.58	-0.56	-0.53	-0.48	-0.45
	3	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.48	-0.42
	4	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.48	-0.43
	5	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.50	-0.44
	6	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.50	-0.44
	7	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.50	-0.45
	8	53	-0.59	-0.59	-0.58	-0.56	-0.53	-0.50	-0.45
	9	53	-0.59	-0.58	-0.58	-0.56	-0.53	-0.50	-0.45
	10	53	-0.59	-0.59	-0.58	-0.57	-0.53	-0.50	-0.44
	11	53	-0.59	-0.59	-0.58	-0.57	-0.53	-0.50	-0.44
	12	53	-0.59	-0.59	-0.58	-0.56	-0.53	-0.50	-0.45
	13	53	-0.59	-0.59	-0.58	-0.57	-0.53	-0.50	-0.47
	14	53	-0.59	-0.59	-0.58	-0.57	-0.54	-0.51	-0.46
	15	53	-0.59	-0.59	-0.59	-0.57	-0.54	-0.50	-0.44
	16	53	-0.59	-0.59	-0.58	-0.57	-0.54	-0.51	-0.46
	17	53	-0.59	-0.59	-0.59	-0.57	-0.54	-0.50	-0.46
	18	53	-0.59	-0.59	-0.59	-0.57	-0.54	-0.51	-0.46
	19	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.50	-0.48
	20	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.51	-0.46
	21	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.51	-0.47
	22	53	-0.59	-0.59	-0.58	-0.57	-0.54	-0.51	-0.48
	23	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.51	-0.47
	24	53	-0.59	-0.59	-0.59	-0.56	-0.53	-0.51	-0.48
	25	53	-0.59	-0.59	-0.58	-0.56	-0.54	-0.51	-0.49
	26	53	-0.59	-0.59	-0.58	-0.56	-0.54	-0.51	-0.48
	27	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.52	-0.48
	28	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.51	-0.49
	29	53	-0.59	-0.59	-0.59	-0.56	-0.55	-0.52	-0.49
	30	53	-0.59	-0.59	-0.59	-0.57	-0.55	-0.53	-0.48
	31	53	-0.59	-0.59	-0.59	-0.56	-0.54	-0.52	-0.49
Sept	1	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.34
	2	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.34
	3	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.35
	4	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.35
	5	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.37	-0.35
	6	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.34
	7	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.33
	8	20	-0.42	-0.41	-0.41	-0.39	-0.38	-0.36	-0.33
	9	20	-0.42	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34

	10	20	-0.42	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34
	11	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.33
	12	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.34
	13	20	-0.41	-0.41	-0.41	-0.39	-0.38	-0.36	-0.34
	14	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34
	15	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34
	16	20	-0.42	-0.41	-0.41	-0.40	-0.38	-0.36	-0.35
	17	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34
	18	20	-0.41	-0.41	-0.41	-0.40	-0.38	-0.36	-0.34
	19	20	-0.41	-0.41	-0.40	-0.40	-0.38	-0.36	-0.34
	20	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.36	-0.34
	21	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.36	-0.33
	22	20	-0.41	-0.41	-0.40	-0.40	-0.38	-0.36	-0.34
	23	20	-0.41	-0.41	-0.40	-0.40	-0.38	-0.36	-0.34
	24	20	-0.41	-0.41	-0.40	-0.40	-0.38	-0.36	-0.33
	25	20	-0.41	-0.40	-0.40	-0.39	-0.38	-0.36	-0.33
	26	20	-0.41	-0.40	-0.40	-0.39	-0.38	-0.36	-0.33
	27	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.36	-0.34
	28	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.36	-0.34
	29	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.36	-0.34
	30	20	-0.41	-0.41	-0.40	-0.39	-0.38	-0.35	-0.33
Oct	1	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	2	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	3	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	4	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	5	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	6	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	7	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	8	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	9	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	10	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	11	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	12	20	-0.22	-0.22	-0.21	-0.21	-0.20	-0.19	-0.18
	13	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.18
	14	20	-0.22	-0.22	-0.22	-0.21	-0.20	-0.19	-0.17
	15	20	-0.22	-0.22	-0.21	-0.21	-0.20	-0.19	-0.17

Appendix C

Moon Lake Electric Power Rates

ELECTRIC SERVICE
SCHEDULE LP

LARGE POWER SERVICE

AVAILABILITY: Available to Consumers located on or near Association's three-phase lines of adequate capacity for all types of usage, subject to the established rules and regulations of Association. Service under this schedule is limited to consumers whose load requirements are equal to or exceed 50 kVa of transformer capacity. This rate not for resale.

MONTHLY BILL:

RATE: Customer Services Charge	\$29.00	per service per month
Demand Charge	\$11.00	per kW of billing demand
Demand Charge Limit	\$.06	per kWh
Energy Charge	\$ 0.03720	per kWh.

MINIMUM MONTHLY CHARGE: \$41.00 plus any increase required under the Line Extension Policy.

DETERMINATION OF BILLING DEMAND WITHOUT TIME OF USE OPTION: The billing demand shall be the maximum kilowatt demand established by the Consumer for any period of fifteen (15) consecutive minutes during the month for which the bill is rendered, as indicated or recorded by a demand meter and adjusted for power factor as follows:

POWER FACTOR ADJUSTMENT: Demand charges will be adjusted for Consumers with an average monthly power factor less than 90% lagging. Such adjustments will be made by increasing the Demand Charge by 1% for each 1% by which the average power factor is less than 90% lagging.

CONDITIONS OF SERVICE:

1. Motors having a rated capacity in excess of ten (10) horsepower should be three-phase.
2. All wiring, pole lines, and other electrical equipment beyond the metering point, shall be considered the distribution system of the Consumer, and shall be furnished and maintained by the Consumer.

TEMPORARY DISCONTINUANCE OF SERVICE: A Consumer requesting reconnection at the same location shall be required to pay the Minimum Monthly Charge for the intervening months. Non-use of service for 12 months may make the premises subject to removal under the Idle Service Regulation.

TERMS OF PAYMENT: Payment is due within twenty (20) days after the bill is prepared.

SPECIAL PROVISION: Rates and Service hereunder subject to Electric Service Regulations of the Association as amended from time to time.

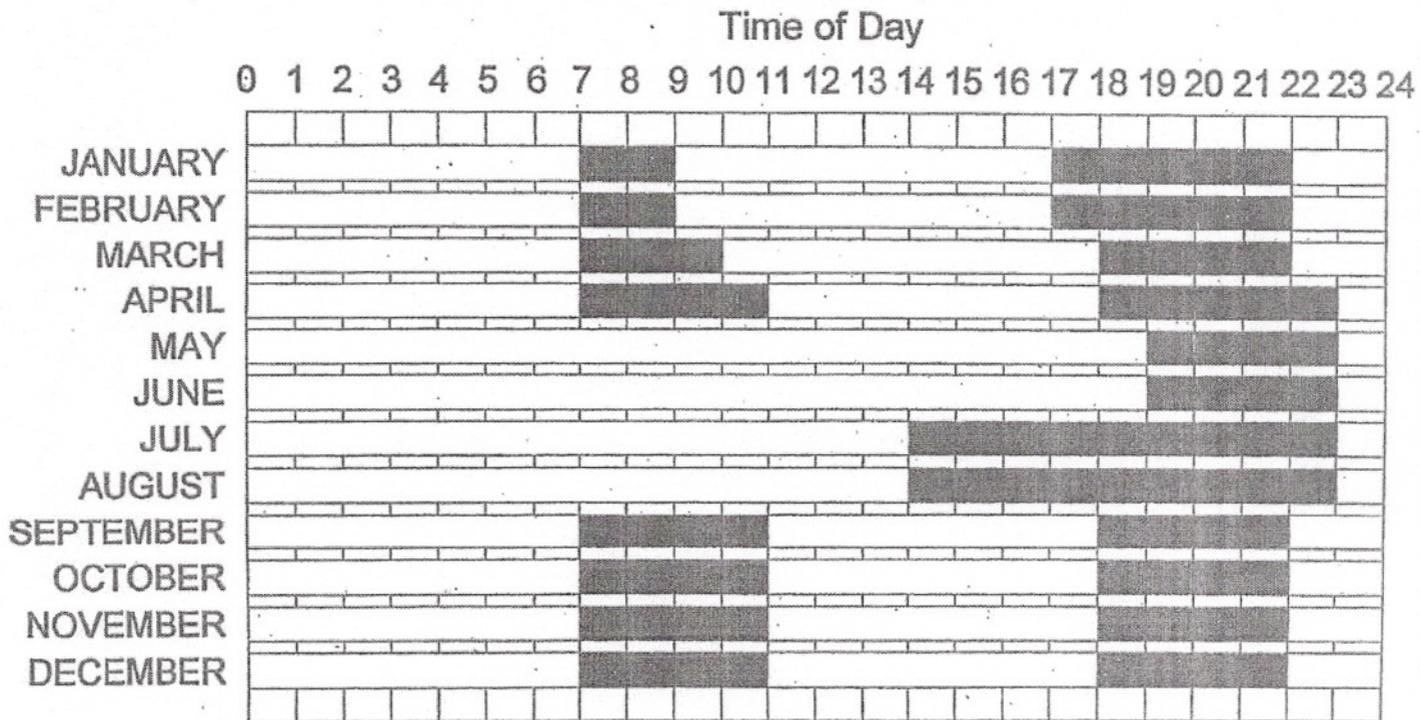
ELECTRIC SERVICE WITH TIME-OF-USE OPTION

AVAILABILITY: Available to all Consumers electing the Time-of-Use Option. Consumer must direct Association in writing to apply the Time-of-Use rate to selected accounts.

DETERMINATION OF THE BILLING DEMAND: The billing demand shall be the maximum kilowatt demand which occurred during the On-peak period. The On-peak period shall be determined by Moon Lake for each month and made known to those consumers electing to use the Time-of-Use Option.

The consumer will be responsible to pay a contribution-in-aid payment to Moon Lake for the cost of the Time-of-Use meter and its installation.

TIME - of - USE Options



■ ON - Peak Period □ OFF - Peak Period