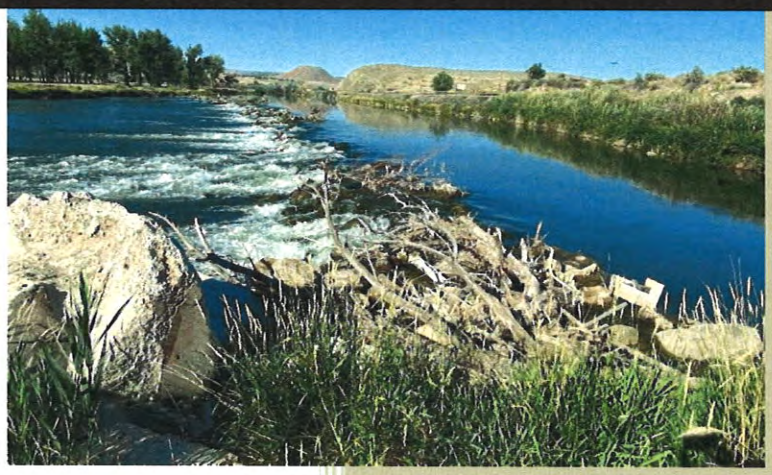
2021

Owl Creek Irrigation District Water Delivery and Efficiency Improvement Project



Owl Creek Irrigation District

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Total	**100**	

Technical Proposal and Evaluation Criteria

Executive summary

November 1, 2021

Owl Creek Irrigation District
Thermopolis, Wyoming
Hot Springs County

Category A Applicant – Irrigation District
Funding Group II

The Lucerne (Lower) portion of the Owl Creek Irrigation District (OCID) is located in the Lucerne Valley about 4 to 8 miles north of the Town of Thermopolis in Hot Springs County, Wyoming. OCID diverts water from the Big Horn River and distributes the water to three service canals (Re-lift Canal, Lucerne Canal, and Dempsey Canal) via two separate pump stations; 1) the main pump station, and 2) the re-lift pump station. The OCID Water Delivery and Efficiency Improvement Project proposed herein consist of the following major components:

1. New headgate structure on the Big Horn River and improvements to the inlet canal which conveys river water from the diversion to the main pump station,
2. Demolish existing main pump station and replace with new building, new pumps, new electrical controls and transformers and new pressurized discharge piping, and
3. Rehabilitation of the Re-lift pump station with new pumps and electrical controls.

This project will result in estimated annual electrical power savings of 640,000 to 840,000 kWh, enough energy to power 60-80 average homes per year (Appendix B, page 10, Wyoming Water Development Commission (WWDC) Level I Study; OCID Lucerne Master Plan, September 2021). Further, the new pumps will be able to deliver water flows that are synchronized much better to irrigation demand, thereby creating a direct-flow water savings estimated to be 2,976 acre-feet per year. This calculation is based on actual field measurements of excess water that is spilled at the end of the existing canal system during the first month and last month of irrigation delivery.

The OCID Water Delivery and Efficiency Improvement Project is anticipated to be completed over the next two years.

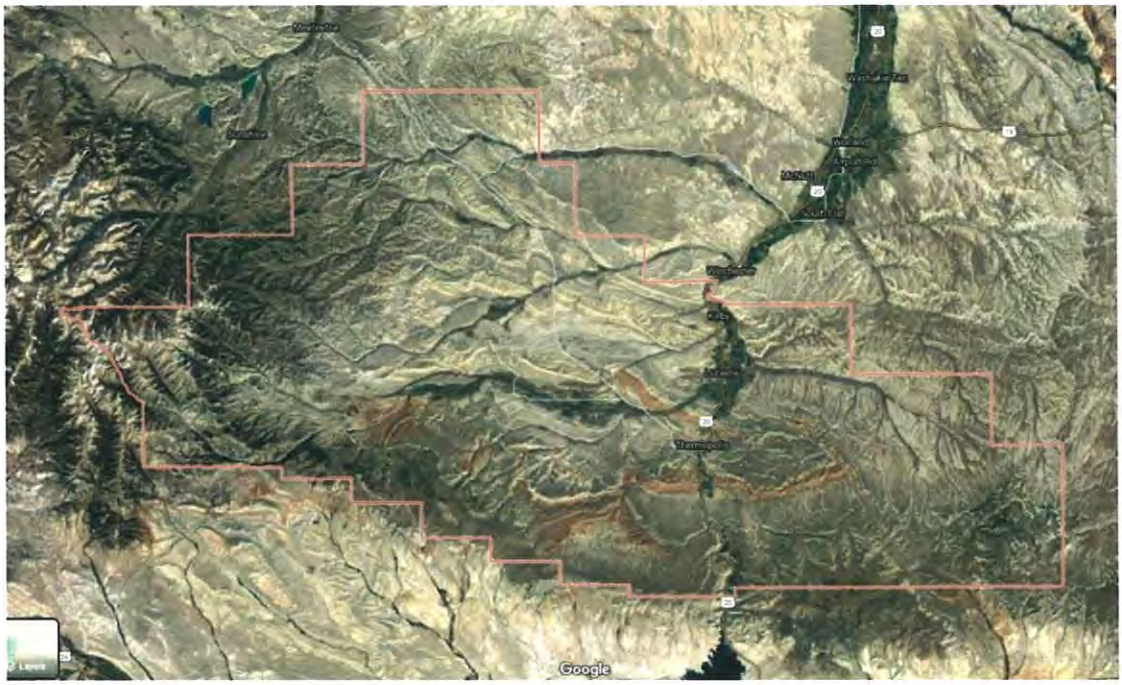
The Project infrastructure is owned by OCID, but the main pump station is located on land owned by the US Bureau of Reclamation, therefore it is located on federal land but is not a federal facility.

The WWDC Owl Creek Irrigation District Lucerne Master Plan Level 1 Study can be found here: http://library.wrds.uwyo.edu/wwdcrept/Owl_Creek/Owl_Creek-Irrigation_District_Lucerne_Master_Plan_Level_I-Final_Report-2021.html

Project location

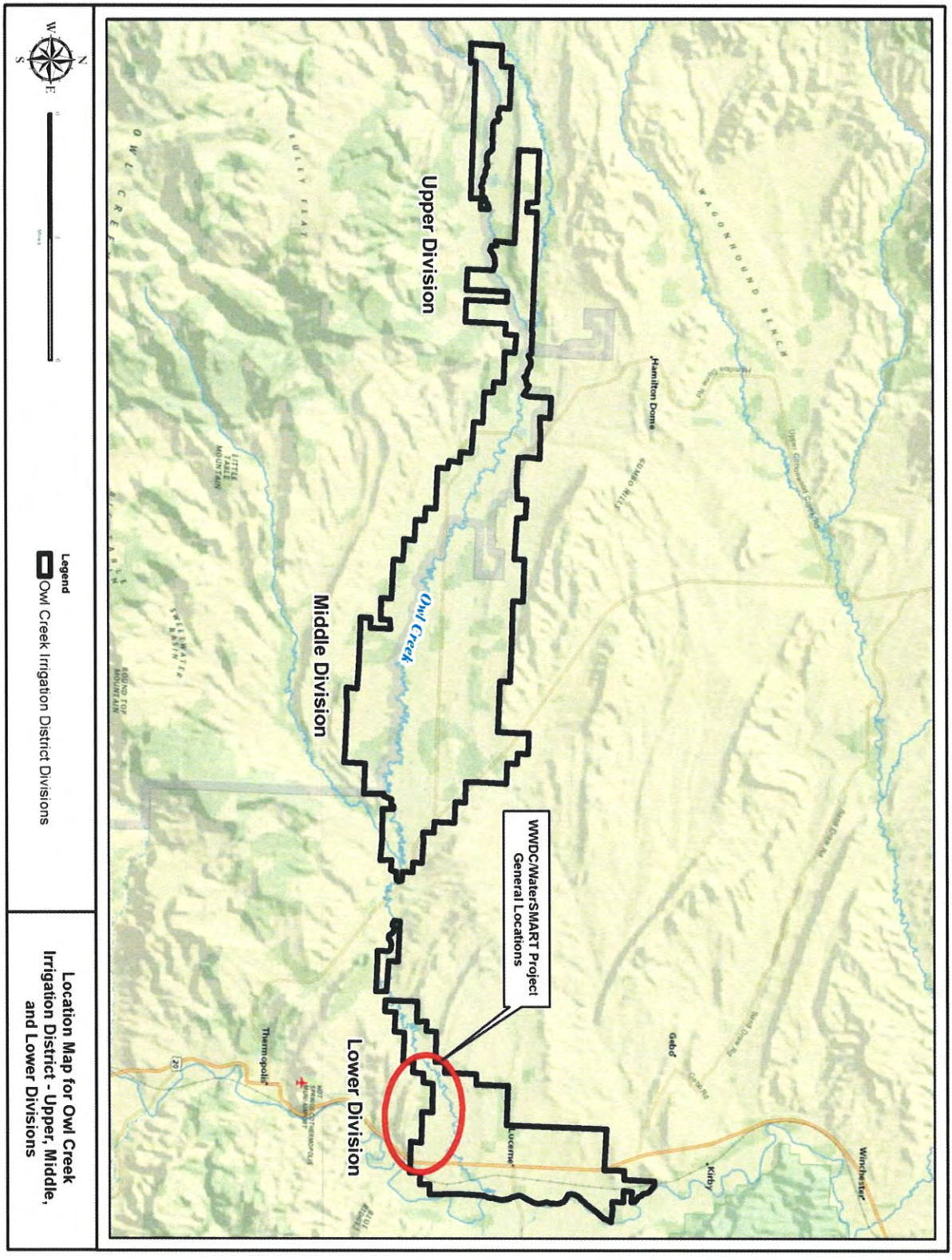
The OCID is located about four miles north of Thermopolis and about two miles south of Kirby, Wyoming. Thermopolis is located in the small county of Hot Springs in the North Center of the State of Wyoming. This area, the Lucerne Valley, produces hay – both grass and alfalfa, barley, beans, corn and sometimes wheat.

The OCID diverts the water from the Big Horn River on its far eastern boundary, the water flows west to the main pump station where it is lifted by four pumps and motors, two to the Re-lift Canal (44cfs) and two to the Lucerne Canal (40cfs). The Lucerne Canal (8.6 miles) flows via gravity north feeding the producers' farm turnouts on the more eastern side (lower side) of the district. The Re-lift Canal (3.0 miles) moves the water directly west, serving some farm turnouts for two and a half miles to the Re-lift Pump Station. Here, the water (33cfs) is pumped a second time up to the Dempsey Canal (9.3 miles). From the Re-lift Pump Station, the water flows north via gravity and continues to feed the producers on the further west side of the district's boundaries. The total canal system is approximately 22 miles long, serving 103 different users.

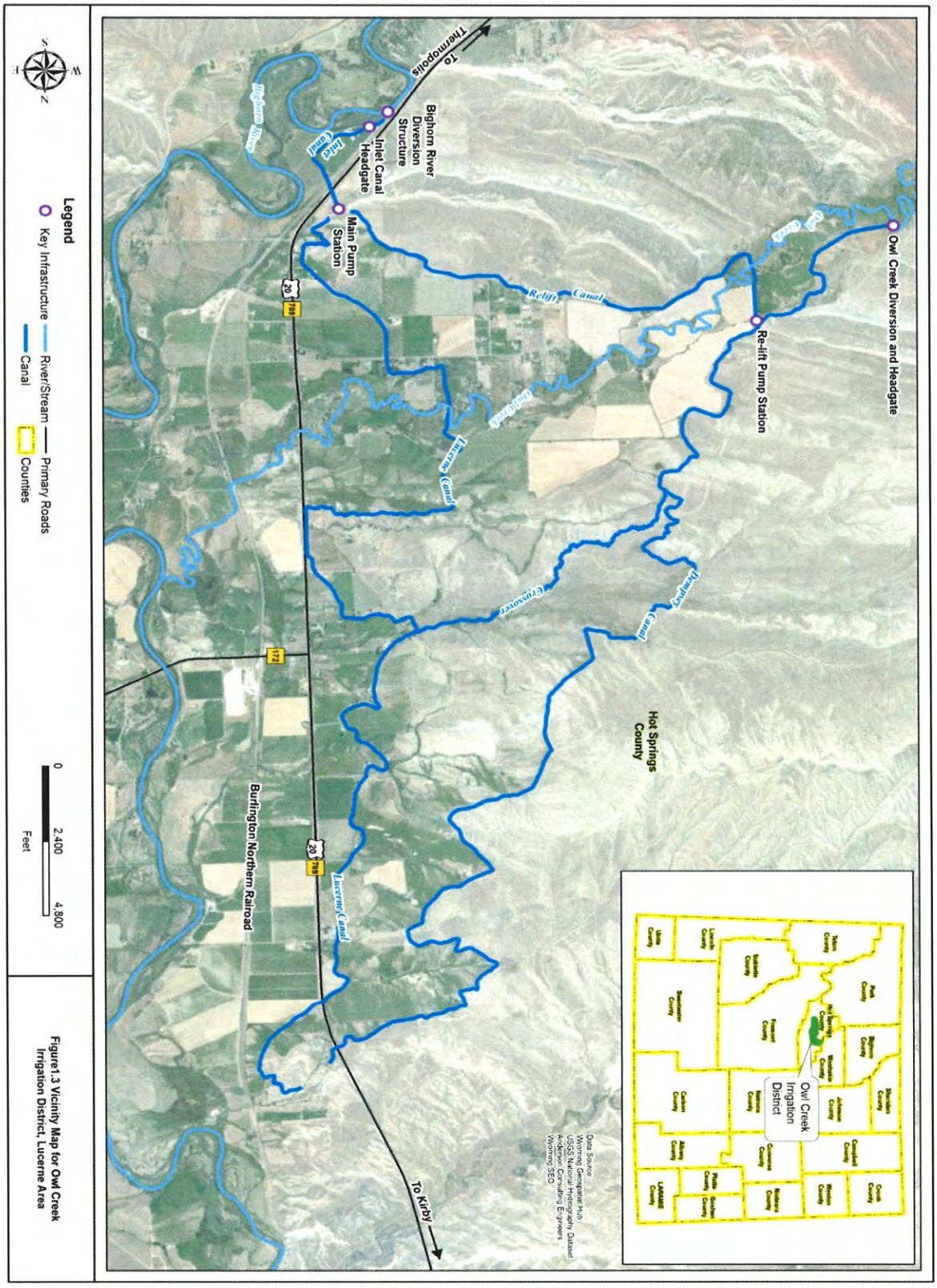


Hot Springs County, Wyoming

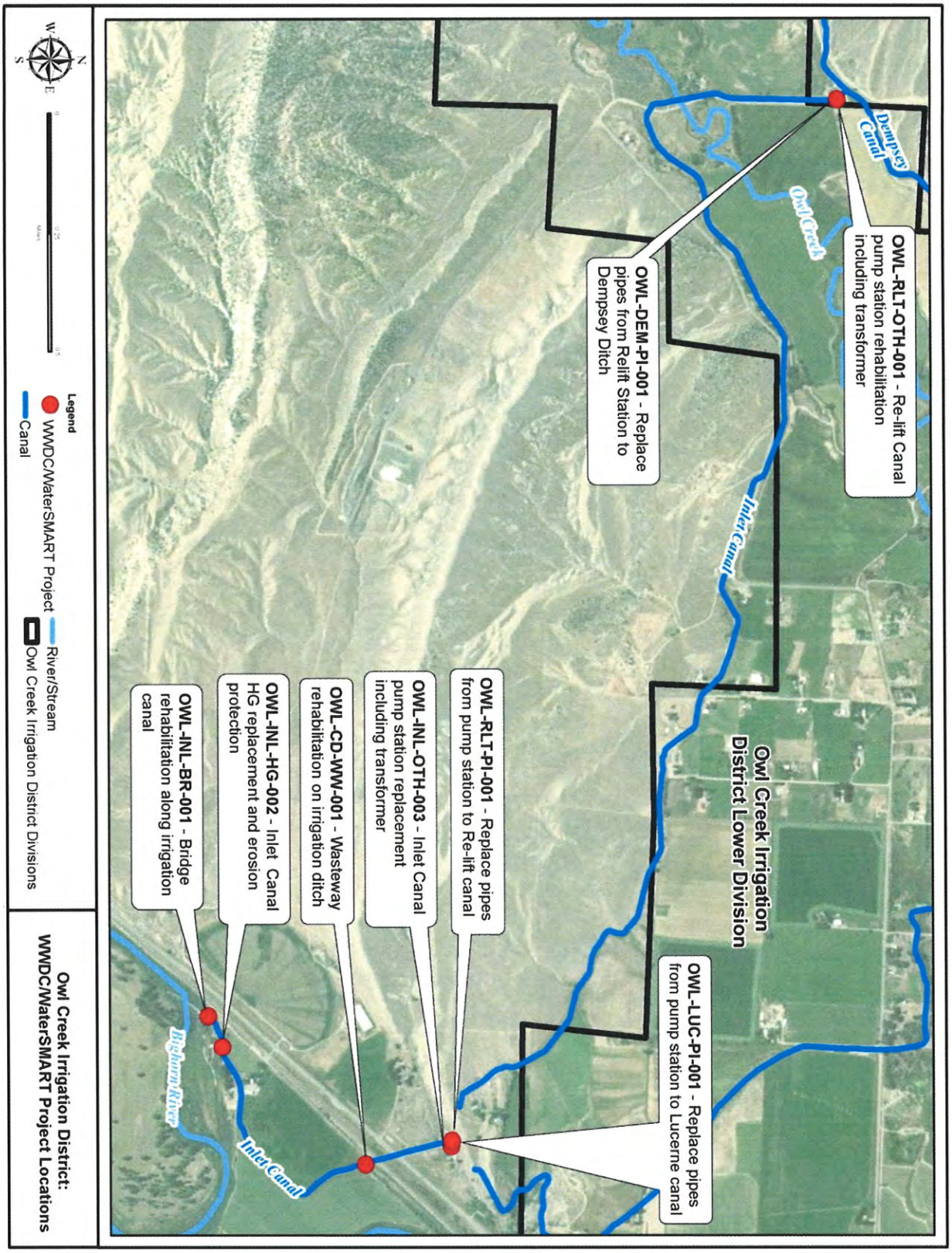
There are three distinct service areas totaling about 4,415 acres (see the following page) while Figure 1.3 shows the location of the diversion structure from the Big Horn River, the two pumping facilities and the three service canals. The project Latitude is 43°41'45.384" North and Longitude is 108°10'48.684" West. The location of the major elements to be designed and constructed as part of this project are shown on the drawing titled **WWDC/WaterSMART Project Locations** following Figure 1.2.



Three Divisions of OCID Lower Area with the Project Location Marked



Overview of OCID Lucerne Area with the inset of Wyoming



Detail Area Map of Specific Components of the Project

Technical project description

The major components of this project include the following:

1. New headgate structure on the Big Horn River and improvements to the inlet canal which conveys river water from the diversion to the main pump station,
2. Demolish existing main pump station and replace with new building, new pumps, new electrical controls and transformers and new pressurized discharge piping, and
3. Rehabilitation of the Re-lift pump station with new pumps and electrical controls.

The original construction of these components occurred in the late 1950's as a Bureau of Reclamation Project (Pick-Sloan). The original pumps were manufactured by Fairbanks-Morse. These pumps are no longer in production and product information is largely unavailable. The pumps at both pump stations have been repaired numerous times as a result of long-term use and are in poor condition at the present time. Likewise, the headgate on the Big Horn River and the inlet canal were constructed along with the pump stations and are in need significant rehabilitation work.

Diversion Dam on the Big Horn River

Flows in the Big Horn River, released from Boysen Reservoir (a Bureau of Reclamation reservoir), are diverted via a boulder/large rock diversion structure placed in the Big Horn River about 3.5 miles north of Thermopolis. The inlet canal, which conveys the diverted water to the main pump station is about .8 miles in length. It crosses underneath the Burlington Northern Santa Fe Railroad tracks and also underneath US Highway 20 North, prior to the debris screens immediately upstream of the main pump station wet well. The existing diversion structure is shown on page 7, while components of the main pump station are shown in Figure 1.4.

Figure 1.4 OCID Lucerne Main Pump Station

Inlet Canal Headgate and Diversion Structure Access Bridge Replacement

The proposed inlet canal headgate and diversion structure access bridge replacement will be a standard Bureau of Reclamation design, modified to fit the physical environment and flow requirements of 84 cubic feet per second for OCID. The concrete portion of the Inlet Canal headgate, which supplies the entire pumped water right for the Lucerne Area is failing. The concrete has been patched extensively with steel plating in order to support the screw-type slide gates, the stems for which are bent. The associated boulder/large rock diversion structure on the Big Horn River requires on-going maintenance to reset the boulders and clear the woody debris. The diversion is more than 500 feet long and is currently accessible by maintenance vehicles only through private property at the southern end of the structure and that access is at the discretion of the owner who is on the East side of the river and is not in the district. If either the diversion dam or the headgate were to fail, it would be catastrophic for the Lucerne Valley irrigators, the members of the OCID.

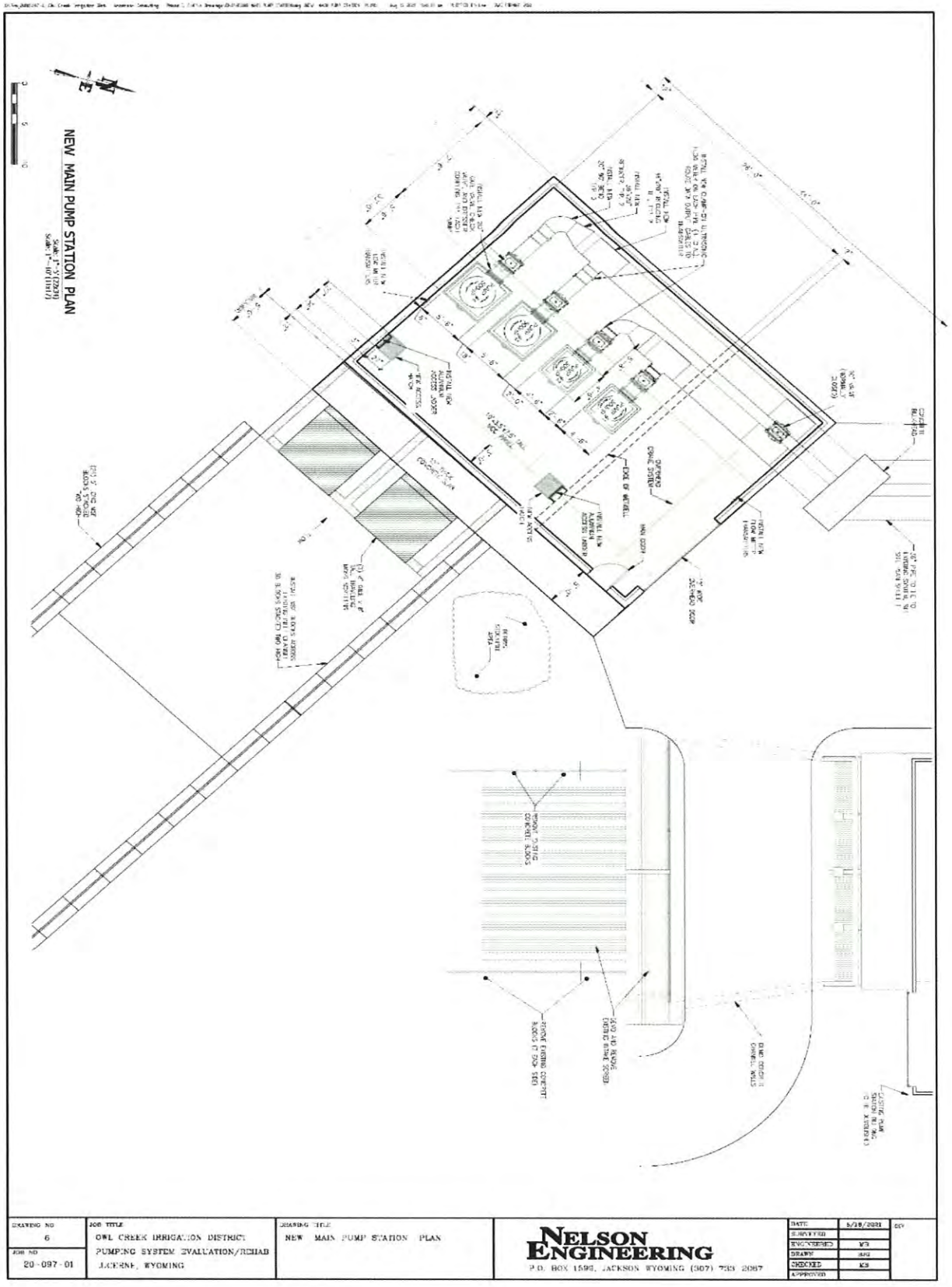
Inlet Canal Headgate

Main Pump Station Replacement, Pressurized Pipes to Canals, and Wasteway/Sediment Sluice

Design and construction of a new main pump station is proposed as the most cost-effective long-term solution to on-going problems with the main pump station. Work will include demolition of most of the existing components, including the inlet works, removing the pumps and motor

controls, transformers and existing steel building. New facilities will include new inlet works (channel, travelling screen and controls, riprap, etc.), two new 500 horse power pumps and two new 300 horse power pumps with standard appurtenant plumbing piping and valves, new electrical controls and SCADA, new pump building designed for easy maintenance access and efficient motor operation. The plan includes two new pressurized pipes which will lift the water up the hillside to the canals. One pipe will lift the water 136 vertical feet to the Re-lift Canal and the other will lift the water 67 vertical feet to the Lucerne Canal. A schematic plan drawing of the proposed new pump station is shown in Figure No. 6 following.

There are two additional components to the main pump station portion of the plan, both are designed to reduce the wear and tear on the pumps. One is the wasteway and sediment sluice. This is planned to reduce the amount of sand and sediment before it gets to the wet wells and damages the pumps. The other is a traveling screen to reduce the algae that comes from the Big Horn River particularly in the heat of summer. Currently, the algae is removed manually (during the height of the season, every three to four hours around the clock) by the pumper while balancing on a precarious bridge with a pitch fork which has been modified to draw the algae out of the grates. See the bottom picture on Figure 1.4 on the previous page. Both of these components (the sand sluice and the traveling gate) will extend the life of the pumps. Further, this improvement component will allow the pumps to operate more efficiently, thereby reducing electrical energy usage.


NEW MAIN PUMP STATION PLAN
DRAWING NO
6
JOB NO
20-097-01
JOB TITLE
OWL CREEK IRRIGATION DISTRICT
PUMPING SYSTEM EVALUATION/REHAB
JACKSON, WYOMING
DRAWING TITLE
NEW MAIN PUMP STATION PLAN
NELSON ENGINEERING
P.O. BOX 1569, JACKSON WYOMING (307) 733-2087
DATE
5/28/2021
SURVEYED
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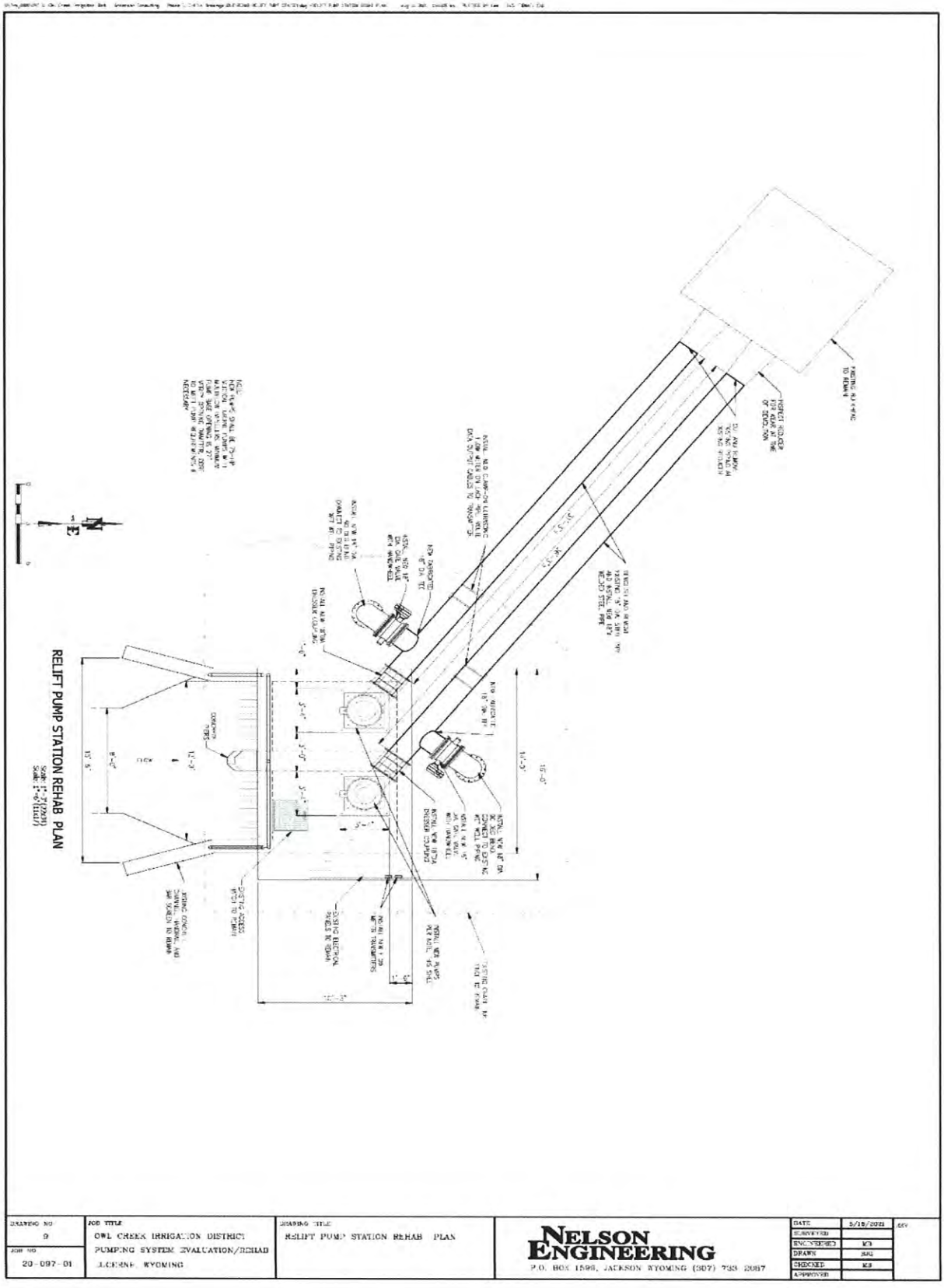
AMJ
CHECKED
KB
APPROVED

Re-lift Pump Station Rehabilitation and Pressurized Pipes to Ditch

Rehabilitation of the re-lift pump station will include removal of existing pumps and demolition of existing pump piping, installation of two new 75 horse power pumps with flow metering and appropriate piping and valves, a new 480 volt three-phase transformer and new motor controls, and a new 3-sided steel shed with removable roof. A pressurized pipe will lift the water 24 vertical feet to the Dempsey Canal. A schematic plan drawing of the proposed rehabilitated re-lift pump station is shown in Figure No. 9 following.

Re-lift Pump Station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JOB NO
20-097-01
JOB TITLE
OWL CREEK IRRIGATION DISTRICT
PUMPING SYSTEM EVALUATION/REHAB
LICENE WYOMING
DRAWING TITLE
RELIFT PUMP STATION REHAB PLAN
NELSON ENGINEERING
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Performance measures

E.1.1 Evaluation Criterion A–Quantifiable Water Savings

1) Describe the amount of estimated water savings. Based on actual field measurements in September and early October 2021 of excess irrigation water being spilled at the end of the Lucerne Canal, the average quantity of spillage normalized for an intake flow of 55 cfs is 30 cfs over the ends of the season. The new main pump station will be able to deliver flows that are highly synchronized to irrigation demand, on a daily basis, therefore the spillage rate will be very small. OCID is dedicated to managing the water flow to reduce the spillage to nearly zero and, in fact, it is expected that many days the spillage will be virtually zero. However, with all of the variables in play along the entire length of the Lucerne Canal, the current average spillage was approximately 30 cfs. If we allow for an average spillage of 5 cfs, although we hope the average spillage is significantly lower than that, for our calculation we will use a savings of 25 cfs (30 cfs -5 cfs) due to the more efficient pumps. Based on operational experience, this estimated spillage normally occurs for the first 30 days of the irrigation season and the last 30 days of the irrigation season, when the irrigation demand is always less than the summer demand. The calculation for estimated water savings therefore is:

- 25 cfs X 60 sec/min X 60 min/hour X 24 hours/day ÷ 43560 sq feet/acre = 49.6 AF/Day
- 49.6 AF/Day X 60 days = 2,976 AF/Year

As noted above, the annual water savings will be more than this calculated estimate because:

1. We plan to manage pump discharge to a reduced spillage outcome throughout the season, not just on the ends of the season, and
2. By pumping the amount of irrigation water that is being demanded, the flow in the 22-mile-long Lucerne Canal will be reduced, thereby also reducing seepage and evapotranspiration losses. At this time, we are unable to provide a calculated estimate of these additional water savings.

2) Describe current losses. The primary losses which are calculated above are spilled at the end of the Lucerne Canal. Much of the spilled water seeps into the ground and is also lost to evapotranspiration, with some of it returning to the Big Horn River.

3) Describe the support/documentation of estimated water savings. The calculation of estimated water savings is provided in paragraph 1.) above. As indicated, the support is in the form of an OCID employee (ditch rider) taking actual flow measurements of the spillage. Those measurements were then analyzed by a professional engineer licensed in the State of Wyoming, who produced the estimated calculations shown above.

4) Please address the following questions according to the type of infrastructure improvement you are proposing for funding.

1. **Canal lining/piping** – This is not applicable to our project.
2. **Municipal Metering** – This is not applicable to our project.
3. **Irrigation Flow Measurements** – This project incorporates new highly accurate ultrasonic flow meters in the proposed new main pumping station and the proposed rehabilitated re-lift pump station. Both of these existing pump plants do not have flow

metering. The new facilities with accurate flow metering will provide OCID operating personnel with greatly improved data with which to manage the OCID river diversion and canal deliveries. The proposed ultrasonic flow meters to be installed in both reconstructed OCID pumping stations were selected and recommended because of their in-service accuracy and ability to measure flow rates in water that contains some debris. While the proposed facilities include considerable design analyses and components to remove sand, silt, algae, moss and other water-borne debris, the OCID irrigation water will still contain some debris, which will not interfere with ultrasonic metering. The new ultrasonic flow meters have a reported accuracy of within 0.5% (meaning 99.5% + accurate).

4. **Turf Removal** – This is not applicable to our project.
5. **Smart Irrigation Controllers, Controllers with Rain Sensor Shutoff, Drip Irrigation, and High-Efficiency Nozzles** – This is not applicable to our project.
6. **High-Efficiency Indoor Appliances and Fixtures** – This is not applicable to our project.
7. **Commercial Cooling Systems** – This is not applicable to our project.

E.1.2 Evaluation Criterion B–Renewable Energy

E.1.2.1 Subcriterion No. B.1–Implementing Renewable Energy Projects Related to Water Management and Delivery

This project purchases electrical power from the Bureau of Reclamation pursuant to Contract Number 20XX660030 for Project Use Power (PUP) electric service (Attached as Appendix C) This is hydro-generated power from Boysen Reservoir and is a renewable energy resource. Additionally, significant energy savings will be achieved with this project as described and calculated below.

E.1.2.2 Subcriterion No. B.2–Increasing Energy Efficiency in Water Management

The new electric motors that will drive the new pumps in both the proposed new main pumping station and the reconstructed re-lift pumping station will be an estimated 20% more efficient on electrical demand. This information comes from the pump and motor manufacturers and is based on extensive bench and field testing. Based on recent data which was analyzed in the WWDC Level I study by qualified professional engineers; the new motors will result in an estimated annual energy savings of 640,000 to 845,000 kWh. That amount of energy is enough to power 60-80 average homes in the United States for a period of one year. The energy efficiency will be even more enhanced by using the proposed SCADA (Supervisory Control and Data Acquisition) system, which is a digital system accessible remotely by cell phone. By use of this remote-control feature, more timely system management of the pumps will result in additional water savings and reduced vehicle travel by the OCID system operator, thereby saving vehicle mileage. The operator has informed us that his average vehicle mileage to visit one or both pump stations is 24 miles per day and currently he makes that trip almost 7 days per week during the irrigation season (an average of 22 weeks per season). The SCADA system will allow him to control many pump functions remotely, saving an estimated 3 trips per week. The total seasonal vehicle mileage savings is therefore:

- 24 X 3 X 22 = 1,584 miles per irrigation season.

E.1.3 Evaluation Criterion C–Sustainability Benefits

Enhancing drought resiliency – This project certainly enhances drought resiliency in the local watershed basin by reducing the spillage, thereby saving water. The water savings calculation is presented in E.1.1 Quantifiable Water Savings above, and totals 2,976 acre-feet per year. By leaving the current water spillage in the river both the water flow and water temperature in the river will benefit. The water savings will be even greater by using the proposed SCADA (Supervisory Control and Data Acquisition) system, which is a digital system accessible remotely by cell phone. By use of this remote-control feature, more timely system management of the pumps will result in additional water savings and reduced vehicle travel by the OCID system operator, thereby saving vehicle mileage and reducing greenhouse gases. It should be noted that all of Hot Springs County is currently categorized as Severe Drought by the National Oceanic and Atmospheric Administration (NOAA) as evidenced the latest Drought Monitor Map shown in Figure 1.5 – Current Drought Conditions for Hot Springs County, Wyoming.

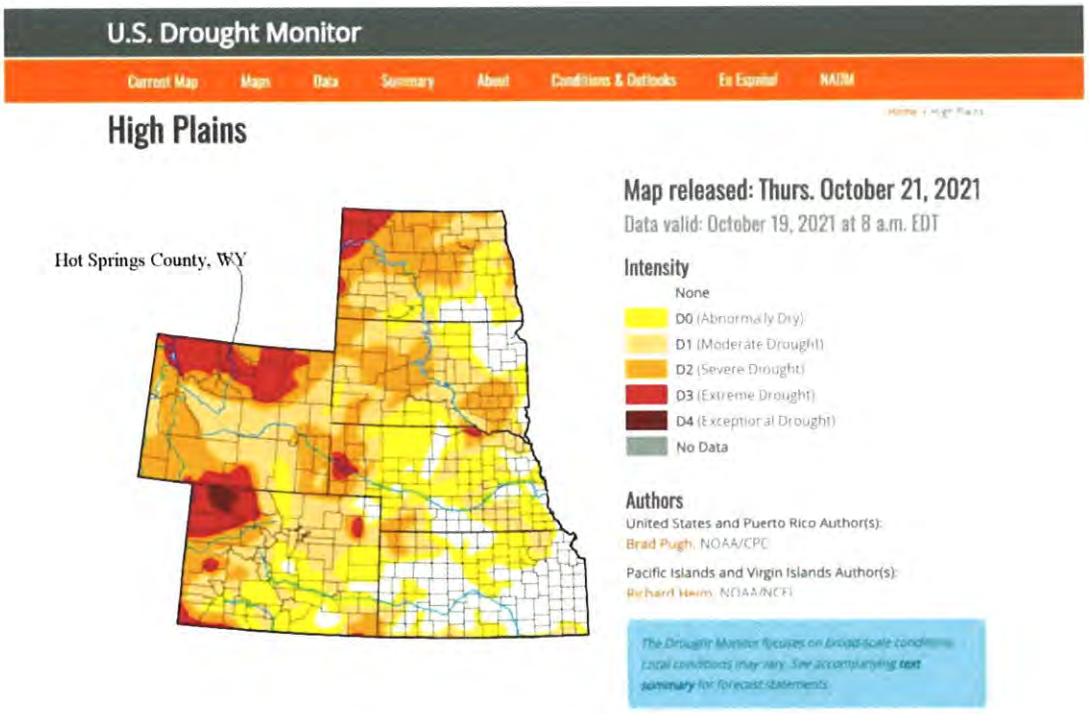

Figure 1.5 – Current Drought Conditions for Hot Springs County, Wyoming

Addressing a specific water and/or energy sustainability concern(s) – Water sustainability has been and continues to be a significant concern on the Owl Creek water shed. The tribes of the Wind River Reservation hold nearly all of the early priority water rights on Owl Creek, which is also a supply source of water for OCID. This project will make the main diversion on the Big Horn River more reliable, thereby reducing the reliance on any supplemental water supply from Owl Creek. That directly benefits the tribal water users of the Wind River Indian Reservation.

Other project benefits

1. ***Combating the Climate Crisis*** – Executive Order 14008, Tackling the Climate Crisis at Home and Abroad. As mentioned directly above, the new pump stations will incorporate SCADA technologies allowing remote control to pump station operations, thereby reducing the need to travel by vehicle each of the pump stations to achieve any change in pumping operations. Reduced vehicle emissions are directly related to reduced greenhouse gases. This project addresses the goals stipulated in Sections 212 through 216 of Executive Order 14008 through the use of new equipment and technologies as detailed through this proposal.
2. ***Disadvantaged or Underserved Communities*** – As noted above, this project will result in a more reliable supply of irrigation water from the Big Horn River, thereby reducing (or eliminating) the need for supplemental water supply from Owl Creek which is the primary source of irrigation water for the Arapaho Ranch of the Wind River Reservation.

   In addition, the Town of Thermopolis (the primary commerce center for OCID) has been identified as Opportunity Zone 9678 by the Census Bureau and further, OZ 9678 is a Low-Income Community Opportunity Zone. Opportunity Zone definitions can be found here https://www.irs.gov/credits-deductions/businesses/opportunity-zones and the designation for OZ 9678 can be found here*:* https://opportunitydb.com/zones/56017967800/. A quick summary of the economic situation in Thermopolis is as follows per the document cited above:
   a. *The median household income of approximately $53,000 is 18% lower than the median household in the state of Wyoming of $65,000.*
   b. *The percentage of households below the poverty line in this Opportunity Zone is 15% which 5% higher than the rate for the state of Wyoming of 10%.*
   c. *The median home value of approximately $140,000 is 42% lower than the median home value for the state of Wyoming of $240,000.*

   All of this just emphasizes the value to our community of a project of this size.

3. ***Tribal Benefits*** – As noted above, this project will result in a more reliable supply of irrigation water from the Big Horn River, thereby reducing (or eliminating) the need for supplemental water supply from Owl Creek which is primary source of irrigation water for the Arapaho Ranch of the Wind River Reservation.
4. ***Other Benefits***:
   a. By virtue of the water savings estimated from implementation of this project (and previously documented) the State of Wyoming and Big Horn basin water users will benefit by enhanced capacity to comply with Yellowstone River Compact of 1950. That interstate compact among the states of Wyoming, Montana and North

Dakota allocates water from the drainage basins of the Yellowstone River, including the Wind River/Big Horn River and Clarks Fork River. Any additional water in these drainages makes it easier for Wyoming to comply with its obligations under the interstate water compact.

b. This project will benefit all of the existing OCID irrigators as previously detailed in this proposal. Other downstream users, such as irrigators, municipalities, industrial, and recreational will also benefit by virtue of the additional almost 3,000 acre-feet of water that will remain in the Big Horn River.

c. At this time, it is believed that this project will not benefit a larger sustainability initiative, besides the fact we will be doing our part to save both energy and water.

d. This project will help prevent a water-related crisis or conflict, because the pump stations will both be equipped with new transformers. If any one of the existing transformers failed, OCID would be without water for the remainder of the irrigation season. The existing transformers are obsolete, hence there are no replacements available in the market place. Further, they cannot be replaced or supplemented with modern new transformers because the way electrical service is provided with the existing transformers (analog) cannot be matched with new modern transformers which are digital.

E.1.4 Evaluation Criterion D–Complementing On-Farm Irrigation Improvements

There are two factors which contribute to more farmers in OCID planning to move from flood irrigation to either pivots or side rolls in order to conserve water. One, the WWDC Level 1 study specifically calculated the water savings of 1,580 acre feet of water if 80% of the acres irrigated by flooding and 55% of the acres irrigated by gated pipe changed to sprinkler systems (either pivots or side rolls.) (Anderson, OCID Lucerne Master Plan Level 1 Study p.6.8) While the number of acres need to change may not be completely attainable, the district is committed to encouraging farmers to conserve water. The NRCS looks favorably on the Level 1 report which encourages the farmers to change their method of irrigating.

The second factor to consider is with more efficient, modern pumps, the cost of both repairs and maintenance for the district is expected to be reduced by 20% or $7,105 (Anderson, OCID Lucerne Master Plan Level 1 Study p.9.5) This may not seem like a lot, but it is nearly $2 per acre and for the large acreage farmer, that makes a big difference. If the district is able to reduce their assessments, this leaves the farmers more funds available to match the NRCS funding. Currently, the OCID is one of the highest assessed irrigation districts per acre in the State of Wyoming due to the two sets of pumps, the vertical lift required to get the water to the farmers and their associated inefficiencies with the obsolete pumps.

See Appendix D for a listing of farmers who are considering moving to sprinkler irrigation.

E.1.5 Evaluation Criterion E–Planning and Implementation

E.1.5.1 Subcriterion E.1–Project Planning

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Does the project address an adaptation strategy identified in a completed WaterSMART Basin Study?

1. There is a very detailed district-wide engineering plan in place that forms the technical basis for the OCID proposed project presented herein, namely, the WWDC Level I Study; OCID Water System Master Plan, September 2021. This is a published document available for public review and we hereby recommend that the Bureau of Reclamation grant application reviewers use that document as a supplemental resource for the OCID grant application. It can be obtained at https://wwdc.state.wy.us/ under project reports.
2. The OCID project conforms to the State of Wyoming Water Plan, since our project has received a formal recommendation from the WWDC staff to receive state grant funding in the amount of $4,557,551 grant and $244,764 loan.
3. OCID does comply with the terms of a Water Conservation Plan, developed by the district for the Bureau of Reclamation pursuant to Reclamation Directives and Standards WTR 01-01 and the Reclamation Reform Act of 1982. The current Water Conservation Plan is effective for the period 2019 through 2024 and was approved and accepted by the OCID Board of Directors on May 14, 2019. This Water Conservation Plan is included as Appendix A. It is also noteworthy that the source of irrigation water for OCID is a Bureau of Reclamation owned and operated dam and reservoir, namely Boysen Reservoir, just a short 22 miles upstream of the OCID diversion structure. (See Appendix B – Contract with the Bureau for water.) Certainly, the water and energy savings detailed herein that will result from implementation of the proposed OCID Water and Energy Efficiency Improvements Project will complement the Bureau's operation and planning of water supply from the Boysen Reservoir and for all downstream users.

E.1.5.1 Subcriterion E.2–Readiness to Proceed

- The major tasks to be completed with this project are 1) a new headgate structure on the Big Horn River and improvements to the inlet canal which conveys river water from the diversion to the main pump station, 2) demolish existing main pump station and replace with new building, new pumps, new electrical controls and transformers and new pressurized discharge piping, and 3) rehabilitation of the Re-lift pump station with new pumps and electrical controls.
- OCID will need a permit from the Army Corps of Engineers to construct an access bridge to the diversion structure on the Big Horn River. It is expected that this will be in the form of a Nation-wide permit and the application and all supporting information will be provided by the professional engineering firm that is contracted by the OCID to design and oversee construction of this project.
- As previously mentioned, the WWDC Level I Study; OCID Lucerne Master Plan, September 2021 has documented extensive alternative analyses that led OCID to select the recommended improvements identified herein. Further, the recommended components of this project have received schematic-level design work as detailed in the

Technical Project Description section presented earlier in this proposal (especially Drawings Nos. 6 and 9 above).

- OCID does not anticipate any new policy or administrative actions to be required for implementation of this proposed project.
- The anticipated project schedule is provided below:
    - May 2022 – Receive affirmation of the WWDC proposed funding of $4,557,551 grant and $244,764 loan,
    - June 2022 – Negotiate and enter into an agreement for professional engineering services,
    - July 2022 – Begin work required to obtain permits/approvals and begin final engineering design of the Project,
    - October 2022 – Obtain WaterSMART grant,
    - December 2022 – Complete final engineering design,
    - February 2023 – Obtain funding agency approvals of final design,
    - March 2023 – Advertise project for construction bids,
    - May 2023 – Open bids for project construction,
    - June 2023 – Award project construction contract,
    - July 2023 – Issue Notice of Award with delayed date for start of construction to October 2023,
    - March 2024 – Complete construction and conduct all final inspections and start-up procedures, and
    - April 2024 – OCID takes ownership of project and begins the irrigation season.

E.1.6 Evaluation Criterion F–Collaboration

- This project promotes and encourages collaboration since it will incorporate federal, state and local funding. Water management agencies at all levels are encouraged to thoroughly review the analyses and benefits detailed in the WWDC Level I Study; OCID Lucerne Master Plan, September 2021, funded entirely by a grant from the state of Wyoming through the WWDC. Local resources also contributed to completing the study by in-kind support through OCID staff assistance with in-field access to facilities and administrative support with extensive data on customer base, operational expenses, irrigation revenues, etc.
- There is wide-spread support for this project as evidenced by the testimonial letters of support from the Hot Springs County Commissioners, the Kirby Ditch Irrigation District (an irrigation district with a diversion structure immediately below the OCID diversion), and Mike Baker, Farmer. (Pages 41-44.)
- This county-wide and river basin support is significant because all of the entities recognize the value of the OCID benefits detailed herein, also benefit the broader communities.
- In addition a letter from the Lucerne Pumping Plant Canal Company is also included documenting the partnership between Lucerne Canal and OCID at page 40.
- A Letter of Commitment from the Wyoming Water Development Office at page 25.

E.1.7 Evaluation Criterion G–Additional Non-Federal Funding

This project does have non-federal funding in excess of 50% as calculated below:

$$\text{Non-Federal Funding} = \frac{\$4,802,315}{\$6,802,315} = 71\%$$

E.1.8 Evaluation Criterion H–Nexus to Reclamation

OCID would not be in existence without the Bureau of Reclamation and we have a long standing history with the Bureau. OCID is a project of the Bureau of Reclamation authorized under the Pick-Sloan Reclamation Act of 1944. Additionally, the water source is the Big Horn River which has a dam and reservoir, Boysen Reservoir, located about 22 miles upstream of the OCID diversion. Boysen Reservoir is a water storage project owned and operated by the Bureau of Reclamation and OCID is a partial owner of Boysen Dam.

OCID also has an O&M contract with the Bureau (contract #1-07-60-W0701) which is attached as Appendix B and a contract with the Bureau for power (contract #20XX660030) attached as Appendix C.

Additional relationships with OCID and the Bureau of Reclamation include:

- In the 1950's, The OCID diversion and main pump station were originally designed, built and owned by the Bureau of Reclamation.
- The OCID operates Anchor Dam on behalf of the Bureau.
- In 1957, the Bureau conveyed ownership, operation and maintenance of the diversion and conveyance facilities to OCID.
- Interestingly, the real estate where the main pump station is located still shows the Bureau of Reclamation as the land owner, hence there remains a long-standing nexus between OCID and the Bureau of Reclamation.

Project Budget

The project budget has received extensive scrutiny through the WWDC OCID Lucerne Master Plan Level 1 Study. Both time and effort were invested in the study to allow OCID to proceed with all three components of this project after the study was concluded. In conjunction with Anderson Consulting Engineers, Nelson Engineering prepared the cost estimates for the two pumping plant stations and their various parts.

OCID is a small district with 103 landowners and 4415 acres. By just replacing one pump if it were to fail, the cost of that one pump ($260,000) would be $58 per acre on top of their normal assessment for operations and maintenance.

Funding Plan and Letters of Commitment

The funding of the OCID Water Delivery and Efficiency Improvement project is three-fold. The first two pieces of funding will come from the WWDC. OCID anticipates receiving 67% ($4,557,551) of the funding from a grant from the Wyoming Water Development Commission (WWDC) to be available in May of 2022. Additionally, the WWDC plans to issue OCID a loan in the amount of $244,764 in the same time frame. OCID has a close working relationship with the WWDC and anticipates the funding to be available, as they have been actively involved in the planning of this project. (Please Letter of Commitment from the WWDC on the following page.)

Thirdly, the WaterSMART WEEG grant of $2,000,000 is a key component of the anticipated funding.

Our project will begin in May of 2022 with the funding from the WWDC and then continue through April of 2024.

OCID has set aside funds $70,000 to be used for this project and plans to minimize the usage of the loan from the WWDC. If necessary, OCID has a current line of credit ($250,000) with a local banking institution. OCID directors are anticipating helping with the project, but primarily the labor and the equipment will be provided by the contractors.

At this time, no costs have been incurred for this project. Any costs that do occur from the awarding of the funds from the WWDC until the awarding of the WaterSMART funds will be paid with the WWDC funds or by OCID directly.

WYOMING WATER DEVELOPMENT OFFICE

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Cheyenne, WY 82002

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Commissioners

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Sheridan Little
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Brandon L. Gebhart, P.E.
Director

October 25, 2021

Mr. Matt M. Brown, Chairman
Owl Creek Irrigation District
P.O. Box 509
Thermopolis, WY 82443

Dear Mr. Brown,

This letter is being provided on behalf of the Wyoming Water Development Commission (WWDC) to supplement your application for Bureau of Reclamation WaterSMART grant funding. The 2020 Wyoming State Legislature provided financial support to conduct an Owl Creek Irrigation District (District) Master Plan Level I Study which was completed in 2021. The Master Plan identified several project priorities including main pump station replacement, re-lift pump station rehabilitation and inlet canal headgate rehabilitation.

We have received your application for WWDC Level III Construction Funding for the projects listed above. Your Application included a WWDC request of $4,557,551 in grant funding and a $244,764 loan to be matched with $2,000,000 in other (WaterSMART) funds for a total project cost of $6,802,315. The WWDO preliminary recommendation is to fund these projects through Water Development Account II as part of the 2022 Omnibus Water Bill - Construction.

WWDC funding is contingent upon approval of the Recommendation at the November 2021 joint meeting of the Wyoming Water Development Commission and Legislative Select Water Committee. If approved, your request will be taken up by both bodies again at their respective January 2022 meetings for inclusion in the 2022 Omnibus Water Bill – Construction and for subsequent consideration by the Legislature and approval by the Governor. Should these contingencies be met, the funds would likely be available in May and at that time the WWDO would begin developing a Five-Year Project Agreement between the WWDC and the Owl Creek Irrigation District.

We will plan to provide you with updates on the status of the OCID Recommendation after the November 10th meeting. If you need additional information to support your WaterSMART Application please feel free to contact me or my staff.

Sincerely,

Brandon L. Gebhart, P.E.
Director, Wyoming Water Development Office

cc Jean Skelton

Budget Proposal

Combined Schedule of WWDC Level 1 Study Costs Estimates Prepared by Anderson Consulting	Inlet Canal	Main Pump	Relift Pump	Combined
Construction Costs				
Inlet Canal headgate	$ 196,018	$ -	$ -	$ 196,018
Demolition		50,812	2,100	52,912
Earthwork		74,600		74,600
New Structure	176,985	434,890		611,875
HVAC & Electrical		25,150		25,150
Pumps and Piping		1,572,050	295,380	1,867,430
Pump Controls & Power		460,950	31,500	492,450
Electrical Service		51,725		51,725
Inlet Screen		304,250		304,250
Contractor General		297,443	32,898	330,341
Pressure Pipe		238,510	113,390	351,900
Pressure Pipe		221,030		221,030
Wasteway Sediment Sluice		304,066		304,066
	$ 373,003	$ 4,035,476	$ 475,268	$ 4,883,747
Engineering	37,300	403,548	47,527	488,375
				-
Contingency	61,545	665,854	78,419	805,818
				-
Final Design	37,300	403,548	47,527	488,375
Permitting	15,000	28,000	15,000	58,000
Legal	6,000	15,000	9,000	30,000
Right of Ways	18,000	20,000	10,000	48,000
	$ 76,300	$ 466,548	$ 81,527	$ 624,375
Total	$ 548,148	$ 5,571,426	$ 682,741	$ 6,802,315

Each of these components are broken down further in the following pages. These are directly out of the WWDC Lucerne Master Plan Level 1 study.

The inlet canal portion has two major components, the headgate and the bridge. Details for both of those pieces are included on pages 25-27.

The Main Pump station has multiple components and the costs of each of those are also detailed in pages 28 to 33. Without the inlet canal headgate, diversion or the main pumping station, nobody in the district would be irrigating.

While the Re-lift Pump station is much smaller in size, the water it pumps serves over half of the irrigated acres in the district. The details for the costs associated with this component are on pages 35-37.

Summary of Inlet Canal Component (As prepared by Anderson Consulting in the WWDC Rep.)

WWDC
Project Cost Estimate

INLET CANAL HEADGATE AND DIVERSION STRUCTURE ACCESS BRIDGE REPLACEMENT

August 2021

WWDC ELIGIBLE PROJECT COSTS

CONSTRUCTION COSTS		
Inlet Canal Headgate Replacement	$ 196,018 – See inlet detail (A)	
Diversion Structure Access Bridge Replace.	$ 176,985 – See inlet detail (B)	
Cost of Project Components TOTAL (subtotal #1)		$ 373,003
Construction Engineering Cost (subtotal #1 x 10%)		$ 37,300
Components + Construction Engineering Costs (subtotal #2)		$ 410,303
Contingency (subtotal #2 x 15%)		$ 61,545
Construction Cost Total (subtotal #2 + Contingency) (subtotal #3)		$ 471,849
PRE-CONSTRUCTION COSTS		
Preparation of Final Designs & Specifications (subtotal #1 x 10%)		$ 37,300
Permitting and Mitigation		$ 15,000
Legal Fees (Title of Opinion Only)		$ 6,000
Acquisition of Access and Rights of Way		$ 18,000
Pre-construction Costs Total (subtotal #4)		$ 76,300
TOTAL WWDC ELIGIBLE PROJECT COST		
Total WWDC Eligible Project Cost (subtotal #3 + subtotal #4) (subtotal #5)		$ 548,149

WWDC INELIGIBLE PROJECT COSTS

Itemized Costs of Ineligible Project Components	$ 0
	$ 0
	$ 0
Additional Cost for Construction Engineering	$ 0
Additional Cost for Preparation of Final Designs & Specifications	$ 0
Total WWDC Ineligible Project Costs Total (subtotal #6)	$ 0

TOTAL PROJECT COST

Total Project Cost (subtotal #5 + subtotal #6)	**$ 548,149**

MATERIALS ONLY TOTAL

Materials Only Total Project Cost (Subtotal #1 + (Subtotal #1 x 10%))	$ 410,303

Detail of Inlet Canal Component- Main Inlet Canal Headgate (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-INL-HG-002**
Structure Type : **Headgate**
Description : **Main Inlet Canal Headgate**
Replacement Priority : **2**
Canal / Lateral : **Inlet Canal**
Canal / Lateral Station : **0.09 mi**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA	1	$10,000	$10,000
3	Demolition and Removal of Existing Structure - Small	EA		$5,000	$0
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	80	$1,300	$104,000
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY	290	$20	$5,800
10	Embankment - Large Structures	CY	145	$20	$2,900
11	Select Backfill - Large Structures	CY	145	$50	$7,250
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY		$130	$0
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY	90	$140	$12,600
14	30" Slide Gate (face mount, incl. yolk)	EA		$8,000	$0
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA	2	$12,000	$24,000
17	20' W x 7' H RCBC	LF		$4,500	$0
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF		$240	$0
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF		$380	$0
25	18-inch Steel Flap Gate	EA		$2,000	$0
26	36-inch Steel Flap Gate	EA		$3,500	$0
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF	52	$75	$3,900
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre		$3,000	$0
				TOTAL ITEMIZED COSTS =	$170,450
31	Mobilization & Demobilization (10% of construction items)				$17,045
32	Miscellaneous (5% of construction items)				$8,523
	steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				
		OWL-INL-HG-002	TOTAL BASE CONSTRUCTION COST =		$196,018

(A)

Owl Creek Detailed Structure Costs_Poor & Failing.xlsx

Inlet Detail

Detail of Inlet Canal Component- Inlet Canal Rail Car Bridge Replacement (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-INL-BR-001**
Structure Type : **Bridge**
Description : **Inlet Canal Rail Car Bridge Replacement -- Revised for Final Report**
Replacement Priority : **2**
Canal / Lateral : **Inlet Canal**
Canal / Lateral Station : **0.01 mi**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA	1	$10,000	$10,000
3	Demolition and Removal of Existing Structure - Small	EA		$5,000	$0
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	55	$1,300	$71,500
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY		$20	$0
10	Embankment - Large Structures	CY	100	$20	$2,000
11	Select Backfill - Large Structures	CY	100	$50	$5,000
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY		$130	$0
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY	110	$140	$15,400
14	30" Slide Gate (face mount, incl. yolk)	EA		$8,000	$0
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA		$12,000	$0
17	44.5' Long Flat Bed Rail Car	EA	2	$25,000	$50,000
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF		$240	$0
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF		$380	$0
25	18-inch Steel Flap Gate	EA		$2,000	$0
26	36-inch Steel Flap Gate	EA		$3,500	$0
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF		$75	$0
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre		$3,000	$0
				TOTAL ITEMIZED COSTS =	$153,900
31	Mobilization & Demobilization (10% of construction items)				$15,390
32	Miscellaneous (5% of construction items)				$7,695
	steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				
		OWL-INL-BR-001	TOTAL BASE CONSTRUCTION COST =		$176,985

(B)

Owl Creek Detailed Structure Costs_Poor & Failing.xlsx

Inlet Detail

Summary of Main Pump Station Component (As prepared by Anderson Consulting in the WWDC Report)

WWDC
Project Cost Estimate

MAIN PUMP STATION REPLACEMENT, PRESSURIZED PIPES TO CANALS, AND WASTEWAY/SEDIMENT SLUICE

August 2021

WWDC ELIGIBLE PROJECT COSTS

See detail

CONSTRUCTION COSTS		
Existing Lift Station Demolition	$ 50,812	(C)
Channel Earthwork	$ 74,600	(D)
New Structure Components	$ 434,890	(E)
Building HVAC and Electrical	$ 25,150	(F)
Pumps and Piping	$ 1,572,050	(G)
Pump Controls and Power Supply	$ 460,950	(H)
Electrical Service - WAPA	$ 51,725	(I)
Travelling Inlet Screen	$ 304,250	(J)
Contractor General Conditions	$ 297,443	(K)
Pressurized Pipe to Lucerne Ditch	$ 238,510	(L)
Pressurized Pipe to Re-Lift Canal	$ 221,030	(M)
Wasteway/Sediment Sluice	$ 304,066	(N)
Cost of Project Components Total (subtotal #1)		$ 4,035,476
Construction Engineering Cost (subtotal #1 x 10%)		$ 403,548
Components + Construction Engineering Costs (subtotal #2)		$ 4,439,024
Contingency (subtotal #2 x 15%)		$ 665,854
Construction Cost Total (subtotal #2 + Contingency) (subtotal #3)		$ 5,104,877
PRE-CONSTRUCTION COSTS		
Preparation of Final Designs & Specifications (subtotal #1 x 10%)		$ 403,548
Permitting and Mitigation		$ 28,000
Legal Fees (Title of Opinion Only)		$ 15,000
Acquisition of Access and Rights of Way		$ 20,000
Pre-Construction Costs Total (subtotal #4)		$ 466,548
TOTAL WWDC ELIGIBLE PROJECT COST		
Total WWDC Eligible Project Cost (subtotal #3 + subtotal #4) (subtotal #5)		$ 5,571,425

Main pump Station Summary

WWDC INELIGIBLE PROJECT COSTS

Itemized Costs of Ineligible Project Components	$ 0
	$ 0
	$ 0
Additional Cost for Construction Engineering	$ 0
Additional Cost for Preparation of Final Designs & Specifications	$ 0
Total WWDC Ineligible Project Costs Total (subtotal #6)	$ 0

TOTAL PROJECT COST

Total Project Cost (subtotal #5 + subtotal #6)	$ 5,571,425

Detail Cost Estimates of Main Pump Station Component - demolition, earthwork, new structure, HVAC & electrical, pumps and piping (Prepared by Anderson Consulting for WWDC Report)

CONSTRUCT NEW MAIN LIFT STATION
OWL CREEK IRRIGATION DISTRICT
COST ESTIMATE

20-097-01
AL/GJK (subtotals)
8/9/2021

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE		
EXISTING LIFT STATION DEMOLITION						
DEMO BAR SCREEN AND PIERS	LS	1	$ 3,150	$ 3,150		
DEMO WALKWAY AND BAR SCREEN	LS	1	$ 1,250	$ 1,250		
DEMO CONCRETE INTAKE CHANNEL	CY	45	$ 160	$ 7,200		
DEMO CONCRETE BULKHEADS	CY	30	$ 160	$ 4,800		
DEMO 20" STEEL MANIFOLDS	EA	2	$ 1,600	$ 3,200		
REMOVE EXISTING PUMPS	EA	4	$ 1,600	$ 6,400		
DEMO EXISTING MCC &TRANSFORMER	LS	1	$ 5,800	$ 5,800		
DEMO STEEL BUILDING	CF	32780	$ 0.58	$ 19,012	$	50,812
CHANNEL EARTHWORK						
ROAD EMBANKMENT - IN CHANNEL	CY	425	$ 26	$ 11,050		
CRUSHED BASE DRIVE AND PARKING	TN	85	$ 42	$ 3,570		
SEGMENTAL CONCRETE WALLS - IN CHANNEL	EA	54	$ 340	$ 18,360		
CHANNEL EXCAVATION	CY	470	$ 16	$ 7,520		
CHANNEL FLOOR CONCRETE SLAB	CY	32	$ 1,000	$ 32,000		
MISC RIPRAP AND CHANNEL GRADING	LS	1	$ 2,100	$ 2,100	$	74,600
NEW STRUCTURE COMPONENTS						
NEW BUILDING EXCAVATION	CY	690	$ 16	$ 11,040		
WET WELL CONCRETE	CY	70	$ 1,000	$ 70,000		
BUILDING SLAB & PUMP PADS	CY	65	$ 1,250	$ 81,250		
ACCESS HATCHES & LADDERS	LS	1	$ 12,600	$ 12,600		
ROOF SYSTEM	SF	1600	$ 11	$ 17,600		
STEEL BUILDING WALLS	SF	1460	$ 135	$ 197,100		
DOORS	EA	1	$ 6,300	$ 6,300		
OVERHEAD DOOR	EA	1	$ 12,600	$ 12,600		
WINDOWS	EA	6	$ 2,650	$ 15,900		
BUILDING INSULATION	LS	1	$ 10,500	$ 10,500	$	434,890
BUILDING HVAC AND ELECTRICAL						
BUILDING ELEC PANEL (120V)	EA	1	$ 5,250	$ 5,250		
BUILDING HEAT	LS	1	$ 5,525	$ 5,525		
BUILDING WIRING	LS	1	$ 4,725	$ 4,725		
BUILDING LIGHTING	LS	1	$ 1,250	$ 1,250		
BUILDING VENTILLATION	LS	1	$ 8,400	$ 8,400	$	25,150
PUMPS AND PIPING						
INSTALL NEW 500HP PUMP	EA	2	$ 260,000	$ 520,000		
INSTALL NEW 300HP PUMP	EA	2	$ 190,500	$ 381,000		
PUMP INSTALLATIONS	EA	4	$ 42,000	$ 168,000		
INSTALL ULTRASONIC FLOW METER	EA	4	$ 2,800	$ 11,200		
INSTALL NEW 20" GATE VALVES (INCLUDING COUPLING)	EA	4	$ 19,950	$ 79,800		
INSTALL NEW 20" CHECK VALVES	EA	4	$ 27,300	$ 109,200		
36" DISCHARGE PIPING AND MANIFOLD	LF	120	$ 345	$ 41,400		
20" BYPASS VALVE	EA	1	$ 19,950	$ 19,950		
CONCRETE BULKHEAD	CY	30	$ 1,000	$ 30,000		
36" TRANSMISSION PIPE - BURIED	LF	240	$ 265	$ 63,600		
36" BEND/FITTING WITH THRUST BLOCK	EA	8	$ 7,875	$ 63,000		
7.5 TON BRIDGE CRANE	LS	1	$ 76,500	$ 76,500		
CRANE INSTALLATION	LS	1	$ 8,400	$ 8,400	$	1,572,050

Main Pump Station Detail

Detail Cost Estimates of Main Pump Station Component - pump controls and power, electrical service, inlet screen, contractor (Prepared by Anderson Consulting for WWDC Report)

CONSTRUCT NEW MAIN LIFT STATION
OWL CREEK IRRIGATION DISTRICT
COST ESTIMATE

20-097-01
AL/GJK (subtotals)
8/9/2021

PUMP CONTROLS AND POWER SUPPLY						
MCC	LS	1	$	430,500	$	430,500
PUMPS 1 & 2 POWER FEED	LS	1	$	2,200	$	2,200
PUMPS 3 & 4 POWER FEED	LS	1	$	2,300	$	2,300
PLC	LS	1	$	18,000	$	18,000
CONTROL WIRING	LS	1	$	1,350	$	1,350
MOTOR POWER CONNECTION	LS	1	$	6,600	$	6,600

$ 460,950 (H)

ELECTRICAL SERVICE - WAPA						
ELECTRICAL TRANSFORMER	LS	1	$	30,200	$	30,200
TOWER FOR ELECTRICAL FEED	LS	1	$	16,800	$	16,800
WAPA DESIGN CONTINGENCY	LS	1	$	1,050	$	1,050
REPLACE POWER SERVICE CONDUCTORS	LS	1	$	3,675	$	3,675

$ 51,725 (I)

TRAVELLING INLET SCREEN						
CONCRETE FOR TRAVELLING SCREEN	CY	25	$	1,250	$	31,250
TRAVELING SCREENS	EA	2	$	120,750	$	241,500
TRAVELING SCREEN CONTROLS	EA	2	$	10,500	$	21,000
TRAVELING SCREEN INSTALL	EA	2	$	5,250	$	10,500

$ 304,250 (J)

CONTRACTOR GENERAL CONDITIONS						
CONTRACTOR GENERAL CONDITIONS				10%	$	297,443

$ 297,443 (K)

INDIRECT PROJECT COSTS					
SUBTOTAL #1				$	3,271,870
CONSTRUCTION ENGINEERING COST			10%	$	327,187
SUBTOTAL #2				$	3,599,057
CONTINGENGY			15%	$	539,859
SUBTOTAL #3				$	4,138,916
FINAL DESIGN & SPECIFICATIONS			10%	$	327,187
INFLATION FROM 2021 TO 2023	YR	2	4%	$	266,985
TOTAL ESTIMATE				**$**	**4,733,087**

$ 3,271,870

ALTERNATE SCREEN SYSTEM						
WTR TALON RAKE AND BAR SCREEN	LS	1	$	255,000	$	255,000
INSTALLATION	DAY	5	$	1,250	$	6,250
RAKE AND BAR ALTERNATE SUBTOTAL					$	**261,250**
TRAVELING SCREEN SUBTOTAL					$	**304,250**

Main Pump Station Detail

Detail Cost Estimates of Main Pump Station Component - pressurized pipes to Lucerne Ditch (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-LUC-PI-001**
Structure Type : **Pipe**
Description : **Pressurized Pipe from Owl Creek Pump Station to Lucerne Ditch**
Replacement Priority : **1**
Canal / Lateral : **Lucerne Ditch**
Canal / Lateral Station : **0.8 mi (Inlet Canal)**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA		$10,000	$0
3	Demolition and Removal of Existing Structure - Small	EA	2	$5,000	$10,000
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	27	$1,300	$35,100
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY		$20	$0
10	Embankment - Large Structures	CY		$20	$0
11	Select Backfill - Large Structures	CY		$50	$0
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY		$130	$0
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY		$140	$0
14	30" Slide Gate (face mount, incl. yolk)	EA		$8,000	$0
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA		$12,000	$0
17	20' W x 7' H RCBC	LF		$4,500	$0
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF		$240	$0
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF	410	$380	$155,800
25	18-inch Steel Flap Gate	EA		$2,000	$0
26	36-inch Steel Flap Gate	EA	1	$3,500	$3,500
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF		$75	$0
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre	1	$3,000	$3,000
				TOTAL ITEMIZED COSTS =	**$207,400**
31	Mobilization & Demobilization (10% of construction items)				$20,740
32	Miscellaneous (5% of construction items) steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				$10,370
		OWL-LUC-PI-001	**TOTAL BASE CONSTRUCTION COST =**		**$238,510**

Owl Creek Detailed Structure Costs_Poor & Failing.xlsx

Main Station detail

Detail Cost Estimates of Main Pump Station Component - pressurized pipes to Re-lift Canal (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-RLT-PI-001**
Structure Type : **Pipe**
Description : **Pressurized Pipe from Owl Creek Pump Station to Re-Lift Canal**
Replacement Priority : **1**
Canal / Lateral : **Re-Lift Canal**
Canal / Lateral Station : **0.8 mi (Inlet Canal)**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA		$10,000	$0
3	Demolition and Removal of Existing Structure - Small	EA	2	$5,000	$10,000
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	27	$1,300	$35,100
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY		$20	$0
10	Embankment - Large Structures	CY		$20	$0
11	Select Backfill - Large Structures	CY		$50	$0
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY		$130	$0
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY		$140	$0
14	30" Slide Gate (face mount, incl. yolk)	EA		$8,000	$0
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA		$12,000	$0
17	20' W x 7' H RCBC	LF		$4,500	$0
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF		$240	$0
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF	370	$380	$140,600
25	18-inch Steel Flap Gate	EA		$2,000	$0
26	36-inch Steel Flap Gate	EA	1	$3,500	$3,500
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF		$75	$0
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre	1	$3,000	$3,000
				TOTAL ITEMIZED COSTS =	$192,200
31	Mobilization & Demobilization (10% of construction items)				$19,220
32	Miscellaneous (5% of construction items) steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				$9,610
		OWL-RLT-PI-001	TOTAL BASE CONSTRUCTION COST =		$221,030

Owl Creek Detailed Structure Costs_Poor & Failing.xlsx

Detail Cost Estimates of Main Pump Station Component - wasteway/sediment sluice (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-CD-WW-001**
Structure Type : **Wasteway**
Description : **Cyclone Wasteway/Sediment Sluice**
Replacement Priority : **1**
Canal / Lateral : **Inlet Canal**
Canal / Lateral Station : **0.62 mi**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA		$10,000	$0
3	Demolition and Removal of Existing Structure - Small	EA		$5,000	$0
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	175	$1,300	$227,500
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY	270	$20	$5,400
10	Embankment - Large Structures	CY	135	$20	$2,700
11	Select Backfill - Large Structures	CY	135	$50	$6,750
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY	13	$130	$1,690
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY	61	$140	$8,540
14	30" Slide Gate (face mount, incl. yolk)	EA	1	$8,000	$8,000
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA		$12,000	$0
17	20' W x 7' H RCBC	LF		$4,500	$0
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF		$240	$0
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF		$380	$0
25	18-inch Steel Flap Gate	EA		$2,000	$0
26	36-inch Steel Flap Gate	EA		$3,500	$0
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF	51	$75	$3,825
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre		$3,000	$0
				TOTAL ITEMIZED COSTS =	**$264,405**
31	Mobilization & Demobilization (10% of construction items)				$26,441
32	Miscellaneous (5% of construction items) steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				$13,220
		OWL-CD-WW-001	**TOTAL BASE CONSTRUCTION COST =**		**$304,066**

(N)

Owl Creek Detailed Structure Costs_Poor & Failing.xlsx

Main Station Detail

Summary of Re-lift Pump Station Component (As prepared by Anderson Consulting for the WWDC Report.)

WWDC
Project Cost Estimate

RE-LIFT PUMP STATION REHABILITATION AND PRESSURIZED PIPES TO DITCH

August 2021

WWDC ELIGIBLE PROJECT COSTS

CONSTRUCTION COSTS		
Demolition	$ 2,100	
Pumps and Piping	$ 295,380	
Pump Controls and Power Supply	$ 31,500	
Contractor General Conditions	$ 32,898	
Pressurized Pipes to Dempsey Ditch	$ 113,390	
Cost of Project Components TOTAL (subtotal #1)		$ 475,268
Construction Engineering Cost (subtotal #1 x 10%)		$ 47,527
Components + Construction Engineering Costs (subtotal #2)		$ 522,795
Contingency (subtotal #2 x 15%)		$ 78,419
Construction Cost Total (subtotal #2 + Contingency) (subtotal #3)		$ 601,214
PRE-CONSTRUCTION COSTS		
Preparation of Final Designs & Specifications (subtotal #1 x 10%)		$ 47,527
Permitting and Mitigation		$ 15,000
Legal Fees (Title of Opinion Only)		$ 9,000
Acquisition of Access and Rights of Way		$ 10,000
Pre-construction Costs Total (subtotal #4)		$ 81,527
TOTAL WWDC ELIGIBLE PROJECT COST		
Total WWDC Eligible Project Cost (subtotal #3 + subtotal #4) (subtotal #5)		$ 682,741

WWDC INELIGIBLE PROJECT COSTS

Itemized Costs of Ineligible Project Components	$ 0
	$ 0
	$ 0
Additional Cost for Construction Engineering	$ 0
Additional Cost for Preparation of Final Designs & Specifications	$ 0
Total WWDC Ineligible Project Costs Total (subtotal #6)	$ 0

TOTAL PROJECT COST

Total Project Cost (subtotal #5 + subtotal #6)	**$ 682,741**

MATERIALS ONLY TOTAL

Materials Only Total Project Cost (Subtotal #1 + (Subtotal #1 x 10%))	$ 522,795

Detail Cost Estimates of Re-lift Pump Station Component - demolition, pumps and piping, pump controls and power, contractor conditions (Prepared by Anderson Consulting for WWDC Report)

RE-LIFT PUMP STATION REHAB
OWL CREEK IRRIGATION DISTRICT
COST ESTIMATE

20-097-01
AL
8/9/2021

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
DEMOLITION				
DEMO 18" STEEL PIPE	EA	2	$ 1,050	$ 2,100
PUMPS AND PIPING				
INSTALL NEW 75HP PUMP	EA	2	$ 95,000	$ 190,000
PUMP INSTALLATIONS	EA	2	$ 21,000	$ 42,000
INSTALL ULTRASONIC FLOW METER	EA	2	$ 2,800	$ 5,600
REPLACE EXISTING 18" DISCHARGE PIPING	LF	68	$ 210	$ 14,280
FABRICATED 18" TEE	EA	2	$ 1,250	$ 2,500
INSTALL NEW 18" GATE VALVES	EA	2	$ 15,750	$ 31,500
INSTALL NEW 18" FLG 90	EA	2	$ 4,750	$ 9,500
PUMP CONTROLS AND POWER SUPPLY				
CONTROLS PROGRAMMING & MISC UPGRADES	LS	1	$ 21,000	$ 21,000
REPLACE EXISTING 480V TRANSFORMER	LS	1	$ 10,500	$ 10,500
CONTRACTOR GENERAL CONDITIONS				
CONTRACTOR GENERAL CONDITIONS			10%	$ 32,898
INDIRECT PROJECT COSTS				
SUBTOTAL #1				$ 361,878
CONSTRUCTION ENGINEERING COST			10%	$ 36,188
SUBTOTAL #2				$ 398,066
CONTINGENGY			15%	$ 59,710
SUBTOTAL #3				$ 457,776
FINAL DESIGN & SPECIFICATIONS			10%	$ 36,188
INFLATION FROM 2021 TO 2023	YR	2	4%	$ 29,529
TOTAL ESTIMATE				**$ 523,493**
STEEL BUILDING				
3-SIDED STEEL SHED - REMOVABLE ROOF	LS	1	$ 21,000	$ 21,000

P

Q

299,380

31,500

R

S

Relif Station Detail

Detail Cost Estimates of Re-lift Pump Station Component – pressurized pipe to Dempsey Canal (Prepared by Anderson Consulting for WWDC Report)

OWL CREEK IRRIGATION DISTRICT - LUCERNE MASTER PLAN
FACILITY REPLACEMENT -- POOR & FAILING STRUCTURES

Anderson Consulting Engineers, Inc.

Item ID: **OWL-DEM-PI-001**
Structure Type : **Pipe**
Description : **Pressurized Pipes from Re-Lift Pump Station to Dempsey Ditch**
Replacement Priority : **1**
Canal / Lateral : **Dempsey Ditch**
Canal / Lateral Station : **2.93 mi (Re-lift Canal)**

Item Number	Description	Unit	Estimated Quantity	Unit Cost ($)	Item Cost ($)
1	Demolition and Removal of Existing Structure - Large	EA		$20,000	$0
2	Demolition and Removal of Existing Structure - Medium	EA		$10,000	$0
3	Demolition and Removal of Existing Structure - Small	EA	1	$5,000	$5,000
4	Demolition and Removal of Existing Concrete Lining	SF		$4	$0
5	Concrete (Reinforced) < 20 Yds.	CY		$1,500	$0
6	Concrete (Reinforced) > 20 Yds.	CY	26	$1,300	$33,800
7	Concrete (Canal Lining) - 6" thick w/ steel reinforcement and subgrade preparation	SF		$18	$0
8	Earthwork - Small Structures (Excavation, Embankment, Select Backfill)	CY		$40	$0
9	Excavation - Large Structures	CY		$20	$0
10	Embankment - Large Structures	CY		$20	$0
11	Select Backfill - Large Structures	CY		$50	$0
12	Riprap D50 = 9" (w/ bedding, fabric, and over-excavation)	CY		$130	$0
13	Riprap D50 = 12" (w/ bedding, fabric, and over-excavation)	CY		$140	$0
14	30" Slide Gate (face mount, incl. yolk)	EA		$8,000	$0
15	48" Slide Gate (incl. yolk)	EA		$10,000	$0
16	60" Slide Gate (incl. yolk)	EA		$12,000	$0
17	20' W x 7' H RCBC	LF		$4,500	$0
18	24-inch CMP	LF		$120	$0
19	36-inch CMP	LF		$140	$0
20	42-inch CMP	LF		$160	$0
21	24-inch RCP	LF		$150	$0
22	24-inch RCP FES	EA		$2,000	$0
23	18-inch Welded Steel Pipe Sch. 40 (incl. remove existing 18"steel pipe)	LF	220	$240	$52,800
24	36-inch Welded Steel Pipe Sch. 40 (incl. remove existing 36" steel pipe)	LF		$380	$0
25	18-inch Steel Flap Gate	EA	2	$2,000	$4,000
26	36-inch Steel Flap Gate	EA		$3,500	$0
27	Structural Steel Grate - Small	EA		$1,000	$0
28	Structural Steel Grate - Medium	SF		$75	$0
29	W-Beam Guardrail w/ Wood Posts	LF		$80	$0
30	Revegetation	Acre	1	$3,000	$3,000
				TOTAL ITEMIZED COSTS =	**$98,600**
31	Mobilization & Demobilization (10% of construction items)				$9,860
32	Miscellaneous (5% of construction items) steel rails / stop logs / handrails / weep holes / small-scale revegetation /etc.				$4,930
		OWL-DEM-PI-001	**TOTAL BASE CONSTRUCTION COST =**		**$113,390**

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Owl Creek Detailed Structure Costs Poor & Failing.xlsx

Relift Station Detail

Budget Narrative

There has been extensive work on the budget for this project as presented in the previous pages. Each component of the three components has been studied extensively. OCID plans to contract all work for this project to contractors, as we only have one full time employee. Although the district board of directors does plan on helping and being actively involved, the in-kind labor provided will be minimal and is not part of this proposal.

D.2.2.5.3.1 Salaries and Wages

The Project Manager will be Paul Ward who is the Secretary/Treasurer on the Board of Directors with the OCID. He will oversee the entire project. There will be no employees directly hired for this grant project. (Please see the discussion of contracts in section *D.2.2.5.3.6.*

D.2.2.5.3.2 Fringe Benefits

There are no anticipated fringe benefits.

D.2.2.5.3.3 Travel

There are no anticipated travel costs.

D.2.2.5.3.4 Equipment

There are no anticipated equipment purchases greater than $5000.

D.2.2.5.3.5 Materials and Supplies

All anticipated material and supply costs will be included in the contract costs.

D.2.2.5.3.6 Contractual

The majority of the work will be completed by contractors. OCID, with the oversight of the WWDC will put all contracts out for bid in a major Wyoming publication. Anticipated contracts include an Assistant Project Manager, Engineering Contract, and the Construction Contracts.

There has been a detail budget prepared for each portion of the project. All major components have been identified.

The inlet canal headgate component of the project has budgeted $196,018 for the headgate and $176,985 for the access bridge. The expected engineering cost of $37,300. The preconstruction costs consisting of $76,300 and a contingency of $61,545. The total for the inlet canal is expected to be $548,149. Please see the detail from pages 26 through 28.

The second component is the Main Pumping Station. The details for this budget are from pages 29 through 34. The component totals $5,571,425. This includes detailed construction costs of $4,035,476, engineering costs of $403,548, a contingency of $665,854, and the preconstruction costs of $466,548.

The third component is the Re-lift Pump Station. The anticipated cost for this portion totals $682,741 and includes $475,268 for construction, $47,527 for engineering, $78,419 for contingency and $81,527 for preconstruction costs. The details of each of these line items are from page 35 through 37.

D.2.2.5.3.7 Third – Party In-Kind Contributions

In Kind Contributions are not part of this grant application.

D.2.2.5.3.8 Environmental and Regulatory Compliance Costs

In the summary of the cost of the components, there is a detail list of permitting and legal. Those two categories will be used for any compliance costs for this project.

D.2.2.5.3.9 Other Expenses

Included in the cost estimates is a large contingency cost. This is primarily due to the rapid rise in prices of construction that Anderson Consulting witnessed while they were preparing these cost estimates and felt it prudent to add a large contingency for inflation.

D.2.2.5.3.10 Indirect Costs

Anticipated indirect costs are built into the cost of the contractual work.

Required Permits or Approvals

Compliance with the Endangered Species Act will be necessary. Given the location of the projects and that they are replacing existing facilities, this can probably be limited to an Environmental Assessment rather than a full Environmental Impact Statement. The U.S. Fish and Wildlife Service will need to sign off on the project.

With the removal of the existing pump house (which could be considered historical), the project will need approval from SHPO. If the pump house is determined to be historical, there will be some sort of mitigation required; hopefully just documentation with narrative and archival photographs.

Hot Springs County will require a building permit for the new pumphouse.

Letters of Support and Letters of Partnership

Following are two letters of support, one from the Hot Springs County Commissioners and one from the Kirby Creek Irrigation District and a letter of partnership from the Lucerne Pumping Plant and Canal Co.

Lucerne Pumping Plant Canal Co Letter of Partnership

Lucerne Pumping Plant Canal Co.
P.O. Box 242
Thermopolis, WY 82443

October 29, 2021

Matt Brown, Chairman
Owl Creek Irrigation District
PO Box 509
Thermopolis, WY 82443

Mr. Brown,

We, as the canal company that distributes the water pumped by the Owl Creek Irrigation District and is therefore dependent on the District for our water supply, are clearly and solidly in support of the improvements planned to the pumping plant facilities in the Level I Master Plan funded by the Wyoming Water Development Commission. We have been concerned for years as we've seen the aging of the pumping facilities and infrastructure that all of our water must be delivered through. The cost, risk and down time to make repairs to the aging system has been cause for considerable consternation throughout our canal system for many years.

We believe that an upgraded pumping plant will afford us the opportunity to more nearly match water pumped to the daily needs of our irrigators. Members of our canal company are considering sprinkler and/or upgraded piping distribution systems to improve the efficiency of water delivery and use within our canal company lands. This will be cause for more flexibility at the pumping facilities that this planned upgrade will help us attain.

It is vital that the grant funding being sought from the Wyoming Water Development Commission be supplemented by additional funding to make this project feasible for the growers within our canal company's purview. We are supportive of the Irrigation District's actions to seek funding from the Bureau of Reclamation WaterSMART program and believe that if this funding is not received the entire project will be endangered because the cost will exceed our growers ability to pay.

We are excited about the possibilities afforded by the district's foresight in seeking the upgrading of the pumping system on which our entire valley is dependent. We look forward to working with your board to see this to a completed project.

Micheal R. Baker, President
Lucerne Pumping Plant Canal Company

Hot Springs County Commissioners Letter of Support

HOT SPRINGS COUNTY COMMISSIONERS

415 ARAPAHOE
THERMOPOLIS, WYOMING 82443
307/864-3515
FAX: 307/864-3333 • EMAIL: commissioners@hscounty.com

LETTER OF SUPPORT FROM
HOT SPRINGS COUNTY COMMISSIONERS

November 2, 2021

WaterSMART Grants: Water and Energy Efficiency Grants
Department of Interior
Bureau of Reclamation

To Whom It May Concern at Bureau of Reclamation:

In Hot Springs County, Wyoming, the County Commissioners are the highest-ranking government officials. This letter is to convey our support of Owl Creek Irrigation District's (the "District") intent to seek grant funding to support the necessary improvements identified in the recent Level I Master Plan funded by the Wyoming Water Development Commission ("WWDC"). We are aware that the District's pumping facilities are essentially obsolete and maintenance on those facilities is becoming extremely difficult. Owl Creek Irrigation District's proposed improvements will upgrade those pump facilities to modern equipment, resulting in greatly reduced maintenance expenditures and also less energy consumption and less water consumption.

While the WWDC program provides 67% grant funding, the proposed improvements are estimated to cost approximately $6.8 million, leaving a substantial principal amount to the District. We understand The District also intends to apply for a Bureau of Reclamation WaterSMART grant in the amount of $2.0 million to help offset the District's remaining principal funding requirement. We wholeheartedly support the District's efforts to obtain the additional Bureau of Reclamation supplemental grant funding. Owl Creek Water District is an important piece of the local economy here in Hot Springs County and it is our desire to see the District continue to provide irrigation water for local agricultural products.

If we can provide any additional information, please contact us.

Sincerely,

Thomas J. Ryan, Chairman

Jack Baird, Vice-Chairman

Phillip Scheel, Chairman

Kirby Ditch Company Letter of Support

Kirby Ditch Irrigation District
PO Box 1065
Thermopolis, WY 82443-1065

October 28, 2021

Mr. Matt M. Brown, Chairman
Owl Creek Irrigation District
PO Box 509
Thermopolis, WY 82443

Dear Mr. Brown:

We are providing this letter of support to you for the improvements identified in your recent Level I Master Plan funded by the Wyoming Water Development Commission. We are aware that your pumping facilities are essentially obsolete and maintenance on those facilities is becoming extremely difficult. Your proposed improvements will upgrade those pump facilities to modern equipment, resulting in greatly reduced maintenance expenditures and also less energy consumption and less water consumption. Since your source of water is the same as ours, we enthusiastically support your project and its calculated water savings. We all benefit from water conservation projects.

While the WWDC program provides 67% grant funding, your proposed improvements are estimated to cost about $6.8 million, leaving a substantial principal amount for your District. We understand that you also intend to apply for a Bureau of Reclamation WaterSMART grant in the amount of $2.0 million to help offset your remaining principal funding requirement. We wholeheartedly support your efforts to obtain the additional Bureau of Reclamation supplemental grant funding.

If we can provide any additional information, please contact us.

Sincerely,

Delbert W. Daniels, President

Letter of Support from Mike Baker (Landowner, 259 Acres)

Micheal R. Baker
920 West Sunnyside Lane
Thermopolis, WY 82443

October 30, 2021

Mr. Matt Brown, Chairman
Owl Creek Irrigation District
PO Box 509
Thermopolis, WY 82443

Mr. Brown, Matt
As you know I am dedicated to upgrading the Irrigation District's pumping facilities here in the Lucerne area.

I support your efforts to find funding that will allow us the ability to get this project to completion. Both Wyoming Water Development funds and Bureau of Reclamation funds through their WaterSMART program will be needed to make this project affordable for the growers in this valley.

I, for my part, have submitted an application with the Natural Resource Conservation Service this summer to upgrade a portion of my farm's irrigation system with a mix of a pivot sprinkler, underground piping and gated pipe. With the ability to match water savings realized from a pivot installed last year on this farm I believe that I will be able to reduce by over 50% the water usage on an additional 65 acres with my irrigation upgrade.

I am actively trying to convince others in the Lucerne area to consider upgrading their farm water delivery systems to increase efficiency. I believe that this kind of conservation is the way we can make this area more productive and save our resources to pass on to the generations that follow us.

Thank you for your dedication and hard work for the irrigators in our valley.

Micheal R Baker

Official Resolution

Official Resolution

We, as the duly elected board of directors for the Owl Creek Irrigation District, are resolved to fully support the OCID LUCERNE PUMPING PLANT project to save both water and energy as outlined in this application. The new pumps (both the main pumps and the relift pumps), the pressurized pipes and sediment sluice, and the inlet canal headgate at the diversion are necessary to prevent a catastrophic failure for the Lucerne Valley farmers. This grant application for the WaterSMART Water and Energy Efficiency Grant for Fiscal Year 2022 (FO R22AS00023) is an integral part of the funding for this project and has our full support.

We grant our chairman, Matt Brown, the authority to enter into an agreement with the Bureau of Reclamation for the WaterSMART Water and Energy Efficiency Grant for Fiscal Year 2022 and any other necessary agreements to further this project.

We have the capability to provide the funding necessary of approximately $250,000 in addition to the anticipated In-Kind piece of the funding for our expected portion of the project costs specified in the funding plan.

Owl Creek Irrigation District will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

Matt M Brown — 10/12/21

Matt Brown, Chairman — Date

— 10-30-21

Jerry Lake, Vice Chairman — Date

Paul Ward — 10-12-2021

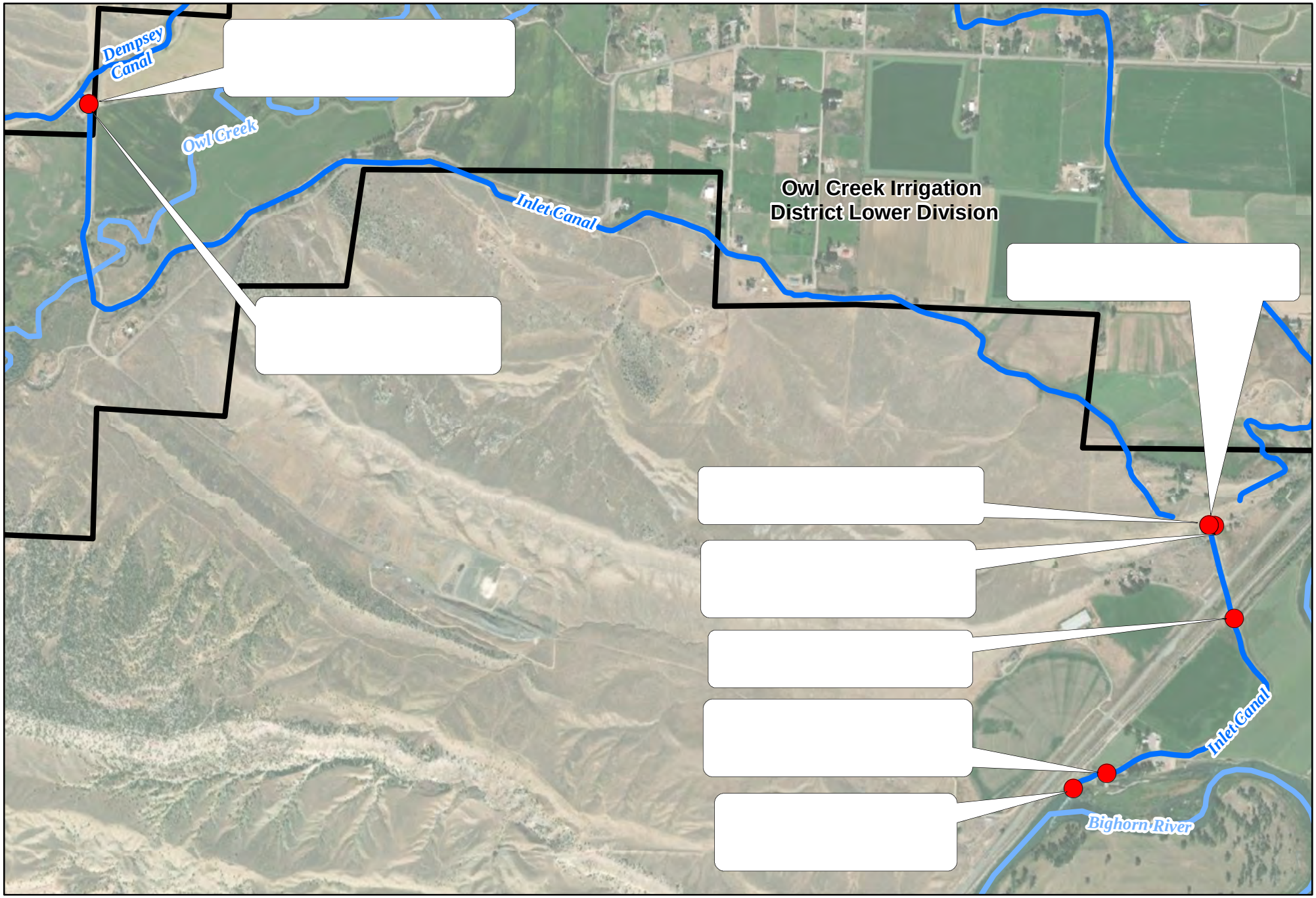
Paul Ward, Board Secretary/Treasurer — Date

Unique Entity Identifier and System for Award Management

Owl Creek Irrigation District's UEI (Unique Entity Identifier) is our SAM (System for Award Management) Number:

SDJVF54PJMA9

Our DUNS number is 046270732.



N
W E
S

0 0.25 0.5
Miles

Legend

- WWDC/WaterSMART Project
- Canal
- River/Stream
- Owl Creek Irrigation District Divisions

Owl Creek Irrigation District: WWDC/WaterSMART Project Locations