

# Chester Canal & Company Headgate and Automation Project

Small Scale Water Efficiency WaterSMART Grant Proposal 2021  
Funding Opportunity Number: R21AS00300



APPLICANT:  
Chester Canal Company  
350 North 6<sup>th</sup> West  
PO BOX 15  
Saint Anthony, Idaho 83445

PROJECT MANAGER:  
Aaron Dalling  
aaron.fmid@myidahomail.com  
(208) 624-3381

3/18/21

1126

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# Canal Headgate and Automation Project

## Small-Scale Water Efficiency Projects FY 2021

### Technical Proposal and Evaluation Criteria

#### Executive Summary

#### Applicant Info

**Date:** March 1, 2021

**Applicant Name:** Chester Canal Company -Category A Applicant

**City, County, State:** Saint Anthony, Fremont, Idaho

**Project Manager:**

*Name:* Aaron Dalling

*Phone:* 208-624-3381

*Email:* dalling236@gmail.com

**Project Funding Request:** Small Scale Water Efficiency Projects- Total Cost \$129,238. Chester Canal Company is requesting 50% funding from Reclamation or \$64,619.

#### Project Summary

*A one paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, expected benefits and how those benefits relate to the water management issues you plan to address. This information will be used to create a summary of your project for Reclamation's website if the project is selected for funding.*

The Chester Canal Company (CCC) proposes to install a new headgate equipped with automation and remote operation equipment. This project is in partnership with Fremont-Madison Irrigation District (FMID) and will be operated from FMID's existing SCADA (Supervisory Control and Data Acquisition) computer system in their office. This project will help manage water more efficiently on 1,586 acres of irrigated cropland, bolster partnerships, and promote conservation among water users within our canal company. This project will be another concrete step toward implementing an alternative in the 2015 Henry's Fork Basin Study that was coordinated and completed with the help of several partners including the Bureau of Reclamation (Reclamation). In the study, canal automation was identified as one of the most economical means of conserving water in the Henry's Fork Watershed.

#### Schedule

*State the length of time and estimated completion date for the proposed project including the construction start date (month/year).*

The desired start date for the project is October 2021, however this will depend on whether grant funds are obtained. The desired project completion is October 2022.

This project is not located on a federal facility.



## Project Location

Figure 2 (Attachment B) provides the geographic locations on a map.

Table 1. Locations of Automation/Remote Operations Equipment

Location Name	Latitude	Longitude	County/State
Chester Canal	43.999533 N	-111.526118 W	Fremont/Idaho

### Nearest Towns

The CCC headgate is located approximately 2.6 miles east of Chester, Idaho.

### Project Description

*Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.*

*Please do not include your project schedule and milestones here; that information is requested in response to the Readiness to Proceed criterion below. In addition, please avoid discussion of the benefits of the project, which are also requested in response to evaluation criteria. This section is solely intended to provide an understanding of the technical aspects of the project.*

*Please note, if the work for which you are requesting funding is a phase of a larger project, please only describe the work that is reflected in the budget and exclude description of other activities or components of the overall project.*

CCC proposes to install a new main diversion headgate equipped with automation equipment at their river diversion. CCC will connect the proposed automation equipment in with FMID's existing Supervisory Control and Data Acquisition (SCADA) system in our office. This will allow us to monitor flow data and make flow changes from the office. This equipment will also make changes as needed automatically. For example, in a scenario when flow in the river changes resulting in a change in head pressure on CCC's headgate, the headgate will automatically adjust to maintain a constant flow in the canal despite the change in head pressure.

The Chester Canal holds a natural flow water right for 112cfs and 1,337 acre feet of storage water through FMID.

### **Evaluation Criterion A—Project Benefits (35 points)**

*Up to 35 points may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure in order to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region.*

•Describe the expected benefits and outcomes of implementing the proposed project.

- What are the benefits to the applicant's water supply delivery system?

This project will help us conserve water. Based on our past experience in our area with installing automation equipment on canal diversions we believe we can average between 4 and 10-acre feet of water savings every day during the peak of the irrigation season. Using the peak dates of our irrigation season from June 1<sup>st</sup> to September 15<sup>th</sup> this equates to a total water savings for this project of between 420-acre feet and 1,050-acre feet each year.

This water savings will be recognized in Island Park and Grassy Lake Reservoirs. Keeping water in these reservoirs will benefit all water users in the Upper Snake Reservoir system and help us be more resilient in potential subsequent drought years. Keeping water in the reservoirs will also benefit fish habitat in the Henry's Fork River. More water held in the reservoirs during the irrigation season directly results in higher winter flows in the river. These winter flows are critical for the Henry's Fork fishery.

This project will save CCC significant time, vehicle wear and result in an overall reduction in our carbon footprint. CCC stretch a total of 4 miles from its river diversion to its ending. By installing the proposed project, the water-master will have access to current flow data without physically seeing it. He will also be able to adjust flows without traveling to the physical locations. We believe this will reduce vehicle travel by up to 8 miles per day. Looking at the irrigation season from April 1<sup>st</sup> to October 1<sup>st</sup> this project will reduce travel each irrigation season by 800 miles.

- *If other benefits are expected explain those as well. Consider the following:*
  - *Extent to which the proposed project improves overall water supply reliability.*

This project will improve water reliability by increasing our carryover storage in the reservoirs. Additional carryover in the reservoirs will benefit water reliability in subsequent drought sequences.

Real time flow data and remote operation of the gates will allow CCC to work with FMID to make precise management decisions from the office where there is dedicated staff.

- *The expected geographic scope benefits from the proposed project (e.g., local, sub-basin, basin)*

The proposed project will specifically benefit the Henry's Fork Basin. It will also benefit the entire Upper Snake System. This project will allow us to keep more water in Island Park Reservoir and Grassy Lake reservoirs during the irrigation season making them easier to fill each winter. Once these reservoirs are full, the excess water spills into American Falls Reservoir and fills it. Therefore this project benefits the entire Upper Snake System.

- *Extent to which the proposed project will increase collaboration and information sharing among water managers in the region.*

This project will provide real time flow data at the diversion structure which has not been available in the past. This new data will significantly increase collaboration and information availability and sharing between CCC and FMID. It will also help us work more effectively with the regulatory entity Water District 01.

- *Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)*

This project will increase the water reliability for an irrigated agriculture economy which fuels the local communities.

The Henry's Fork is a world-famous fly-fishing destination. This project will result in reduced outflow from the reservoirs during the irrigation season and increased flows in the winter which will more closely mimic nature. This increased winter flow is critical for trout habitat. Water quality in the rivers

will be improved during the summer when most of the fishing occurs. Benefiting overall habitat in this way will increase trout populations bringing in additional anglers and thereby benefiting the local economies.

It will also maintain higher levels in the reservoirs benefiting recreation on the reservoirs themselves including, boating, fishing, camping etc. also benefiting the local economies.

*\*Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district's water supply). Describe anyone-farm efficiency work that is currently being completed or is anticipated to be completed in the future using NRCS assistance through EQIP or other programs.*

This project complements many of the on-farm projects the NRCS is currently working on in our area.

### **Evaluation Criterion B—Planning Efforts Supporting the Project (35 points)**

*Up to 35 points may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review, or identified as part of another planning effort led by the applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs. Describe how your project is supported by an existing planning effort.*

*\*Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?*

Yes, this project will address issues that have been identified in existing planning efforts as follows:

#### **Henry's Fork Basin Study-2015**

Canal automation was identified as the most economical alternative for conserving water on a per acre foot basis within the Henry's Fork Basin in the 2015 Henry's Fork Basin Study.

Automation has also been discussed at several of our local planning meeting with FMID and has been identified as the economic way of conserving water currently within or watershed.

*\*Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.*

Through the planning efforts of CCC canal automation has been identified as the most economical way of conserving water within our canal company. The 2015 Henry's Fork Basin Study also identified canal automation as the most economical way of conserving water in our basin.

### **Evaluation Criterion C—Project Implementation (10 points)**

*Up to 10 points may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.*

*\*Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.*

The schedule provided below outlines timing of the major tasks and milestones for the proposed project. Ideally, if the WaterSMART grant is awarded and environmental work is completed the construction phase of the project will begin in November of 2021 and be complete by July 1<sup>st</sup>, 2022. If

the environmental evaluation takes longer than anticipated, we may have to complete the project during the fall of 2022.

CCC Headgate and Automation Project	2021				2022											
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Activity																
Award of WaterSMART Grant																
Develop and sign WaterSMART Contract																
Environmental Evaluation																
Installation of Structure and Automation Equipment																

•Describe any permits that will be required, along with the process for obtaining such permits.

Irrigation entities are exempt from permitting requirements for existing diversions. There are not any required permits for this project.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

The engineering work necessary for this project is included in the contractual bids. Required engineering is already complete.

•Describe any new policies or administrative actions required to implement the project.

There are no new policies or administrative actions that will need to be implemented. The proposed project will enhance the ability to manage water under current policies and administrative mechanisms, without requiring new policies or changes in administration.

•Describe the timeline for completion of environmental and cultural resource compliance. Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?

We are hopeful the environmental and cultural resource compliance will move forward quickly. All dirt work will be completed in previously disturbed areas.

**Evaluation Criterion D— Nexus to Reclamation (10 points)**

Up to **10 points** may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including:

•Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following:

The proposed project will be performed within FMID, which is a part of Reclamation’s Minidoka Project. It will therefore benefit the District and Reclamation through better management of water resources and reduce overall demand.

○ Does the applicant receive Reclamation project water?

Yes, CCC receives storage water from FMID which is contracted with Reclamation for the water in Island Park and Grassy Lake reservoirs.

○ Is the project on Reclamation project lands or involving Reclamation facilities?

The project will be located on lands that are a part of the Minidoka Project, serving land irrigated with water from Island Park and Grassy Lake Reservoirs. The project will not be installed on



Reclamation facilities but will benefit the overall operations of Island Park and Grassy Lake Reservoirs which are reclamation facilities.

- *Is the project in the same basin as a Reclamation project or activity?*

Yes, the proposed project will better manage water resources within the Henry’s Fork Basin. This project is expected to conserve water allowing us to keep it in the reservoirs thereby reducing impacts of potential subsequent drought years.

- *Will the proposed work contribute water to a basin where a Reclamation project is located?*

Yes, the proposed project will better manage water resources within the Henry’s Fork Basin by providing better water management ability and better water use data to the canal companies and FMID. This project is expected to conserve water allowing us to keep it in the reservoirs thereby reducing impacts of potential subsequent drought years.

- *Will the project benefit any tribe(s)?*

As a part of the Nez Perce Water Rights Settlement Agreement of 2005, the Upper Snake River water users provide flow augmentation water down river for fish habitat. The amount of flow augmentation water available from the Upper Snake River system is significantly dependent upon reservoir levels. This project will help keep more water in the reservoir and therefore more water may be available in any given year for flow down river.

## Project Budget

### 1. Funding Plan and Letters of Commitment

*Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.*

CCC will fund all non-federal contributions entirely with operating revenues. CCC officially committed to fund the non-federal share of the project in its official resolution.

### 2. Budget Proposal

*The total project cost (Total Project Cost), is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project (Table 1). Note: The budget proposal must include the cost of all equipment, materials and supplies, and labor or contractual costs to complete the project.*

*Applicants must include the costs of all equipment, materials and supplies, and labor required to complete the project in the budget proposal (Table 2).*

Budget Table 1. Total Project Costs

**Budget Table 1. Total Project Budget**

Source	Amount	% of Total Projects Cost
Cost to be reimbursed with the requested Reclamation Funding	\$64,619.00	50%
Cost to be paid by Fremont-Madison	\$64,619.00	50%
<b>Total Project Cost</b>	<b>\$129,238.00</b>	<b>100%</b>



As described in budget table 1, the total cost of the project is \$129,238.00. CCC is requesting \$64,619 in WaterSMART grant funds.

Budget Table 2 Budget Proposal

Budget Item Description	COMPUTATION		Quantity Type	Total Cost
	\$/Unit	Quantity		
<b>Salaries and Wages</b>				
none	\$0.00	0	Hours	\$0.00
<b>Fringe Benefits</b>				
none	\$0.00	0	Hours	\$0.00
<b>Supplies and Materials</b>				
Chester Headgate	\$49,360.00	1	EA	\$49,360.00
Automation Equipment	\$22,378.00	1	EA	\$22,378.00
<b>Excavation Work</b>				
Excavation	\$57,500.00	1	EA	\$57,500.00
			<b>Total Project Cost</b>	<b>\$129,238.00</b>

A full breakdown of the project cost is included in Attachment C.

**3. Budget Narrative**

The budget proposal was developed using a bid from a local contractor. The contractor bid the Automation/remote operations equipment and installation together.

Final selection of the contractor will be completed in accordance with Idaho law for Irrigation Districts and any additional requirements of the WaterSMART grant program.

**Salaries & Wages**

Aaron Dalling is the project manager is a secretary of CCC. No CCC salaries or wages will be included. CCC’s staff time will be over and above the cost of the project and will not be counted toward the project cost.

**Fringe Benefits**

No fringe benefits will be required.

**Travel**

No travel will be required.

**Other Expenses**

No other expenses will be part of the project.

**Indirect Costs**

No indirect costs will be part of the project.

## ***Environmental and Cultural Resource Considerations***

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants should consider the following list of questions focusing on the NEPA, NHPA, and ESA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why.

The application should include the answers to:

- Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water[quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

**Ground disturbance for this project will be limited to previously disturbed sites and should have no negative impact on natural resources.**

**This project will have very little impact on the surrounding environment. If there is any impact it will be positive by limiting traffic, emissions etc. This project will benefit natural resources and the surrounding environment.**

- Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

**No listed species or proposed to be listed species have critical habitat near the proposed project.**

- Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have.

**This project will not impact any wetlands or Waters of the United States.**

- When was the water delivery system constructed?

**CCC was constructed in the late 1890’s.**

- Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

**Yes, the existing headgate will be removed, it was believed to be constructed in the 1970’s.**

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

**No**

- Are there any known archeological sites in the proposed project area?

**None**

•Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No

•Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

No

•Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

No

### **Required Permits or Approvals**

*Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.*

*Note that improvements to Federal facilities that are implemented through any project awarded funding through this NOFO must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see P.L. 111-11, Section 2504(a)(3)(B). Reclamation may also require additional reviews and approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 CFR Section 429, and that the development will not impact or impair project operations or efficiency.*

**There are no required permits or approvals for this project. This project is not on federal facilities.**

### **Unique Entity Identifier and System for Award Management**

We have started the process of registering with SAMS but have not yet received our cage code. We will provide it to Reclamation as soon as we have it. We will maintain the registration for the life of the agreement.

Our DUNS number is 120573527.



# Chester Canal Company

## Official Resolution 2021-01

*In the matter of the proposed WaterSMART application to United States Bureau of Reclamation (Reclamation) for new headgate equipped with automation equipment by the Chester Canal Company (CCC)*

*WHEREAS, Reclamation's Small-Scale Water Efficiency Grants provide funding to non-federal entities to implement actions to increase water supply reliability through investments in existing infrastructure; and*

*WHEREAS, Reclamation requires that Small-Scale Water Efficiency Grant applicant adopt a resolution verifying (1) the identity of the official with legal authority to enter into agreement, (2) the board of directors, governing body, or appropriate official who has reviewed and supports the application submitted, (3) the capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the funding plan, and (4) that the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement; and*

*WHEREAS, CCC desires to apply for a Small-Scale Water Efficiency Grant to assist the Canal Company with installing a new headgate equipped with automation equipment within the company, a project designed to improve water use efficiency; and*

*WHEREAS, The CCC Board of Directors have reviewed the WaterSmart Grant proposal and supports the grant application; and*

*NOW, THEREFOR, BE IT RESOLVED that CCC authorizes application to Reclamation for a WaterSMART grant and authorizes Vance Blanchard, President to enter into an agreement with Reclamation for the WaterSMART grant; and*

*FURTHER IT BE RESOLVED, that Vance Blanchard, President will represent CCC as its legal entity in the cooperative agreement; and*

*FURTHER IT BE RESOLVED, that CCC agrees to the WaterSmart funds and will work cooperative with Reclamation to meet established deadlines for entering into a cooperative agreement; and*

*FURTHER IT BE RESOLVED, that CCC shall provide or ensure the non-federal portion of the project costs.*

Dated this 12<sup>th</sup> day of March 2021.

Chester Canal Company

V. B.  
By: Vance Blanchard, President






# Chester Canal

Headgate & Automation Equipment Project

## Attachment A-Figure 1 Project Location and Plan Map

### Legend

-  Chester
-  Chester Canal
-  Headgate & Automation Equipment



Google Earth

©2021 Google

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**Attachment B**

HILL & SON EXCAVATING L.L.C.

P.O. BOX 886  
REXBURG, ID 83440  
(208) 458-4401  
FAX (208)458-4404

License Number: PWC-C-C-11840-AA-4  
Idaho Contractors Registration # RCE-20950

# Proposal

JOB NAME: Chester Canal Intake Structure  
LOCATION: Fall River

To: Vance Blanchard  
Email: vance7676@gmail.com  
Date: 03-09-2021

We hereby submit specifications and estimates for:

Demo old structure and haul off, dispose of-	\$4,000.00
Build a coffer dam to enable construction of intake structure. Approx. 120' long-	\$20,750.00
Remove coffer dam when complete, includes reusing as much as we can to improve access road into structure, banks etc. Haul off of remainder-	\$20,750.00
Dig for footings, backfill, compact around new structure with suitable material-	\$9,000.00
Dewatering during construction-	\$3,000.00

**Not Included:** This is a budgetary estimate without any final plans. Testing, permits etc. are the general contractor's responsibility. Engineering/Design or anything not specifically mentioned in this quote or out and outside of the scope of work.

We propose to furnish equipment & labor; complete in accordance with the plans and specifications for the sum of:

Fifty seven thousand, five hundred dollars and no cents. \$57,500.00

Payable as follows: Upon Completion.

All material is guaranteed to be as specified. All work to be completed, in a workmanlike manner according to standard practices. Any alterations or deviation from above specifications involving extra cost will be considered a change order and will become an extra charge over and above the estimate. All agreements contingent upon accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance. Insurance requirements will be agreed upon prior to signing contracts, any coverage above standard requirements will be added as an additional cost to the project.

Authorized Signature

NOTE: This proposal may be withdrawn by us if not accepted within 30 days.

**ACCEPTANCE OF PROPOSAL** - The prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above. Monthly Progress payments to be made 15 days after billing. Final Payment due upon completion of project. In the event the balance is not paid, the undersigned agrees to pay 1.5% interest per month until paid, together with all collection and attorney's fees incurred in collecting the sums due hereunder.

Owner / Contractor

Hill and Son Excavating L.L.C.

Signature

Date

Signature

Date

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Attachment B

K & C CONCRETE, INC.

PO BOX 520

REXBURG, ID 83440

# Estimate

Date	Estimate #
2/15/2021	1106

Name / Address
Chester Canal

Description	Qty	Rate	Total
Footing	13	350.00	4,550.00
Wall 84"x16"x12"	51	450.00	22,950.00
Wall 4"x20"x8"	2	350.00	700.00
Pad 20"x20"x12"	16	260.00	4,160.00
Pump Truck	2	1,000.00	2,000.00
Metal work	1	15,000.00	15,000.00
<b>Total</b>			<b>\$49,360.00</b>

Project

Attachment B

METCOM, INC.  
 4151 East 421 North  
 Rigby ID. 83442  
 (208)521-6403

<b>Quote For:</b>
Fremont-Madison Irrigation district

<b>Description:</b>
Automation for Fall River Canal. Flow will be maintained by adjusting gates according to desired water level at the gaging house.

Date: January 11, 2020

Part # & Quantity	Description	Unit Pr	Total
CR-1000X 1	Campbell controller/datalogger	\$ 1840.00	\$ 1840.00
CR-300 1	Data logger at Gage House	\$ 680.00	\$ 680.00
RF-451 2	Spread Spectrum radio, 1 watt	\$ 995.00	\$ 1990.00
CR-Cell 1	Campbell 4g network modem (Communications)	\$ 495.00	\$ 495.00
Cell-Ant 1	Modem antenna and cables	\$ 125.00	\$ 125.00
Ant-yagi 2	Yagi antennas for radios	\$ 135.00	\$ 270.00
Actuator 1	30,000lb actuator, limit switches, pos.sensor.	\$ 8900.00	\$ 8900.00
Encoder 1	Encoder and assemble with display	\$ 1150.00	\$ 1150.00
MOA-1 1	Manual-Off-Auto control switch box with display	\$ 595.00	\$ 595.00
Sol-100 2	100 watt solar panels	\$ 200.00	\$ 400.00
Sol-30 1	30 watt solar panel for gaging house	\$ 95.00	\$ 95.00
MetReg-7 2	Solar regualtor 7 amp, 12 volt for each battery	\$ 140.00	\$ 280.00
31series 2	Lead acid batteries, 12 volt 31 series	\$ 144.00	\$ 288.00
12-Rly-80 2	12 volt relays, 80 amp	\$ 50.00	\$ 100.00
misc. 1	Wire, mileage, fuses & holders, HD terminals, tys, etc.	\$ 350.00	\$ 350.00
Prog 1	Custom program, testing, calibrations, training, & sup-port	\$ 1500.00	\$ 1500.00
Labor 50	Installation of all equipment	\$ 50.00	\$ 2500.00
Neam 4 enclosure 1	Hoffman 30"X30" enclosure with locking handles & insulated	\$ 995.00	\$ 995.00
Nema 4 enclosure 1	Nema 16"x16"x6" enclosure at gaging house	\$ 225.00	\$ 225.00
Neam metal stand 1	Metal stand 4" C channel for Nema box & solar mounts	\$ 250.00	\$ 250.00
Metal work	Labor for attaching actuator budget, by other party	\$ 1000.00	\$ 1000.00

<b>Sub Total</b>	\$ 22,028.00
<b>Freight</b>	\$ 350.00
<b>Bal Due</b>	\$ 22,378.00