

**GARRISON DIVERSION CONSERVANCY DISTRICT**

**ENGINEERING & OPERATIONS COMMITTEE**

**Garrison Diversion Conservancy District  
Carrington, North Dakota  
January 20, 2022**

A meeting of the Engineering and Operations Committee of the Garrison Diversion Conservancy District was held on January 20, 2022, at the Garrison Diversion Conservancy District, Carrington, North Dakota. The meeting was called to order by Chairman Vein at 11:15 a.m.

**DIRECTORS PRESENT**

Board Chairman Alan Walter  
Committee Chairman Ken Vein (by video conference)  
Director Jim Pellman  
Director Mike Tweed  
Secretary Kip Kovar

**DIRECTORS ABSENT**

Director Cliff Hanretty

**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 Tweed to dispense with a reading of the July 14, 2021, Engineering & Operations Committee minutes and approve them as distributed. Second by Director Walter. Upon voice vote, motion carried.**

**2021 WORK PLAN REVIEW**

**McClusky** - - Darren Murray, Superintendent, Operation & Maintenance (O&M), Garrison Diversion, provided a review and shared photos of 2021 work activities performed by the O&M crew at McClusky.

### Slide Repair Presentation

Ryan Anderson, Engineer, Garrison Diversion, provided an update and shared photos of the slide repair work taking place along the McClusky Canal.

Work on the slide repair began March 9, 2021, and went until November 29, 2021. To date, approximately 130,000 total loads of dirt have been hauled. For 2021, roughly 38,000 loads were hauled, which equates to 675,000 cubic yards. The earth work portion of the project is approximately 90 percent complete.

Mr. Anderson stated the tunneling to be performed by Minger Construction is expected to be completed by the end of June 2022.

Approximately \$5.5 million of the slide repair budget has been expended.

**New Rockford** - - Mr. Murray reported that minimum maintenance work continues at the New Rockford site consisting of mowing and vegetation control. A project was also done to increase the working space and cold storage area of the shop building.

**Snake Creek Pumping Plant** - - Mr. Anderson gave a summary of 2021 work activities accomplished at the Snake Creek Pumping Plant (SCPP).

Kip Kovar, District Engineer, Garrison Diversion, added there will be a lot of work coming up in 2022 at the SCPP between the O&M crew and the Department of Water Resources on the NAWS Project.

### 2022 O&M WORK PLAN & BUDGET

Mr. Anderson presented and reviewed the 2022 Operation, Maintenance and Replacement (OM&R) Work Plan dated November 30, 2021, which is submitted annually to the Bureau of Reclamation (Reclamation). The work plan lays out the work items for the year and the guidelines to be followed. It is split out into transferred and non-transferred projects. The primary portion pertains to the transferred projects, which includes the SCPP and the McClusky Canal Mile Marker 0 to 59. The non-transferred projects include the Lonetree Wildlife Management Area, Arrowwood National Wildlife Refuge, Jamestown Dam, New Rockford Canal, McClusky Canal Mile Marker 59 to 74 and McClusky Canal recreation. A copy of the work plan is attached to these minutes as Annex II.

Mr. Anderson stated the 2022 OM&R budget is \$3,931,361.

**Motion by Director Walter to approve the 2022 Operation, Maintenance and Replacement Work Plan & Budget. Second by Director Pellman. Upon roll call vote, the following directors voted aye: Pellman, Tweed, Walter and Vein. Those voting nay: none. Absent and not voting: Hanretty. Motion carried.**

### 2022 DEVILS LAKE OUTLET WORK PLAN

Mr. Anderson presented the 2022 Devils Lake Outlet Work Plan. This lays out the work the Garrison Diversion O&M division assists with at the Devils Lake Outlets, which includes

spraying, vegetation control and monitoring of pumping operations. A copy of the work plan is attached to these minutes as Annex III.

All work is coordinated and requested by the Devils Lake Outlet manager.

**Motion by Director Walter to approve the 2022 Devils Lake Outlet Work Plan. Second by Director Tweed. Upon roll call vote, the following directors voted aye: Pellman, Tweed, Vein and Walter. Those voting nay: none. Absent and not voting: Hanretty. Motion carried.**

#### **2022 E&O WORK PLAN & BUDGET**

Mr. Kovar reviewed the committee's list of 2022 Engineering & Operations work items and budget. A copy of the work plan and budget are attached to these minutes as Annex IV.

**Motion by Director Tweed to approve the 2022 Engineering & Operations Work Plan and Budget. Second by Director Pellman. Upon roll call vote, the following directors voted aye: Pellman, Tweed, Vein and Walter. Those voting nay: none. Absent and not voting: Hanretty. Motion carried.**

#### **2022 EQUIPMENT LIST**

Mr. Kovar referred to the 2022 O&M Master Equipment List, which is provided for the committee's information.

#### **OTHER BUSINESS**

There being no further business to come before the committee, the meeting adjourned at 12:15 p.m.

(SEAL)

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Kenneth Vein, Chairman

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Kip Kovar, Secretary

# REGISTRATION

Engineering and Operations Committee  
Garrison Diversion Conservancy District  
Carrington, North Dakota  
January 20, 2022

NAME	ADDRESS
Jim Fellman	Sheridan Co.
Alan Miller	Ward Co. - GDCD
Randy Ehler	Reclamation - Bismarck
Ryan Anderson	GDLI
I name (Jo Krey)	GDLI
Brett Johnson	AEZS
Mike Tweed	Cody Co.
Kp Kover	GDCD
Daren Murray	GDCD
Lisa Schaper	GDCD

**GARRISON DIVERSION  
CONSERVANCY DISTRICT**

**2022 OPERATION, MAINTENANCE,  
and REPLACEMENT WORKPLAN  
FOR TRANSFERRED WORKS**

November 30, 2021

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## **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 Ken Royse, 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, 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.

The Safety Manual was updated May 9, 2007. All O&M employees received copies of the 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, 2021 through December 31, 2021 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 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.

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 at 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 SSCP as specified 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 1980's. \*\*
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. Investigate sediment depth in Lake Audubon Canal Inlet and determine if action is needed to remove sediment at beginning of inlet.\*
6. Install French drains where needed from MM 50-54.\*\*\*
7. Repairs and maintenance at the McClusky shop. Including painting overhead doors on main shop, and extend concrete aprons on south side of main building.\*\*
8. Conduct supplemental surveying of canal invert and structures along the canal.\* (completed with condition assessment?)

9. Analyze water operations including radial gates, MM 28 embankment, MM 52 plug, tunnel and MM 58 plug.\*\* (Completed with Condition Assessment?)
10. Develop a normally inaccessible features examination program with schedules for all significant McClusky Canal features (i.e., headworks, check structures, ND Highway 200 tunnel, and cross drains that are typically inundated, and begin inspections.\*
11. Re-set cross drain end section at MM11 (station 641+76) that has separated.\*\*
12. Repair and/or reset the lower limit switch for the MM38 left radial gate.\*\*
13. Repair and/or reset the lower limit switch for the MM55 right radial gate.\*\*
14. Spot clean and recoat corroded areas of the MM38 radial gates and arms.\*
15. Spot clean and recoat corroded areas of the MM55 radial gates and arms.\*
16. Purchase equipment needed for O&M operations. Equipment to be purchased include a compact track loader, an apache sprayer, tow-master trailer (4-axle lowboy), ¾ ton pickup, and a tire balancer.

**b. Snake Creek Pumping Plant (SCPP)**

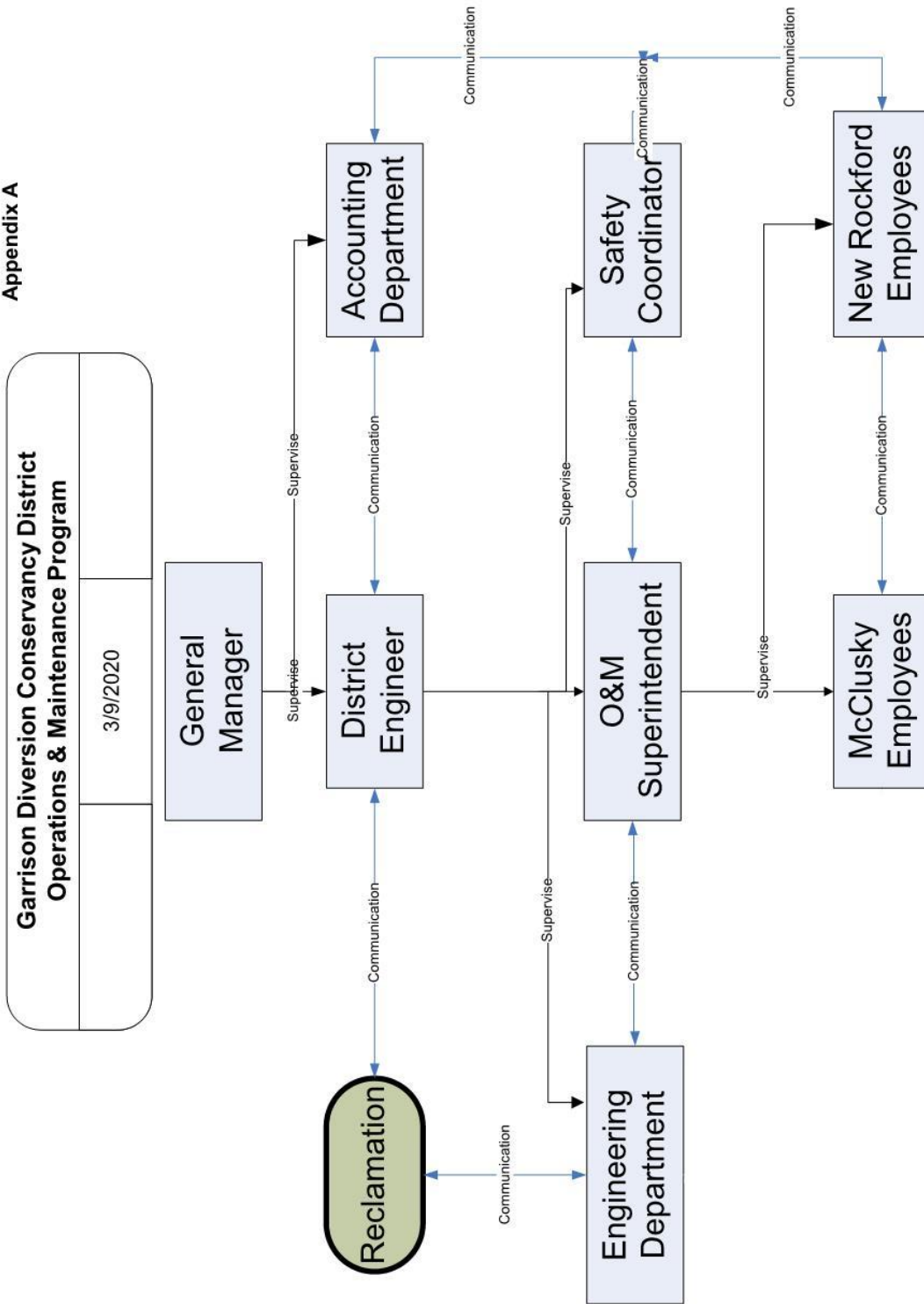
1. Inspect wall thickness of service water pipes. Replace as necessary.\*\*
2. Prepare specifications and contract to recoat Unit #3 intake elbow from the intake gates to the pump bowl.\*\*\*
3. Sand blast and coat Unit #3 tunnel.\*\*\*
4. Install plant wide wi-fi.\*\*\*
5. Investigate replacing the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

10. Install camera on west side of superstructure.\*
11. Update Arc Flash study within facility.\*\*\*
12. Replace pumps, (2) HAVC, (1) Fire Suppression, (1) Domestic Water, (1) Emergency Water pump.\*
13. Repair holding tanks and plant sewer system.\*
14. Upgrade plant security system.\*
15. Perform DC ramp test determine baseline for motor cables.\*\*\*
16. Repair/replace outlet wing wall.\*

**D. MILESTONES AND COMPLETION DATES**

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

Appendix A





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								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, 2022- December 30, 2022**

November 30, 2021

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### III. 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 verbal 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 abutment within McClusky Canal MM59-75 and New Rockford Canal. Garrison Diversion is to maintain McClusky Canal MM59-74 bridges markers, attenuation systems, and remove any gravel

from the bridge decks.

Cleaning, removal, and replacement of buried pipe drains in McClusky MM59-74, 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 MM59-74 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 to keep access in winter.

**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 and managing the vegetation, mowing parking areas and fire breaks. Standing 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 type of 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.\*\*\*
- Develop a normally inaccessible features examination program with schedules for all significant McClusky Canal features (cross drains that are typically inundated) and begin inspections. \*
- 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)  
The cross drain at MM28.5L 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. \*
- 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. \*\*\*

**New Rockford Office**

- Replace damaged concrete sidewalks\*\*\*
- Replace rear entry door. \*\*\*
- Adjust front door so that it opens and closes freely. \*\*\*
- Investigate the tar-like substance appearing in the yard. Remove and dispose of per Reclamation's direction. \*\*\*

**c. Arrowwood National Wildlife Refuge**

- Replace electrodes and level transducer within the fish barrier culverts. \*\*\*

**d. Audubon National Wildlife Refuge**

- Gather field stones for later use on Audubon dike repairs, stockpile at the McClusky Canal Headworks. \*

**e. Lonetree**

No specific work schedule for 2022.

**f. Scattered Tracts**

No specific work scheduled for 2022.

**g. 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. \*



**h. Jamestown Dam**

- Install two security lights and camera system. \*\*
- Fabric and install a galvanized ladder into west toe drain inspection well.\*\*\*

**i. McClusky Canal Recreation**

- Finish Camp Host Site connections\*\*\*
- Transplant trees to camp host site \*\*\*
- Install registration placards on campsite carsonites\*\*\*
- Install Iron Rangers\*\*\*
- Move regulation signage to kiosks\*\*
- Install new signage\*\*
- Install traffic counters\*\*
- Place New Shed on location\*
- 

**E. MILESTONES AND COMPLETION DATES**

<b>Tasks</b>	<b>Milestones</b>	<b>Completion Date</b>
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 2022**

<b>BUDGET ITEM DESCRIPTION</b>	<b>Transferred Works Jan 1 to Dec 31, 2022</b>	<b>Other Project Works Jan 1 to Dec 31, 2022</b>	<b>Total Budget Jan 1 to Dec 31, 2022</b>
<b>SALARIES AND WAGES</b>			
O&M Wages	\$ 644,700.00	\$ 276,300.00	\$ 921,000.00
Management Salaries	\$ 92,199.00	\$ 34,101.00	\$ 126,300.00
<b>Total Wages</b>	\$ 736,899.00	\$ 310,401.00	\$ 1,047,300.00
<b>FRINGE BENEFITS</b>			
O&M Benefits	\$ 299,880.00	\$ 128,520.00	\$ 428,400.00
Management Benefits	\$ 43,727.00	\$ 16,173.00	\$ 59,900.00
<b>Total Benefits</b>	\$ 343,607.00	\$ 144,693.00	\$ 488,300.00
<b>TRAVEL</b>			
Travel	\$ 1,364.00	\$ 11,036.00	\$ 12,400.00
<b>TRAINING</b>			
Training	\$ 2,166.00	\$ 1,634.00	\$ 3,800.00
<b>EQUIPMENT</b>			
Equipment Maintenance	\$ 159,300.00	\$ 110,700.00	\$ 270,000.00
Equipment Lease	\$ 10,000.00	\$ -	\$ 10,000.00
Equipment Purchase	\$ 176,730.00	\$ 234,270.00	\$ 411,000.00
<b>Total Equipment</b>	\$ 346,030.00	\$ 344,970.00	\$ 691,000.00
<b>SUPPLIES/MATERIALS</b>			
Supplies	\$ 43,600.00	\$ 65,400.00	\$ 109,000.00
Materials	\$ 295,000.00	\$ 105,000.00	\$ 400,000.00
<b>Total Supplies &amp; Materials</b>	\$ 338,600.00	\$ 170,400.00	\$ 509,000.00
<b>CONTRACTUAL SERVICES</b>			
Engineering	\$ 243,593.00	\$ 32,480.00	\$ 276,073.00
Professional Services	\$ 110,000.00	\$ 10,000.00	\$ 120,000.00
<b>Total Contractual Services</b>	\$ 353,593.00	\$ 42,480.00	\$ 396,073.00
<b>OTHER</b>			
Utilities	\$ 20,503.00	\$ 50,197.00	\$ 70,700.00
Safety	\$ 29,040.00	\$ 19,360.00	\$ 48,400.00
Miscellaneous	\$ 3,510.00	\$ 8,190.00	\$ 11,700.00
<b>Total Other</b>	\$ 53,053.00	\$ 77,747.00	\$ 130,800.00
<b>TOTAL DIRECT COSTS</b>	<b>\$ 2,175,312.00</b>	<b>\$ 1,103,361.00</b>	<b>\$ 3,278,673.00</b>
<b>INDIRECT COSTS</b>			
<b>TOTAL INDIRECT COSTS-Rate 27.9%</b>	<b>\$ 440,271.10</b>	<b>\$ 212,417.30</b>	<b>\$ 652,688.40</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$ 2,615,583.10</b>	<b>\$ 1,315,778.30</b>	<b>\$ 3,931,361.40</b>

\*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 2021**

<u>Equipment</u>	<u>Amount</u>
Car Hoist	\$ 10,000.00
Rubber-tire Backhoe	\$ 106,000.00
Rock Screen	\$ <u>125,000.00</u>
<b>Total Equipment Contracts</b>	<b>\$ 241,000.00</b>
<u>Contracted Services</u>	
	\$ -
	\$ -
	\$ <u>-</u>
<b>Total Contracted Services</b>	<b>\$ -</b>
<u>Professional Services</u>	
	\$ -
<b>Total Professional Services</b>	<b>\$ -</b>
<b>Total Committed Funds</b>	<b>\$ 241,000.00</b>
<u>Total Committed Funds Subject to Indirect</u>	
REC fiber to SCPP	\$ 10,000.00
	\$ <u>-</u>
	\$ 10,000.00
Indirect Cost Rate 2021	<u>X 29.83%</u>
<b>Indirect Cost on Committed Funds</b>	<b>\$ 2,983.00</b>
<b>Total Cost Committed Funds</b>	<b>\$ 243,983.00</b>

**Garrison Diversion Conservancy District  
Operations and Maintenance Division  
Estimated Appropriation**

2021 Committed Funds	\$	243,983.00
<u>2022 Program Work Budget</u>	\$	<u>3,931,361.40</u>
<b>2022 Estimated Funds Needed</b>	\$	<b>4,175,344.40</b>

## 2022 Maintenance Work Plan Devils Lake Outlet

State Water Commission  
and  
Garrison Diversion Conservancy District

January 20, 2022

### 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 – Jon Kelsch, Water Development (701) 328-4958
- iii) Garrison Diversion - Vern Schafer, O&M Operator II (701) 947-2001
- iv) Garrison Diversion - Darren Muray, 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 alternating shifts 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.



## **2022 WORK PLAN**

### **Garrison Diversion Conservancy District**

#### **Engineering & Operations Committee**

##### **A. Engineering & Operations**

1. Maintain quality staff and equipment
2. Complete final design for major slide repair initiative
3. Implement "5-Year Work Plan"
4. Complete 2022 annual work plan on GDU facilities
5. Complete 2022 annual work plan for Devils Lake Outlet maintenance
6. Complete 2022 LAWA water quality monitoring plan
7. Complete 2022 work plan for McClusky Canal Irrigation Projects
8. Assess the future utilization of the New Rockford Canal

**GARRISON DIVERSION CONSERVANCY DISTRICT  
BUDGET EXPENDITURES  
January 1, 2022 to December 31, 2022**

	<b>Budget 2021</b>	<b>Budget 2022</b>
<b>GDU O &amp; M</b>		
Salaries & Benefits	\$2,644,000	\$2,247,266
Salaries	\$1,646,000	\$1,446,050
Benefits	\$998,000	\$801,217
Travel	\$33,000	\$17,115
Training	\$5,000	\$9,000
Utilities	\$101,000	\$87,000
Contracted Services (Eng / Survey)	\$1,628,000	\$280,000
Supplies	\$631,000	\$652,000
Equipment Purchases	\$720,200	\$385,000
Small Equipment Purchases	\$20,000	\$15,000
Equipment Rental	\$11,000	\$112,000
Equipment Maintenance	\$313,000	\$286,240
Safety	\$61,000	\$58,985
Miscellaneous	\$54,000	\$22,000
Materials	\$146,800	\$417,000
<b>Total GDU O &amp; M</b>	<b>\$6,368,000</b>	<b>\$4,588,606</b>