

**GARRISON DIVERSION CONSERVANCY DISTRICT
ENGINEERING AND OPERATIONS COMMITTEE**

Garrison Diversion Conservancy District

January 12, 2023

9:30 AM

A G E N D A

- 9:30 a.m. I. Pledge of Allegiance
- 9:32 a.m. II. Roll Call – Lisa Schafer
- 9:33 a.m. III. **>Consideration of Minutes** – Ken Vein
- 9:34 a.m. IV. 2022 O&M Work Plan Review
 - A. McClusky Report – Darren Murray
 - 1. Slide Repair Presentation – Ryan Anderson
 - B. New Rockford Report – Darren Murray
 - C. Snake Creek Pumping Plant – Dustin Offerdahl
- 10:05 a.m. V. **>2023 OM&R Annual Work Plan & Budget** – Ryan Anderson
- 10:15 a.m. VI. **>2023 Devils Lake Outlet Work Plan** – Ryan Anderson
- 10:20 a.m. VII. **>2023 E&O Work Plan & Budget** – Kip Kovar
- 10:25 a.m. VIII. **>2023 Master Equipment List** – Kip Kovar
- 10:30 a.m. IX. **>Snake Creek Embankment Dam Safety Mod. Study** – Duane/Kip
- 10:40 a.m. X. **Eddy County Water Resource District Request** – Duane DeKrey
- 10:50 a.m. XI. Other Business
- 10:55 a.m. XII. Adjourn

The following minutes are in draft form subject to review and approval by the Engineering & Operations Committee at its next meeting.

22-35

**GARRISON DIVERSION CONSERVANCY DISTRICT
ENGINEERING & OPERATIONS COMMITTEE**

**Holiday Inn
Fargo, North Dakota
July 12, 2022**

A meeting of the Engineering & Operations Committee of the Garrison Diversion Conservancy District was held at the Holiday Inn, Fargo, North Dakota, on July 12, 2022. The meeting was called to order by Chairman Vein at 1:15 p.m.

DIRECTORS PRESENT

Board Chairman Alan Walter
Committee Chairman Ken Vein
Director Cliff Hanretty
Director Jim Pellman
Director Mike Tweed
Secretary Kip Kovar

OTHERS PRESENT

Staff members of the Garrison Diversion Conservancy District were present along with others. The registration sheet is attached to these minutes as Annex I.

The meeting was recorded to assist with compilation of the minutes.

READING OF THE MINUTES

Motion by Director Hanretty to dispense with a reading of the January 20, 2022, Engineering & Operations Committee minutes and approve them as distributed. Second by Director Tweed. Upon voice vote, motion carried.

MCCLUSKY CANAL REFERENCE MAP

Ryan Anderson, Engineer, Garrison Diversion, referred to the McClusky Canal map, stating this is provided as a reference for canal locations.

2022 WORK PLAN REVIEW

McClusky - - Darren Murray, Superintendent, Operations & Maintenance (O&M), Garrison Diversion, provided a review of the 2022 work activities performed by the O&M crew at McClusky and New Rockford sites, which included a slide show presentation. Regular maintenance at this time consists of mowing, rock hauling, grading and spraying.

Snake Creek Pumping Plant - - Dustin Offerdahl, Plant Supervisor, Snake Creek Pumping Plant (SCPP), updated the committee on the projects and activities at the SCPP via PowerPoint, including pumping operations, tunnel inspections, installation of fiber optic cable and safety gate, shop upgrades and plant tours.

MCCLUSKY CANAL SLIDE REPAIR

Mr. Anderson provided a PowerPoint update and shared photos of the slide repair work taking place along the McClusky Canal.

To date, approximately 6,000 loads of spoil have been hauled in 2022. This equates to 105,000 cubic yards. Just under 2.4 million cubic yards have been hauled altogether. The project is approximately 93% complete.

Mr. Anderson reported they ran out of storage area on the adjacent federal property. An agreement was recently made with an adjacent landowner, and this morning work began stripping topsoil. The O&M crew will begin placing soil at the new location later this week.

Mr. Anderson also informed the committee the installation of trenchless tunnels on the McClusky Canal is being wrapped up. Cleanup work is taking place, and the contractor, Minger Construction, will be off site soon.

The approved budget for the slide repair project is \$17.5 million. Approximately \$6.4 million has been spent through the end of June. This amount will increase significantly due to fuel prices, the new landowner agreement and the bill from Minger Construction for the tunneling.

Geotechnical Investigation Task Order - - Mr. Anderson referred to the task order with Black & Veatch for geotechnical work to be completed at the McClusky Canal. Ongoing slides have resulted in a need to conduct additional soil borings to assess the levels of perched groundwater. The cost of the task order is \$74,000.

Material Testing Services (MTS), LLC, is the subcontractor, who will perform five standard penetration borings. After all field work is complete, a report will be issued, which will include:

- Description of vibrating wire piezometer (VWP) installation work (summary of work, work methods, conditions encountered)
- Description of canal conditions during installation and initial monitoring period
- Description of soil adjacent to each VWP. Description of soil horizons encountered and any unique conditions encountered; e.g., soft zones, permeable soil horizons, etc.
- Classifications of soils encountered in VWP holes supported by laboratory testing data (Atterberg Limits, natural moisture content, particle sizes, percent passing U.S. No. 200 sieve)

Motion by Director Walter to approve the geotechnical investigation task order to complete additional soil borings at the slide repair project on the McClusky Canal at a cost of \$74,000. Second by Director Tweed. Upon roll call vote, the following directors voted aye: Hanretty, Pellman, Tweed, Vein and Walter. Those voting nay: none. Motion carried.

FIVE-YEAR WORK PLAN & BUDGET

Mr. Anderson referred to the Five-Year 2022-2026 OM&R Work Plan, which was approved by the committee at its last meeting. This lays out the O&M job duties, along with milestones and completion dates.

2022 EQUIPMENT INVENTORY

Kip Kovar, District Engineer, Garrison Diversion, referred to the 2022 O&M Master Equipment List, which is the equipment owned by Garrison Diversion.

OTHER BUSINESS

Snake Creek Embankment - - Mr. Kovar commented on the Snake Creek Embankment issue and the potential for seepage. Garrison Diversion and the Bureau of Reclamation have been working on ideas to get some sort of flow to the headworks of the McClusky Canal during a drought. Black & Veatch and AE2S have been asked to prepare a study looking at the minimum flow requirements for current and future irrigation and the RRVWSP.

The Corps of Engineers (COE) is preparing a Dam Safety Modification Study, and they have come up with some alternatives to address the embankment issue. The intention was for the COE to share a preferred alternative in July.

Mr. Kovar added, in the meantime, Garrison Diversion and Reclamation are moving forward with developing a plan together. A draft plan will be brought to this committee at its next meeting.

There being no further business to come before the committee, the chairman called for a motion to adjourn.

Motion by Director Walter to adjourn the Engineering & Operations Committee meeting. Second by Director Hanretty. Upon voice vote, motion carried.

The meeting adjourned at 2:10 p.m.

(SEAL)

Kenneth Vein, Chairman

Kip Kovar, Secretary

5
REGISTRATION

Annex I
22-38

Engineering and Operations Committee
Holiday Inn
Fargo, North Dakota
July 12, 2022

NAME	ADDRESS
Lisa Schaper	GDCD
Joann DeBry	GDCD
Rumbly Cook	GDCD
Paul Cole	GDCD
Bryan Anderson	GDCD
Brian Orr	GDCD
Arnd Walter	GDCD - WARD Co.
Greg Bischoff	GDCD - Berne Co.
Dawn Murray	GDCD
Randy Ehlic	Reclamation
Mami Mami	GDCD
Mike Truel	GDCD
Kelly Hart	GDCD
Cliff Barrett	GDCD
Paul Bourque	BV
Steve M. Jagers	GDCD - Foster Co.
Kp Kam	GDCD
Jeff Hubby	AE25
Jesse Kist	AE25
Ward Koerer	GDCD
Jim Anderson	GDCD - Pierce

**GARRISON DIVERSION
CONSERVANCY DISTRICT**

**2023 OPERATION, MAINTENANCE,
and REPLACEMENT WORKPLAN
FOR TRANSFERRED WORKS**

December 27, 2022

TABLE OF CONTENTS

INTRODUCTION	1
Purpose	1
Organization	1
Operational Plan and Work Schedule.....	1
Safety Program.....	2
General.....	2
Job Safety Analysis.....	2
Training and Certification	3
Budget and Funding	3
 ROUTINE AND SPECIFIC WORK ITEMS	 4
General.....	4
Routine O&M Work at SSCP and McClusky (MM 0-59)	4
Facility Maintenance	4
Water Operations.....	5
Specific Work Items to be Performed	6
McClusky Canal (MM 0-59)	6
Snake Creek Pumping Plant.....	7
Milestone and Completion Dates	9

LIST OF APPENDICES

Appendix A (O&M Organizational Chart).....	10
Appendix B (Safety Program Summary/Training).....	11
Appendix C (OM&R Workplan for Other Project Facilities)	12
Appendix D (2023 Budget Estimate)	20

I. INTRODUCTION

A. PURPOSE

This document presents the Garrison Diversion Conservancy District's Annual Operation, Maintenance, and Replacement (OM&R) Workplan as required by the OM&R Transfer Contract 20XX620109. It details work schedules and procedures to ensure that all work performed by the Garrison Diversion O&M personnel will meet high quality standards.

B. ORGANIZATION

The Operation and Maintenance Division is an integrated portion of Garrison Diversion. The overall responsibility for the work performed by the O&M staff rests with Alan Walter, Chairman of the Board of Directors. The general operation is the responsibility of the General Manager, Duane DeKrey. The District Engineer, Kip Kovar, is responsible for the general O&M activity as needed. The General Manager is supplied with summaries of the work accomplished and other pertinent information and periodically provides input on various issues, including safety.

An O&M organizational chart is attached as Appendix A.

There is frequent communication between Darren Murray, O&M Superintendent, located in McClusky with the New Rockford office and Snake Creek Pumping Plant. These personnel work closely with the District Engineer and Staff Engineer in developing the workplan and in the overall coordination of work activities, especially safety and unforeseen or unscheduled activities. All of the O&M staff are encouraged to work closely with and input ideas to their supervisors to ensure that a cooperative and coordinated effort is being made to perform all required work efficiently, effectively and safely. A continual and genuine effort is being made to provide training in all aspects of the work effort and to utilize proper equipment and procedures to develop and implement an efficient and safe O&M program.

C. OPERATIONAL PLAN AND WORK SCHEDULE

Garrison Diversion will annually submit a detailed OM&R Workplan for Reclamation's approval. The workplan will include items to be completed for the Transferred Works and attached in Appendix C will be the workplan submitted by Reclamation for Other Project Works. However, it should be pointed out that this is a dynamic document that may change, depending on actual conditions encountered. All significant changes and activities will be closely coordinated with Reclamation. Before any major unscheduled work item is undertaken, specific plans, specifications and schedules will be submitted to Reclamation for concurrence and comments. Routine work will be performed in accordance with this annual work plan and transfer contract.

Bi-weekly accomplishment reports and schedules will be submitted to Reclamation.

Note: Transferred Works include Snake Creek Pumping Plant (SCPP), McClusky Canal O&M (MM 0-59), McClusky Canal ROW (MM 0-59), and Carrington Headquarters. Other Project works include McClusky Canal O&M (MM 59-74), McClusky Canal ROW (MM59-74), McClusky Canal Recreation, New Rockford Canal & Radio Towers, Arrowwood National Wildlife Refuge, Audubon National Wildlife Refuge, Lonetree Wildlife Management Area, Scattered Tracts, Jamestown Dam, and State and Tribal MR&I.

D. SAFETY PROGRAM

a. General

Garrison Diversion strives to develop and implement a comprehensive safety program. The Garrison Diversion Conservancy District "Safety and Health Program Manual" (Safety Manual) and "North Dakota Workers Compensation Bureau Risk Management Program" summarize many aspects of the safety program. Garrison Diversion has qualified over the past several years and is presently operating with a five percent discount granted by the North Dakota Workers Compensation Bureau.

All O&M employees have received a copy of the May 9, 2007, Safety Manual and are provided time and training to become familiar with its contents. Supervisors and employees are responsible for ensuring that safety is the number one priority. Personnel are receiving primary and advanced safety training as outlined in Appendix B. All operations will be performed in a safe manner, and safety violations will be documented and handled according to policies and procedures outlined in the Safety Manual. Judy Allmaras coordinates Garrison Diversion's overall safety program with as much of it as practical being delegated to the O&M and Carrington offices.

District employees will be guided by the following fundamental principles:

- Let no person think for even an instant that it is acceptable to set aside safe work procedures for personal convenience or to expedite a job.
- Let every person know that it is his/her responsibility to look for and eliminate hazardous working procedures or equipment.
- Let every supervisor and manager know that he/she is to be a model of a positive safety attitude at all times.

b. Job Safety Analysis

One of the best accident-prevention tools supervisors possess is the Job Safety Analysis (JSA). A JSA is a breakdown of the steps needed to safely accomplish a job, with each step being analyzed for associated hazards. Once hazards are identified, solutions can be developed to eliminate them and guard against potential accidents. JSAs are critical to the safety program and will be

developed and/or reviewed for each operation prior to initiating any work tasks. All employees involved in the work will participate in preparing the JSA. All JSAs developed previously will be reviewed and updated prior to performing a job. JSAs will be kept on file in each field office.

c. Training and Certification

Before employees are permitted to operate any equipment, they will be properly trained and certified to operate each piece required of them. Certification will be by Garrison Diversion personnel or other appropriate sources. No one will be permitted to operate any piece of equipment if not certified to do so. Records of operator certification will be kept on task training forms and maintained at the O&M offices.

Brake testing of equipment and heavy vehicles will be performed annually and vehicles certified to assure that they are in safe operating condition from this viewpoint.

Bi-weekly reports will be provided to Reclamation, which includes work accomplished during the reporting period and scheduled work for the following period. Significant issues such as training, inspections, operator certification, brake testing and other issues will also be included.

Emergency action plans will be followed, as needed, as outlined in Section XVII of Garrison Diversion's Safety and Health Manual.

E. BUDGET AND FUNDING

The budget has been prepared for January 1 through December 31, 2023, in conformance with the workplan and is shown in detail in Appendix D.

II. ROUTINE AND SPECIFIC WORK ITEMS

A. GENERAL

The workplan is divided into two parts, routine and specific work activities. Section B below discusses the routine O&M work to be performed at each area. **This work is all considered high priority.**

Specific work activities, which have been identified during various field reviews are listed in section C under their respective location subheadings. **The priorities for these specific work activities are shown by each individual item.** The specific work activities are a comprehensive list for tracking purposes. Completion of these activities may not occur within the timeframe noted in this workplan. Any incomplete specific work activities will be reviewed with Reclamation annually and carried over into subsequent workplans.

All gravel, rock and soil materials will come from archeologically approved sources.

B. ROUTINE OM&R WORK for TRANSFERRED WORKS

a. Facility Maintenance

Activities performed under facility maintenance include; building and yard maintenance, facility surveillance, vegetation control, fence maintenance, O&M road maintenance, structure maintenance, slope stabilization and drain maintenance.

Garrison Diversion personnel will perform all maintenance of buildings and yards and provide janitorial services for all office, shop, and storage facilities at SPPP, McClusky Canal, and Carrington Headquarters.

Portions of the canal and other facilities are monitored for slides, erosion, drainage and other problems on at least a weekly basis. Some activities, such as reading wells and monitoring water elevations and flows, have specific schedules to follow to ensure that all drainage facilities are operating correctly and desirable water levels in the canals are maintained within reason.

Vegetation management along the canal includes several control methods such as aerial and ground spraying, mowing, grazing, burning, or other biological non-chemical control methods. An annual "Vegetation Management Report" is prepared by Garrison Diversion and submitted to Reclamation to report on past and future activities.

Activities along the canal such as repairing fence, cleaning or removing cattle guards, and other general right-of-way related maintenance are performed as needed.

Blading, vegetation control on roads, graveling when needed, filling holes, clearing material deposited from small landslides, and other miscellaneous maintenance items are performed as needed on the McClusky Canal (MM 0-59) O&M roadways. County roads will be mowed in accordance with county regulations.

Maintenance on all structures will be performed as required so that structures are unobstructed and in an operable condition, a master schedule detailing all structures and a schedule for inspecting each type of structure will be maintained. A schedule will be maintained for recoating structures and equipment to improve the life, safety, operating efficiency, and appearance of the structures and equipment. Inaccessible features (headworks, check structures, ND Highway 200 tunnel, and cross drains) were examined in 2022. Recommended to re-inspect the facilities by 2032.

Reclamation will conduct certified bridge inspections biennially on all Type I bridges, as specified in Reclamation's master bridge inspection schedule. Garrison Diversion will inspect the abutments on all bridges across the McClusky Canal (MM 0-59). Garrison Diversion will also annually inspect and clean the bridges on the McClusky Canal (MM 0-59) in Sheridan County, for which Reclamation holds the title.

Stabilizing the cut slopes on the McClusky Canal (MM 0-59) where slope failures have occurred and replacing beach belting where existing material has been eroded are continuing efforts. Repairing slope failures and implementing measures to prevent future failures are to be evaluated with Reclamation.

Obtaining field stone to be used for rip rap throughout the canal for slope stabilization and erosion protection is an ongoing work activity. Garrison Diversion acquires the field stone from landowners with field rock piles near project facilities and then stockpiles the rock on the canal ROW. The rock is screened to separate the soil and sort by size. The soil removed during the process is used as topsoil on other projects for reseeding.

Cleaning, removal, and replacement of buried pipe drains on the McClusky Canal will be completed in accordance with a master schedule. All pipe drains will be maintained in an operational basis and inspected regularly. All drains will be cleaned, as needed, to ensure flows are not obstructed.

b. Water Operations

Garrison Diversion will cooperate with Reclamation in the management and delivery of project water to various water users for various purposes, including but not limited to the Fish and Wildlife Service, North Dakota Game and Fish Department, park boards, irrigators, landowners and ranchers, for wildlife enhancement, recreation, in-stream flow maintenance, livestock watering,

water quality improvement, irrigation, and freshening of the canal and lakes. Monitoring and recording of water supplies, flows, elevations, deliveries, water quality, and other pertinent water operations information is accomplished periodically at numerous sites by the O&M staff at McClusky. All new requests for water are directed to Reclamation. Reclamation will issue and administer all water service contracts.

Garrison Diversion will operate SCPP as specified in the *LOU for interim Operations of Audubon Lake and COE's Snake Creek Dam and Lake Audubon Reservoir Water Control Manual*. Annual water reports will be submitted to Reclamation.

C. SPECIFIC WORK ITEMS TO BE PERFORMED

*** High Priority

** Medium Priority

* Low Priority

Note: Joint reviews required are in bold letters.

a. McClusky Canal (MM0-59)

1. Investigate why in-place envelope material is solidifying around O&M road buried pipe v-ditch drains. Buried drains have been in place in the v-ditches since the early 1980s.**
2. Monitor slides between MM 22-23 left and right, **Monitor any existing French drains in the area to determine whether they are functioning and rehabilitate them as necessary. This work is to be coordinated with Reclamation.****
3. **Work with Reclamation to evaluate the need to replace upper berm drains between MM 41 and 47 and south of the shop.****
4. Remove slides near MM 39-40 left. Side slopes will be flattened to a 2.5:1. **Specific plans are to be agreed upon with Reclamation.***
5. Install French drains where needed from MM 50-54.***
6. Repairs and maintenance at the McClusky shop. Including painting overhead doors on main shop, extend concrete aprons on south side of main building, insulate the shop, and install supplementary heat source in shop bays.**
7. Conduct supplemental surveying of canal invert and structures along the canal.*
8. Analyze water operations including radial gates, MM 28 embankment, MM 52 plug, tunnel and MM 58 plug. Develop a feasibility level analysis for supplying water to the McClusky Canal for Alternative 6 (dredging a

canal), developed by the USACE, if reservoir elevation restrictions are placed on Lake Audubon.**

9. Re-set cross drain end section at MM 11 (station 641+76) that has separated.**
10. Replace grease lines and connection to trunnions at MM 38 radial gate.**
11. Repair and/or reset the lower limit switch for the MM 38 left radial gate.**
12. Repair and/or reset the lower limit switch for the MM 55 right radial gate.**
13. Spot clean and recoat corroded areas of the MM 38 radial gates and arms.*
14. Spot clean and recoat corroded areas of the MM 55 radial gates and arms. Investigate the option to fully remove and recoat gates.*
15. Purchase equipment needed for O&M operations. Equipment to be purchased include (2) tandem axle trucks with dump boxes, a service truck chassis, a 6x6 side-by-side, and a new fuel dispensing/monitoring system.
16. Make repairs to Reclamation owned bridges in accordance with the bridge inspection reports. Guard railing, posts, reflectors and fasteners need repairs on various bridges.***

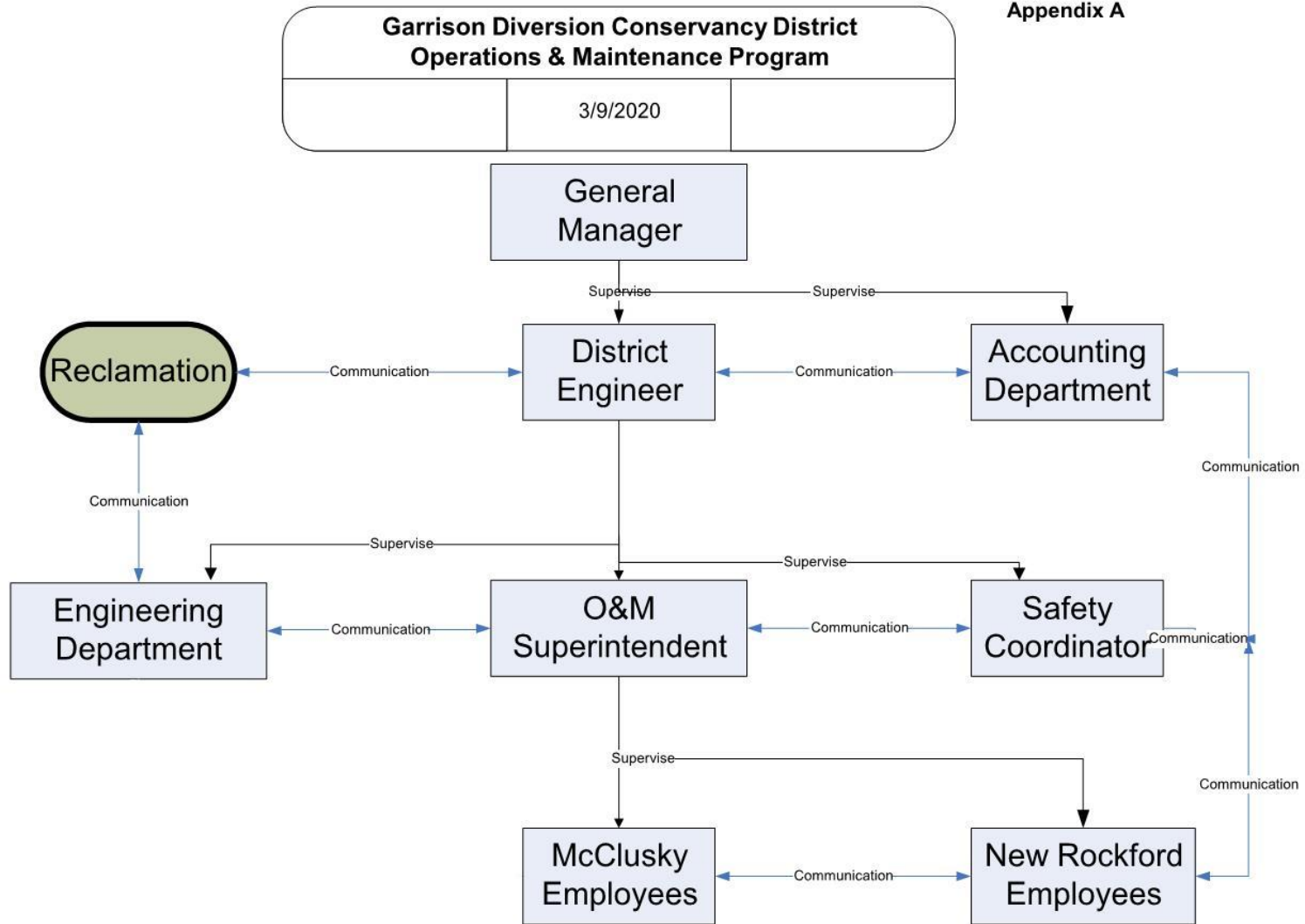
b. Snake Creek Pumping Plant (SCPP)

1. Inspect wall thickness of service water pipes. Replace as necessary.**
2. Prepare specifications and contract to recoat Unit #2 and #3 intake elbow from the intake gates to the pump bowl.***
3. Install wi-fi throughout the plant.**
4. Investigate replacing the Azone injection system and upgrading the plants domestic water to a potable system.**
5. Update domestic water tank level control system.**
6. Continue automating SCADA system.**
7. Recoat exterior of substation switchgear.***
8. Contact Siemens to program motor shutdown and high sump through security system callout.***

9. Install camera on west side of superstructure.*
10. Update Arc Flash study within facility.***
11. Replace pumps: (1) Fire Suppression, (1) Domestic Water, (1) Emergency Water.*
12. Repair holding tanks and plant sewer system.*
13. Upgrade plant security system.*
14. Perform DC ramp test and determine baseline for motor cables.***
15. Repair/replace outlet wing wall.*
16. Replace expired safety gear within plant.***
17. Investigate options for more maintenance shop storage.*
18. Coordinate demo and construction of NAWIS intake. Assure safe working and facility security are implemented throughout the construction activities. Gather and store equipment and components that would be beneficial for future maintenance. Coordinate delivery and offload of components hauled to McClusky.***
19. Renew NDPDES permit for discharges at SPCP Gather quarterly water samples and report results in accordance with the permit.***
20. Participate in Associated Facility Review.***

D. MILESTONES AND COMPLETION DATES

Tasks	Milestones	Completion Date
2	Annual jetting of Jamestown relief wells	April 15
3	Complete 1 st quarter water operations report	April 30
4	Complete maintenance and repairs on equipment, pumping plants and distribution systems in preparation for yearly water distribution	May 1
6	Reach Lake Audubon summer target elevation	May 25
7	Water up pipe laterals and pumping plants for irrigation season	June 10
8	Complete hay auction	June 15
9	Complete spring blading of O&M roads	June 30
10	Sweep bridge decks	June 30
11	Complete 2 nd quarter water samples along the McClusky Canal	June 30
12	Complete water deliveries to FWS WDA's	June 30
13	Complete summer mowing of county and township road ditches	July 15
14	Complete 2 nd quarter water operations report	July 30
15	Complete fall blading of O&M roads	Sept 1
16	Complete annual noxious weed spraying	Sept 30
17	Annual inspection of bridge abutments	Sept 30
18	Conduct joint annual inspection of New Rockford and McClusky Canals	Sept 30
19	Complete 3 rd quarter water samples along the McClusky Canal	Sept 30
20	Complete fall mowing of county and township road ditches	Sept 30
21	Dewater and winterize pipe laterals and pumping plants	Nov 15
22	Complete annual vegetation management report	Dec 31
23	Submit annual water delivery summary	Dec 31



Appendix B

GARRISON DIVERSION CONSERVANCY DISTRICT
MANDATORY ANNUAL SAFETY TRAINING

Topic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st Aid												
CPR												
Defensive Driving												
Skidsteer/Forklift												
Safety Attitude	X											
Cell Phone Safety	X											
JSAs	X											
Safety Conference		X										
Hearing Protection/Survey/Tests				X								
Eye Protection	X	X										
Head Protection	X	X										
Foot Protection	X	X										
Hand Protection	X	X										
Ladders, Slips, Trips & Falls			X									
General Safety Rules				X								
Drug/Alcohol/Medical				X								
Incident/Near Miss Reporting				X								
Health Physicals				X								
Pesticides				X								
Respirator/Fit Testing					X							
Hanta Virus/West Nile					X							
CPR/Bloodborne Pathogens					X				X			
Welding					X							
Compressed Gases					X							
Working Outdoors						X						X
Fire Protection/Mean of Egress/Emergency Plans						X						
Trenching/Excavation							X					
Lockout/Tagout Verifications							X					
Machine Guarding							X					
Hand/Power/Stationary Tools							X					
Hazard Communication/Materials/MSDS								X				
Ergonomics								X				
Housekeeping									X			
Scaffolding									X			
Rigging/Hoisting/Slings/Chains									X			
Electrical Safety										X		
Back Safety											X	
Carbon Monoxide											X	
Confined Spaces											X	
Ice/Winter Safety												X
Battery Safety												X
Asbestos												X
Painting												X
Miscellaneous Training												X

Appendix C

**GARRISON DIVERSION UNIT
OPERATION, MAINTENANCE, and
REPLACEMENT WORKPLAN
FOR OTHER PROJECT WORKS**

January 1, 2023- December 30, 2023

October 27, 2022

TABLE OF CONTENTS

A. **Purpose**..... 14

B. **General**..... 14

C. **Routine OM&R Work** 15

 a. McClusky Canal (MM 59-74) and New Rockford Canal 15

 b. Radio Towers..... 16

 c. Jamestown Dam 16

 d. McClusky Canal Recreation..... 16

 e. Other GDU Project Facilities 16

D. **Specific work Items**

 a. McClusky Canal..... 17

 b. New Rockford Canal 17

 c. New Rockford Office 18

 d. Arrowwood National Wildlife Refuge..... 18

 e. Audubon National Wildlife Refuge 18

 f. Lonetree..... 18

 g. Scattered Tracts 18

 h. Radio Towers..... 18

 i. Jamestown Dam 19

 j. McClusky Canal Recreation..... 19

E. **Milestones and Completion Dates** 19

I. INTRODUCTION

A. Purpose

This document presents Reclamation's annual operation, maintenance, and replacement (OM&R) workplan as required by OM&R Transfer Contract 20XX620109. It details work items presented to Garrison Diversion to be performed on Other Garrison Diversion Unit (GDU) Project Works, in addition to the Transferred Project Works.

B. General

Reclamation will annually submit an OM&R workplan listing work items for Other GDU Project Works to Garrison Diversion for consideration to complete. This is a dynamic document that may change, depending on actual conditions encountered. All significant changes and activities will be closely coordinated between Reclamation and Garrison Diversion. Before any major unscheduled work item is undertaken, Reclamation and Garrison Diversion will verbally concur on schedule and budget. Routine work will be performed in accordance with this annual workplan. Accomplishments will be reported to Reclamation along with accomplishment reports for the transferred works.

Other GDU Project Works, included in this Workplan: McClusky Canal mile-marker (MM) 59-74, New Rockford Canal, Lonetree Wildlife Management Area, Jamestown Dam, Arrowwood and Audubon National Wildlife Refuge mitigation features, Scattered Tracts wildlife development areas, radio towers, State and Tribal MR&I, and McClusky Canal recreation facilities. Work and costs will be tracked separately for each facility by Garrison Diversion and fully reimbursed by Reclamation according to OM&R Transfer Contract 20XX620109.

The workplan is divided into two parts, routine and specific work activities. Section C below discusses the routine OM&R work to be performed by area. All routine work is considered high priority.

Specific work activities, which have been identified during various field reviews are listed in Section D under their respective location subheadings. **The priorities for these specific work activities are shown by each individual item.**

Garrison Diversion should track maintenance in a Facilities Maintenance Checklist. Joint OM&R reviews may be scheduled between Reclamation and Garrison Diversion to ensure work is being accomplished within agreed upon priorities, schedules, and budget.

C. Routine OM&R Work

a. McClusky Canal (MM 59-74) and New Rockford Canal

Garrison Diversion is to perform all maintenance of buildings and yards and provide janitorial services for all office, shop, and storage facilities at New Rockford.

Canals and associated facilities are to be monitored for slides, erosion, drainage and other problems on at least a weekly basis. Some activities, such as reading wells and monitoring water elevations and flows, have specific schedules to follow to ensure that all drainage facilities are operating correctly and desirable water levels in the canals are maintained within reason. On the New Rockford Canal, slides within the canal prism should be covered with gravel material available from Reclamation's cleared Lonetree gravel pit to protect O&M roads and to cover canal lining.

Vegetation management along the canals includes several control methods such as aerial and ground spraying, mowing, grazing, burning, or other biological non-chemical control methods.

Activities along the canal such as repairing and removing fence, cleaning or removing cattle guards, and other general right-of-way related maintenance are to be performed as needed.

Blading, vegetation control on roads, graveling when needed, filling holes, clearing material deposited from small landslides, and other miscellaneous maintenance items are to be performed as needed on the McClusky Canal (MM 59-74) O&M roadways to maintained at least one passable O&M road along the length of the canal. The New Rockford Canal O&M roads are to be maintained with chemical and mowing methods, with blading only as necessary. County roads are to be mowed in accordance with county regulations.

Maintenance on all structures is to be performed as required so that structures are unobstructed and meet current operational needs. A master schedule detailing all structures and a schedule for inspecting each type of structure is to be maintained. A schedule is to be maintained for recoating structures and equipment to maintain the life, safety, operating efficiency, and appearance of the structures and equipment.

Reclamation will conduct certified bridge inspections biennially on all Type I bridges in accordance with their inspection schedule. Garrison Diversion is to annually inspect all bridge abutments within McClusky Canal MM 59-75 and New Rockford Canal. Garrison Diversion is to maintain McClusky Canal MM 59-74 bridges markers, attenuation systems, and remove any gravel from the bridge decks.

Cleaning, removal, and replacement of buried pipe drains of McClusky Canal MM 59-74 and New Rockford is to be completed in accordance with a master schedule. The schedule also includes jetting Jamestown Dam relief wells and toe drains. All pipe drains are to be maintained in an operational basis and inspected regularly. All drains are to be cleaned, as needed, to ensure flows are not obstructed.

Water operations on the McClusky Canal MM 59-74 and New Rockford Canal are to be maintained in a dewatered condition as much as practical.

b. Radio Towers

Garrison Diversion is to maintain the towers, buildings, and grounds at Dogden Butte and Prophets Mountain radio tower sites. Noxious weed control and site security are to be performed at the Harvey, Jamestown, LaMoure, and Devils Lake sites.

c. Jamestown Dam

Garrison Diversion is to jet clean the eight relief wells in the spring and fall; jet clean the horizontal drains and pipes in the spring; mow and spray the dam site area in late June and in mid-September; and remove snow as required for winter access.

d. McClusky Canal Recreation

For areas open to the public, maintain lands and facilities necessary to provide minimum basic facilities to meet public health and safety standards, primarily in the Chain-of-Lakes Area. This includes routine maintenance of restroom facilities, boat docks, boat ramps, parking areas, camp sites, fire rings, signs, and garbage pickup. It also includes spraying noxious weeds, managing the vegetation, and mowing parking areas and fire breaks. Standard operating procedures (SOP) have been developed for describing the facilities, O&M activities, schedules, and procedures. The SOP is reviewed annually and updated as necessary by Reclamation and Garrison Diversion.

e. Other GDU Project Works

Reclamation may ask Garrison Diversion to provide assistance on maintenance of other GDU Project Works as needed. This work is typically short-term projects, occurs unexpectedly, and is difficult to plan for. An example of this work item, which has occurred in the past, is setting up emergency pumping operations for Tribal MR&I systems. Garrison Diversion has the equipment and personnel expertise to complete this work in the most efficient and economical manner without disruption to another OM&R work on GDU. In the event such work activities occur, they will be handled as unscheduled work activities and closely coordinated between Reclamation and Garrison Diversion.

D. Specific Work Items

*** High Priority

** Medium Priority

* Low Priority

a. McClusky Canal (MM 59-74)

- Fix v-ditch at MM 62L.***
- Remove any trees within 100 feet from any canal embankment/fill areas. ***
- Inspect all cross-drainage siphons and culverts and re-set or grout end sections that have separated. **

b. New Rockford Canal

- Inspect significant New Rockford Canal features that are typically inundated with water (stations 433+91, 1390+54, 1620+86, and 2221+58).** (O&M Recommendation 2019-2-B)
- Inspect and repair cross drain end sections that have separated from the conduits. *** (O&M Recommendation 2019-2-C)
It is suggested that two cables or bars be attached from the end section to the conduit to prevent separation from happening again.
- The cross drain at MM 28.5L needs to be repaired. Resetting the inlet may not be possible. Repairs could include grouting, installing a metal plate or tie the inlet and the culvert with metal strapping.
- Monitor the voids under abutments concrete pile caps of bridges NR1-7, NR1-8, and NR1-9. Add material to the bridge abutments in the canal prism that are exhibiting settling. It is suggested to fill to a 3:1 slope. Need to backfill the abutments of bridge NR1-12. Additional settlement has occurred at the previous grouted repair.*
- Drain oil from all the radial gate gearboxes, as many of them have started to leak. *
- Remove the sediment in front of the field culvert located on the James River Drain 9.
- Repair pump No. 1 of the relief well located at approximate MM 7.4 (station 389+80). Pump has been installed, but discharge pipeline within manhole needs repair. (O&M Recommendation 2019-3-A)

- Seal the downstream headwall of bridge structure NR1-11 with Dural 335 or similar product. (O&M Recommendation 21-2-A). ***
- Woody vegetation should be sprayed or removed from within the prism of the canal and bridge prisms. ***

c. **New Rockford Office**

- Replace damaged concrete sidewalks***
- Adjust front door to open and close freely. ***
- Investigate the tar-like substance appearing in the yard. Remove and dispose of per Reclamation's direction. *** Once given the State's approval on the voluntary clean-up plan, properly excavate and dispose of the tar-like substance in the NR field office yard.

d. **Arrowwood National Wildlife Refuge**

- Replace wire connections to electrodes within the fish barrier culverts. ***
- Place riprap within bypass channel prism south of CR44.***

e. **Audubon National Wildlife Refuge**

- Gather field stones for later use on Audubon dike repairs, stockpile at the McClusky Canal Headworks. Gather and screen rockpiles on refuge as directed by FWS. *
- Repair erosion on Norland dike.*

f. **Lonetree**

No specific work schedule for 2023.

g. **Scattered Tracts**

No specific work scheduled for 2023.

h. **Radio Towers**

- Work together with Reclamation to decommission radio tower sites as determined necessary. *
- Conduct a joint site review of all radio tower sites with Reclamation. *

i. **Jamestown Dam**

- Fabricate and install a galvanized ladder into east toe drain inspection well.***
- Install cofferdam in outlet works channel to allow for inspection of the stilling basin concrete repairs.***
- Contract for mold remediation of the adit.***

j. **McClusky Canal Recreation**

- Finish camp host site connections.***
- Transplant trees.***
- Install new campsite markers.***
- Purchase new storage unit.*
- Repair boat ramps at COL.*
- Gravel access roads at COL.*
- Investigate and repair East Park Lake Dump Station.***
- Shoreline stabilization at New Johns.*
- East Park Lake swim beach development.*
- East Park Lake campsites access road.*

E. MILESTONES AND COMPLETION DATES

Tasks	Milestones	Completion Date
1	Clean and prepare Chain of Lakes for public use	May 20
2	Complete hay auction	June 15
3	Inspect and maintain Chain of Lakes for public use	June 30
4	Complete spring blading of roads	June 30
5	Sweep bridge decks	June 30
6	Jamestown spring mowing, spraying, & jetting of relief wells	July 1
7	Complete summer mowing of county and township road ditches	July 15
8	Complete fall blading of O&M roads	Sept. 1
9	Inspect and maintain Chain of Lakes for public use	Sept. 20
10	Complete annual noxious weed spraying	Sept. 30
11	Annual inspection of bridge abutments	Sept. 30
12	Conduct joint annual inspection of New Rockford and McClusky Canals	Sept. 30
13	Complete fall mowing of county and township road ditches	Sept. 30
14	Jamestown fall mowing, spraying, & jetting of relief wells	Sept 30

OMR Contract # 20XX620109
Budget FY 2023

BUDGET ITEM DESCRIPTION	Transferred Works Jan 1 to Dec 31, 2023	Other Project Works Jan 1 to Dec 31, 2023	Total Budget Jan 1 to Dec 31, 2023
SALARIES AND WAGES			
O&M Wages	\$ 804,600.00	\$ 215,800.00	\$ 1,020,400.00
Management Salaries	\$ 100,696.28	\$ 37,603.72	\$ 138,300.00
Total Wages	\$ 905,296.28	\$ 253,403.72	\$ 1,158,700.00
FRINGE BENEFITS			
O&M Benefits	\$ 374,086.68	\$ 100,213.32	\$ 474,300.00
Management Benefits	\$ 44,176.68	\$ 15,823.32	\$ 60,000.00
Total Benefits	\$ 418,263.36	\$ 116,036.64	\$ 534,300.00
TRAVEL			
Travel	\$ 2,247.03	\$ 5,952.97	\$ 8,200.00
TRAINING			
Training	\$ 912.00	\$ 688.00	\$ 1,600.00
EQUIPMENT			
Equipment Maintenance	\$ 173,273.33	\$ 42,726.67	\$ 216,000.00
Equipment Lease	\$ 8,000.00	\$ -	\$ 8,000.00
Equipment Purchase	\$ 180,600.00	\$ 239,400.00	\$ 420,000.00
Total Equipment	\$ 361,873.33	\$ 282,126.67	\$ 644,000.00
SUPPLIES/MATERIALS			
Supplies	\$ 140,164.07	\$ 85,835.93	\$ 226,000.00
Materials	\$ 361,500.00	\$ 60,000.00	\$ 421,500.00
Total Supplies & Materials	\$ 501,664.07	\$ 145,835.93	\$ 647,500.00
CONTRACTUAL SERVICES			
Engineering	\$ 49,740.00	\$ 33,160.00	\$ 82,900.00
Professional Services	\$ -	\$ 10,000.00	\$ 10,000.00
Total Contractual Services	\$ 49,740.00	\$ 43,160.00	\$ 92,900.00
OTHER			
Utilities	\$ 25,986.41	\$ 53,213.59	\$ 79,200.00
Safety	\$ 58,294.70	\$ 19,705.30	\$ 78,000.00
Miscellaneous	\$ 4,058.39	\$ 10,841.61	\$ 14,900.00
Total Other	\$ 88,339.51	\$ 83,760.49	\$ 172,100.00
TOTAL DIRECT COSTS	\$ 2,328,335.57	\$ 930,964.43	\$ 3,259,300.00
INDIRECT COSTS			
TOTAL INDIRECT COSTS- Rate 27.8%	\$ 575,247.49	\$ 175,574.91	\$ 750,822.40
TOTAL PROJECT COSTS	\$ 2,903,583.06	\$ 1,106,539.34	\$ 4,010,122.40

*Transferred works include:

Snake Creek Pumping Plant
McClusky Canal O&M (MM 0-59)
McClusky Canal ROW (MM 0-59)
Carrington HQ non-routine costs

**Other Project works include:

McClusky Canal O&M (MM 59-74)
McClusky Canal ROW (MM 59-74)
McClusky Canal Recreation
New Rockford Canal & Radio Towers
Arrowwood National Wildlife Refuge
Audubon National Wildlife Refuge
Lonetree
Scattered Tracts
Jamestown Dam
Tribal MR&I

**Garrison Diversion Conservancy District
Operations and Maintenance Division
Committed Funds from Year 2022**

<u>Equipment</u>		<u>Amount</u>
1-ton pickup	\$	32,374.00
Heavy Haul Trailer	\$	87,110.00
Self-Propelled Sprayer	\$	263,675.00
Compact Track Loader	\$	44,702.22
Total Equipment Contracts	\$	427,861.22
<u>Contracted Services</u>		
Class 5	\$	97,500.00
Envelope Rock	\$	48,000.00
	\$	-
Total Contracted Services	\$	145,500.00
<u>Professional Services</u>		
Task Order 1.25 - SC REM Alt Feasibility	\$	53,586.90
Task Order 1.27 Snake Creek Structure Repairs	\$	21,000.00
KLJ New Rockford VRAP	\$	10,660.00
Total Professional Services	\$	10,660.00
Total Committed Funds	\$	584,021.22
<u>Total Committed Funds Subject to Indirect</u>		
	\$	156,160.00
	\$	-
	\$	156,160.00
Indirect Cost Rate 2023	X	27.80%
Indirect Cost on Committed Funds	\$	46,582.53
Total Cost Committed Funds	\$	630,603.75

Garrison Diversion Conservancy District
Operations and Maintenance Division
Estimated Appropriation

2022 Committed Funds	\$	630,603.75
<u>2023 Program Work Budget</u>	\$	<u>4,010,122.40</u>
2023 Estimated Funds Needed	\$	4,640,726.15

2023 Maintenance Work Plan Devils Lake Outlet

State Water Commission
and
Garrison Diversion Conservancy District

January 5, 2023

1) Introduction

The State Water Commission (SWC) owns and manages the Devils Lake Outlet. The outlet consists of an intake located on Round Lake, two pumping stations, 10.3 miles of canal, 3 miles of pipeline and an outlet discharge structure. The Garrison Diversion Conservancy District (Garrison Diversion) has a Memorandum of Understanding dated April 21, 2006, with the SWC to perform general maintenance work.

All work is coordinated and requested by the Devils Lake Outlet manager. Routine work items will be scheduled between the outlet manager and the New Rockford foreman.

Additional work items will be coordinated between the outlet manager and the O&M Superintendent at McClusky. Sufficient time should be allowed for Garrison Diversion to mobilize their work force. A summary of work items should be sent to Garrison Diversion in April of each year.

2) Contacts

- i) SWC – Jeff Trana, Outlet Manager (701) 527-4873
- ii) SWC – Chris Korkowski, Investigations Section Chief (701) 328-2762
- iii) Garrison Diversion - Vern Schafer, O&M Operator II (701) 947-2001
- iv) Garrison Diversion - Darren Murray, O&M Superintendent (701) 363-2950
- v) Garrison Diversion - Kip Kovar, District Engineer (701) 652-3194
- vi) Garrison Diversion - Scott Mehring, Master Electrician (701) 947-2001

3) Routine Work

- i) Spraying - Typically, spraying will be accomplished twice a year. Garrison Diversion will spray once in the spring, and the SWC will spot spray in the fall. The outlet manager will assist Garrison Diversion in identifying all outlet right-of-ways.
- ii) Mowing - The outlet manager will identify areas which are to be mowed twice a year. State law opens mowing on July 15 of each year.
- iii) Fence Repair - The outlet manager will identify areas to be fixed. Supplies will be provided by the SWC.
- iv) Water Sampling - Weekly water samples are taken and sent to the North Dakota Health Department. Twelve locations on the Red and Sheyenne Rivers are sampled each week. On the Sheyenne River, three sites are near the West Outlet,

and one each at Warwick, East Outlet, Tolna Dam, Pekin, Cooperstown, Lake Ashtabula, Baldhill Dam, Lisbon and Horace. On the Red River, the sites are at Harwood and Halstad. Sampling at the Lake Ashtabula, Harwood and Halstad sites are rotated every other week and the Tolna dam site is sampled twice a summer.

- v) Operating Outlet - Garrison Diversion provides one employee to work directly with the Devils Lake Outlet manager on an on-call basis to operate the facilities.
- vi) Weed Removal - The open canal, along with trash racks, need to be cleaned due to weed growth in the canal. Equipment required in the past has included anything from a hand rake up to a small excavator.

4) Additional Work Items

- i) Erosion control will be coordinated in conjunction with water operations.
- ii) Additional items to be coordinated with the State Water Commission.
- iii) All of the above work items also apply to the newly constructed East End Outlet.

2023 WORK PLAN

Garrison Diversion Conservancy District

A. Engineering & Operations

1. Maintain quality staff and equipment
2. Implement "5-Year Work Plan"
3. Complete 2023 annual work plan on GDU facilities
4. Complete 2023 annual work plan for Devils Lake Outlet maintenance
5. Complete 2023 LAWA water quality monitoring plan
6. Complete 2023 work plan for McClusky Canal Irrigation Projects
7. Assess the future utilization of the New Rockford Canal

* 2023 additions

GARRISON DIVERSION CONSERVANCY DISTRICT
BUDGET EXPENDITURES
 January 1, 2023 to December 31, 2023

	Budget 2022	Budget 2023
GDU O & M		
Salaries & Benefits	\$2,247,266	\$1,921,000
Salaries	\$1,446,050	\$1,183,000
Benefits	\$801,217	\$738,000
Travel	\$17,115	\$14,000
Training	\$9,000	\$4,000
Utilities	\$87,000	\$93,000
Contracted Services (Eng / Survey)	\$280,000	\$423,000
Supplies	\$652,000	\$225,000
Equipment Purchases	\$385,000	\$400,000
Small Equipment Purchases	\$15,000	\$11,000
Equipment Rental	\$112,000	\$50,000
Equipment Maintenance	\$286,240	\$505,000
Safety	\$58,985	\$53,000
Miscellaneous	\$22,000	\$13,000
Materials	\$417,000	\$475,000
Total GDU O & M	\$4,588,606	\$4,187,000

O&M Master Equipment List

Asset No.	Type	Description
107	Dozer	2019 D6 Dozer
108	Dozer	2010 D8 Dozer
218	Loader	821XR Case Loader
219	Loader	2014 950K Loader
220	Loader	2017 Doosan DL250-5
253	Forklift	99 Hyster 60 Forklift
254	Skidsteer	2021 Bobcat T770
256	Skidsteer	2017 T770 Bobcat
257	Skidsteer	2017 T770 Bobcat Track Loader
258	Skidsteer	2021 Bobcat 5600T Toolcat
		Mowere, Snowblower
260	Backhoe	2022 Case 580SN WT
333	Excavator	Bobcat E85
334	Excavator	2014 329L Excavator
335	Excavator	2015 Volvo EC350EL
353	Miscellaneous	1986 GMC Boom Water Truck
358	Miscellaneous	2011 Peterbilt Vactor
409	Dump Truck	2022 Freightliner Truck
431	Dump Truck	2007 Sterling Dump Truck
432	Dump Truck	2007 Sterling Dump Truck
433	Dump Truck	2013 Mack Elliptical Truck
434	Dump Truck	2014 Mack Truck
435	Dump Truck	2017 Mack Truck
436	Dump Truck	2017 Mack Truck
437	Dump Truck	2017 Western Star
447	Semi	2006 Semi Kenworth
448	Semi	2012 Freightliner
450	Trailers	Pipe Trailer
451	Trailers	2021 Aluma 8114SR Utility Trailer
452	Trailers	Towmaster Trailer(4 Axle)
453	Trailers	Fuel/Def Trailer-FST990
454	Trailers	Load King 2466 Belly Dump
455	Trailers	Load King 2466 Belly Dump
456	Trailers	2020 DCT 833WT Gooseneck
457	Trailers	
458	Trailers	2013 Utility Office Trailer
459	Trailers	Big Tex 20' Car Trailer
460	Trailers	2022 Big Tex 14ET-22BK-MR
461	Trailers	2015 Big Tex Gooseneck
462	Trailers	Paint Cargo Trailer
463	Trailers	1994 Semi-Van Trailer

Asset No.	Type	Description
464	Trailers	ATV Trailer
466	Trailers	Pintle Hook 28' Trailer
467	Trailers	Enclosed Drill Rig Trailer
468	Trailers	Enclosed Trailer(job)
469	Trailers	Enclosed Trailer(job)
470	Trailers	20' Car Trailer
471	Trailers	2009 Heavy Haul
472	Trailers	Flatbed Trailers
	Miscellaneous	Coats Truck Tire Machine
	Miscellaneous	Tire Balancer
	Miscellaneous	Hofman Tire Changer
	Miscellaneous	Blue Office Trailer
475	Trailers	Orange Fuel Trailer-NR
476	Trailers	Pipe Trailer
477	Trailers	Pipe Trailer
478	Small Special	Spiffy Biff
479	Small Special	Compactor for Excavator
480	Small Special	Power Creed
481	Small Special	Chain Saw
482	Small Special	Wacker Compactor
483	Small Special	Flat Plate Compactor
484	Small Special	Concrete Saw
485	Small Special	Chop Saw
486	Small Special	Weed Eater
487	Small Special	Push Mower
488	Small Special	Pressure Washer
489	Small Special	80" Brushcat
653	Mower	2020 Ferris Mower
490	Small Special	Post Hole Digger
491	Small Special	Pallet Forks
492	Small Special	Grapple Forks
493	Small Special	Trencher
494	Small Special	36" Power Troll
495	Small Special	Soft Cut Saw
496	Small Special	2011 185 Air Compressor
497	Small Special	Laser Plane
498	Small Special	Laser Plane
499	Small Special	Broom for Skidsteer
500	Miscellaneous	1975 GMC Truck
502	Small Special	12' Ford Disc
503	Small Special	Shop Metal Cutting Saw
504	Small Special	Cement Mixers
505	Miscellaneous	1999 F450 Spray Truck

Asset No.	Type	Description
507	Small Special	Ice Auger
508	Small Special	Ice Auger
509	Small Special	Iron Worker
510	Small Special	Bobcat Snowblower Attach
511	Small Special	Marco Sandblaster
512	Small Special	Schmidt Sandblaster
513	Small Special	Bomag Jumping Jack Compactor
514	Small Special	Sheeps Foot Roller
515	Small Special	Light Plant
516	Small Special	Bob Installer
517	Small Special	Aaladin Pressure Washer
518	Small Special	Bobcat Snowblower Attach
519	Small Special	Grizzly
521	Small Special	Seeder Transferred from LT
522	Major Slide	Birchland Straw Crimper
523	Major Slide	Haybuster 2660 Bale Processor
524	Major Slide	Bale Spear
525	Small Special	Fence Winder
564	Blade	160MA 3 Motor Grader
655	Mower	Ferris Mower
654	Tractor	2002 NH TM125
707	Mower	Rouse 9 Foot 3 PT Mower
661	Tractor	2011 Case 130 Puma
662	Tractor	2001 TT70S Terratrak
664	Tractor	231S Massey Ferguson
666	Tractor	2017 Kioti PX 1053
667	Tractor	Challenger 485TD
670	Tractor	5610 Ford Tractor
674	Specialty	1974 Delphi Boat/Trailer
675	Specialty	Monarch Boat/Trailer
676	Specialty	Pontoon
677	Specialty	2011 Tree Spade
679	Specialty	Small Boat Trailer
680	Specialty	Portable Shed On Trailer
695	ATV	2021 CanAm
696	ATV	2015 Polaris 6x6
697	ATV	Artic Cat ATV
699	ATV	2004 Polaris Sportsman
702	Specialty	1993 3pt Snowblower
704	Specialty	2001 Nordberg Rock Screen
706	Sprayers	3Pt Sprayer for 5130
708	Mower	235 JD Riding Mower
710	Mower	930D Grasshopper

Asset No.	Type	Description
712	Mower	2002 Schulte Batwing Mower
713	Mower	Woods Dual Mower
718	Mower	FX1800 Schulte Batwing
721	Mower	Riding Mower
730	Mower	44" Trail Mower
723	Sprayers	ATV Sprayer
724	Sprayers	2009 Pickup Mounted
725	Sprayers	2009 Pickup Mounted
726	Specialty	Drill Rig for F450 Ford
727	Sprayers	ATV Sprayer
728	Specialty	Gas Drill
730	Mower	Terra Trac Flail Mower
752	Pumps	
753	Pumps	3" Honda Pump-WT3ox
754	Pumps	6" Godwin Dri-Pump
755	Pumps	2" Honda Transfer-Water Truck
756	Pumps	6" Pump
758	Pumps	Tank
759	Pumps	1992 GX160 2"-Spray Water Truck
760	Pumps	3" Pump
761	Pumps	12" Cat 3126 Motor
761	Pumps	Cornell Pump 10RB-RP-F18D8
	Pumps	Model 3126 Industrial Motor
762	Pumps	6" Cornell Pump Trailer
763	Pumps	Propelled
771	Pumps	Oakes Drain Pump
778	Pumps	Black Honda Pump-6.0
779	Pumps	Red Honda Pump-Vac Truck
780	Pumps	3" Gorman Rupp Pump
801	Pumps	Hearte Butte Pump
803	Specialty	Honda 6500 Generator
806	Specialty	GPS/Sonar
807	Specialty	Honda Air Compressor
808	Specialty	A/C Reclaimer
810	Specialty	Honda Suitcase Generator
830	Pickups/SUV	2018 Dodge Tradesman-Ryan
831	Pickups/SUV	2020 Chevy 1500 4WD Crew
833	Pickups/SUV	2020 Ford Expedition
834	Pickups/SUV	2021 F250
839	Pickups/SUV	2017 Dodge Ram Dually
841	Pickups/SUV	2017 Chevy Flatbed
849	Service Trucks	1987 Chevy Service Truck
851	Service Trucks	Enpac Unit-850 Service Truck

Asset No.	Type	Description
852	Service Trucks	2017 Dodge Ram
856	Pickups/SUV	1996 2500 Chevy Extended
863	Pickups/SUV	2007 Chevy 2500 Ext
864	Pickups/SUV	2019 Ford F350
865	Service Trucks	2008 F350 Electrical
866	Pickups/SUV	2008 Chevy 1 Ton-Sold GDCD
869	Pickups/SUV	2018 Dodge Tradesman
870	Miscellaneous	1985 GMC Stakebed
875	Pickups/SUV	2006 Chevy Colorado-Totaled
901	Major Slide	JD Tractor #1
902	Major Slide	JD Tractor #2
903	Major Slide	Case Tractor#1
904	Major Slide	Case Tractor#2
911	Major Slide	JD Scraper #1
912	Major Slide	JD Scraper #3
913	Major Slide	Ktec Scraper#1
914	Major Slide	Ktec Scraper#3
921	Major Slide	JD Scraper #2
922	Major Slide	JD Scraper#4
923	Major Slide	Ktec Scraper#2
924	Major Slide	Ktec Scraper#4
930	Major Slide	349F Excavator
940	Major Slide	Freightliner Water Truck
	Major Slide	Leicha Machine Control
	Pickups/SUV	1999 Ford F450
	Small Special	Winch for D8
	Small Special	Integrated Tool Carrier
	Small Special	Diamon Air Compressor



GARRISON DIVERSION
 CONSERVANCY DISTRICT
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 gdcdd@gdcdd.org
 www.garrisondiversion.org

January 6, 2023

Jeff Greenwald
 Planner / Project Manager
 Omaha District, USACE
 1616 Capital Avenue
 Omaha, NE 68102

Re: Snake Creek Dam Safety Mod Study – Socioeconomic Analysis Comments

Dear Mr. Greenwald:

Per your recent request, Garrison Diversion has provided a review of the Socioeconomic Analysis that was provided as Appendix A6 of the Snake Creek Dam Safety Mod Study. Our review focused primarily on Section 5 of the Appendix titled *Lost Benefits Associated with Embankment Failure and WCMD*. More specifically, our review focused on Section 5.10 of Appendix A6 which provided an analysis of the lost benefits associated with the Garrison Diversion led MR&I Water Supply Projects (i.e., RRVWSP, ENDAWS, and CNDAWS) from the Water Control Manual Drawdown (WCMD) measures. Although we did provide a complete review of the entire Appendix, in the interest of brevity and to emphasize our most significant comments on the analysis, this letter focuses primarily on our comments regarding the methodology utilized to determine the lost benefits for each of these MR&I projects.

Below is a summary of our primary comments on the analysis by section reference:

- **5.10.3 – ENDAWS and CNDAWS Usage** – This section states that the counties served by these projects “*have access to normal levels of potable water for MR&I uses currently; however, a severe and prolonged drought may threaten the current water sources. This means that in normal years, or wet years, these counties would rely little on these projects for MR&I water.*” It should be pointed out that this statement is accurate for current usage, however, both of these projects have significant planned capacity for water dedicated to future industrial expansion that once operational will rely entirely on these supplies. For this reason, Equation 1 and Equation 2 summarized in this section do not represent the likely impacts to water supply for industry that will primarily be served by these projects and that will not exist if their supply is interruptible based on the WCMD.
- **Section 5.10.4 – CNDAWS Methodology** – This section summarizes how demands were analyzed for water from the CNDAWS project. The section analyzes demands for CNDAWS water based solely on household use. This is a flawed underlying assumption since none of this water is intended for domestic household use and the supply is entirely dedicated to industry. The associated CNDAWS benefit calculations are therefore inaccurate as the economic impact of the loss of this supply relative to household water price increases is irrelevant. A more accurate approach would be to analyze the comprehensive impacts associated with the loss of industry due to a complete loss of water supply.

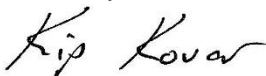
Jeff Greenwald
January 6, 2023
Page 2

- **Section 5.10.5 – ENDAWS Methodology** – Similar to Section 5.10.4, the ENDAWS approach to analyzing benefits is entirely based on household demands. Although ENDAWS capacity is not entirely dedicated to industry, major portions of the project are intended to serve industrial expansion for the area of service. Therefore, pricing benefits of ENDAWS based entirely on the estimated impact to the cost of household water across the project service area is also fundamentally flawed.
- **Section 5.10.6 – Loss of Benefits from Drawdown** – This section provides a calculation to show the loss of benefits in any single year should be weighted down per Equation 2 in Section 5.10.3 to recognize the projects are backup water supplies. Per the comments above on Section 5.10.3, the calculations in this section are also fundamentally flawed as they fail to represent that there will be industry served by ENDAWS and CNDAWS that will rely entirely on these projects as a primary water supply and that will likely not exist if these projects provide interruptible service due to the WCMD measures.
- **Section 7 – NED Costs and Benefits** – Based on the concerns noted regarding the methodology utilized to determine the Loss of Benefits for the ENDAWS and CNDAWS projects, we do not believe the Benefit Cost Ratios calculated in this section are an accurate representation of the actual economic impacts from the proposed WCMD measures.

We appreciate the extensive work that the USACE has done on the EA. Our overall comment is that the EA does not adequately account for the significant economic impacts on North Dakota resulting from an inadequate water supply during a drought.

We expect to have technical comments on other portions of the EA during the public comment period. Thank you for considering these comments.

Sincerely,



Kip Kovar, PE
District Engineer