

GARRISON DIVERSION CONSERVANCY DISTRICT

ENGINEERING & OPERATIONS COMMITTEE

**Garrison Diversion Conservancy District
Carrington, North Dakota
July 18, 2024**

A meeting of the Engineering & Operations Committee of the Garrison Diversion Conservancy District was held at the Garrison Diversion Conservancy District, Carrington, North Dakota, on July 18, 2024. The meeting was called to order by Chairman Tweed at 7:30 a.m.

MEMBERS PRESENT

Committee Chairman Mike Tweed
Director Steve Forde (by video conference)
Director Cliff Hanretty
Director Jim Pellman
Secretary Kip Kovar

MEMBERS ABSENT

Board Chairman Alan Walter
Director Jeff LeDoux

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 18, 2024, Engineering & Operations Committee minutes and approve them as distributed. Second by Director Pellman. 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.

2024 WORK PLAN UPDATE

McClusky/New Rockford Report - - Darren Murray, Superintendent, Operations & Maintenance (O&M), Garrison Diversion, provided a review of the 2024 spring/summer work

activities performed by the O&M crew at the McClusky and New Rockford sites, which included photos. This included mowing, blading, graveling and slide repair at McClusky and mowing, road repair and a pump replacement at New Rockford. The O&M division also did culvert repair at Coal Mine Lake and provided assistance at Jamestown Dam cleaning out relief wells for the Bureau of Reclamation.

Snake Creek Pumping Plant Report - - Dustin Offerdahl, Plant Supervisor, Snake Creek Pumping Plant (SCPP), updated the committee, via PowerPoint, on the projects and activities at the SCPP, including sump clean up, sewer pit repairs, installation of plant security system, pumping operation updates, facility review and Northwest Area Water Supply (NAWS) construction.

MCCLUSY CANAL SLIDE REPAIR REPORT

Mr. Anderson provided a PowerPoint presentation sharing photos of the slide repair work taking place along the McClusky Canal.

Mr. Anderson said work on the slide repair project has been slow this year due to wet conditions. Only about 3,500 loads or 50,000 cubic yards of fill have been hauled this year. Approximately 95% of the spoil has been moved.

Mr. Anderson said once the 4:1 slope is complete, there will be one drain to install.

Project expenses through May 2024 total \$9.7 million, which is 60% of the estimated \$17.5 million cost.

Remaining and ongoing work includes finalizing agreements with adjacent landowners who want wetlands dewatered, continuing to clean out the water prism portion of the canal, installing last drain and manholes, and riprapping and graveling after earthwork is completed.

Mr. Anderson stated the slide repair agreement with the Bureau of Reclamation expires October 30, 2025.

FIVE-YEAR OPERATION, MAINTENANCE & REPLACEMENT PLAN

Mr. Anderson presented and reviewed the 2024-2028 Five-Year Operation, Maintenance & Replacement (OM&R) Plan dated July 11, 2024, which is submitted annually to the Bureau of Reclamation (Reclamation). This lays out the O&M job duties, along with milestones and completion dates. A copy of the OM&R Plan is attached to these minutes as Annex II.

Mr. Anderson added the 2024 OM&R budget is \$4,678,118.

Kip Kovar, District Engineer, Garrison Diversion, stated next year's outlook includes raising the Mile Marker 59 plug and determining what needs to be done with the McClusky Canal if it is to become operational for the Red River Valley Water Supply Project (RRVWSP).

Motion by Director Hanretty to approve the 2024-2028 Five-Year Operation, Maintenance & Replacement Plan. Second by Director Forde. Upon roll call vote, the following directors voted aye: Forde, Hanretty, Pellman and Tweed. Those voting nay: none. Absent and not voting: LeDoux and Walter. Motion carried.

2024 EQUIPMENT LIST

Mr. Kovar referred to the 2024 O&M Master Equipment List, which is provided for the committee's information.

Mr. Anderson reported new equipment for 2024 other than the vac truck includes a three quarter ton truck, two tandem axle dump trucks and a pickup.

OTHER BUSINESS

There being no further business to come before the committee, the meeting adjourned at 8:25 a.m.

(SEAL)

Mike Tweed, Chairman

Kip Kovar, Secretary

REGISTRATION

Engineering and Operations Committee
Garrison Diversion Conservancy District
Carrington, North Dakota
July 18, 2024

NAME	ADDRESS
Darren Murray	GD CD McClusky
Dustin offerdahl	GD CD - SCPP
Ryan Anderson	GD CD
Greg Bischoff	GD CD
Sey Paul Anderson	GD CD
Duane DeKruy	GD CD
Yara Schroyer	GD CD
Mike Weed	GD CD
Cory Hammett	GD CD
Jim Helmer	GD CD

**Garrison Diversion Unit
Five-Year Operation,
Maintenance &
Replacement Plan
2024-2028**

July 11, 2024

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I. PURPOSE AND OBJECTIVES

A. Purpose

The purpose of this plan is to reaffirm objectives and maintenance criteria and to present work activities and estimated funding requirements to guide the Operation, Maintenance and Replacement (OM&R) Program of constructed Garrison Diversion Unit (GDU) facilities over the next five years under an Operation, Maintenance, and Replacement Contract between the Garrison Diversion Conservancy District (Garrison Diversion) and Bureau of Reclamation (Reclamation).

B. Objectives

The objectives of the OM&R Program are: 1) to protect the federal investment, 2) to maintain public safety, 3) to provide long-term beneficial use and public benefits, 4) to protect water, land, wildlife, and cultural resources, and 5) to provide for future operations and management of project facilities as authorized by current legislation and within current environmental analyses.

II. BACKGROUND

GDU Project facilities constructed to date include: Snake Creek Pumping Plant (SCPP), McClusky Canal, Lonetree Wildlife Management Area, New Rockford Canal, Jamestown Dam and Reservoir, Oakes Test Area (OTA) irrigation facilities (recently title transferred), Kraft Slough Wildlife Management Area, recreation facilities, radio towers, scattered tracts wildlife development areas, Audubon and Arrowwood National Wildlife Refuge (NWR) mitigation features, State and Tribal Municipal, Rural and Industrial (MR&I) water systems, and office and shop facilities at McClusky, New Rockford, Oakes, and Carrington.

In July 1991, Reclamation entered into Cooperative Agreement No. 1-FC-60-01790 with Garrison Diversion for OM&R of the McClusky Canal, New Rockford Canal, and OTA and to provide assistance as needed on other GDU facilities. OM&R of constructed GDU facilities continued under subsequent Cooperative Agreements Nos. R91AC60001 and R11AC60005. In June 2020, Reclamation entered into contract No. 20XX620109 an Operation, Maintenance and Replacement Contract of Certain Project Works with Garrison Diversion. This five-year plan covers work proposed to be completed by Garrison Diversion under contract. Reclamation provides Garrison Diversion with the funding, from annual GDU appropriations, necessary to perform the OM&R functions. Reclamation also cooperates with Garrison Diversion in providing technical assistance on OM&R activities and administrative assistance on NEPA/NHPA compliance requirements. The Dakota Water Resources Act of 2000 (DWRA), the current legislative authority for GDU, states in part in Section 1 (g) "The Secretary shall enter into one or more

agreements with the State of North Dakota to carry out this Act, including operation and maintenance of the completed unit facilities....”.

III. GENERAL OPERATION, MAINTENANCE AND REPLACEMENT CRITERIA

- Routine OM&R of the McClusky Canal, New Rockford Canal, and Snake Creek Pumping Plant, as covered in the OM&R contract is to continue with particular focus on:
 - Protecting the federal investment
 - Maintaining a competent, well-trained OM&R work force
- Clear instances of public safety are to be given priority (i.e. structural integrity of bridges).
- Safe access is to be maintained along at least one side of the canals.
- Protection of private and public lands outside project ROWs from activities associated with OM&R of project facilities is to be given priority.
- The canal prism should be maintained to protect O&M roads, lands outside the canal ROWs, and to protect canal lining on watered canal reaches.
- At New Rockford, minimum maintenance will be provided to protect the federal investment and public safety.
- Slides on the McClusky Canal should be repaired to the extent needed to meet existing water demands. Repair measures are to be developed on a case-by-case basis.
- Measures to prevent slope failures are to proceed (i.e. V ditch drain conversions, berm drain modifications, and interceptor drains).
- Focus on efficient and economical methods to minimize costs, including contracting.
- Provide assistance with maintenance of other constructed GDU facilities as requested by Reclamation.

In 2020 Garrison Diversion entered into Contract No. 20XX620109 with Reclamation. This contract assigned responsibility for the OM&R of transferred works to Garrison Diversion. The transferred works include Snake Creek Pumping Plant (SCPP), McClusky Canal O&M (MM 0-59), McClusky Canal ROW (MM 0-59), and Carrington Headquarters. Reclamation retains the OM&R responsibilities for other project works. Garrison Diversion will complete the agreed upon routine and extraordinary work at the other project works. 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.

IV. STATUS

A. McClusky

Primary construction of the McClusky Canal covered the period beginning in the early 1970s through 1980. Overall, the McClusky Canal is in acceptable condition, except for the major slide area between mile marker (MM) 20-21.5. On average, the McClusky Canal currently delivers approximately 15,000 acre-feet of water a year for uses such as irrigation, fish and wildlife mitigation and enhancement, livestock watering, recreation, water quality maintenance, and in-stream flow needs. The canal is used from MM 1 to MM 59. From MM 59 to the end, at MM 74, the canal is dewatered. Interest in contracting for irrigation water from the McClusky Canal has been increasing in recent years.

Two major areas which will need to be addressed to ensure delivery of a firm water supply which are not included in this plan are: 1) repairs to the major slide area between MM 20-21.5 (handled under a separate cooperative agreement) and 2) modification to the MM 59 Plug.

B. New Rockford

Construction of the New Rockford Canal covered the period beginning in 1983 through 1991. Overall, the New Rockford Canal is in acceptable condition. The canal does not deliver water for any use and is not in operation. Natural runoff, which accumulates in the canal, is outlet to the James River.

Significant items which need to be addressed on the canal for the future are dealing with the effects the canal has on cross drainage along its 42-mile length and how best to manage and maintain the canal given its unknown future.

C. Snake Creek Pumping Plant

Construction of the Snake Creek Pumping Plant (SCPP) covered the period beginning in 1970 through 1974. The SCPP consists of a reinforced concrete structure, three vertical shaft pumping units, and three 11-foot discharge pipes. The three pumps each have a high-head and low-head bowls to cover the required pumping head range. Each pump is powered by an 8,000-horsepower synchronous motor with power provided from the Garrison power plant. Total capacity of the three pumps is 2,050 cubic feet per second.

The SCPP pumps water from Lake Sakakawea to Lake Audubon to maintain a summer target elevation of 1847 feet. Overall, the SCPP is in acceptable condition. Construction activities associated with converting one of the pumps and a discharge pipe of the SCPP to an intake for the Northwest Area Water Supply began in 2023 and is ongoing.

V. ROUTINE OM&R, 2023-2027

Routine OM&R of the McClusky Canal, New Rockford Canal, and Snake Creek Pumping Plant is to continue. Routine OM&R activities include facility maintenance, water operations, and maintenance at other GDU Facilities.

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 SCPP, McClusky, New Rockford, and restrooms at the Chain-of-Lakes area.

Portions of canals 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 canals 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 O&M roadways. County roads will be mowed in accordance with county regulations. The New Rockford Canal O&M roadways will be maintained with chemical and mowing methods, with blading only as necessary.

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 and New Rockford Canal. Garrison Diversion will also inspect annually the bridges on the McClusky Canal in Sheridan County, for which Reclamation holds the title.

Stabilizing the cut slopes on the McClusky Canal 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 top soil on other projects for reseeding.

Cleaning, removal, and replacement of buried pipe drains in McClusky and New Rockford will be completed in accordance with a master schedule. The schedule also includes jetting Jamestown Dam relief wells and toe drains. 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.

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, which is part of the McClusky Canal system. 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. 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.

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 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.

Water operations on the New Rockford Canal involve maintaining the canal in a dewatered condition as much as practical.

C. Other GDU Facilities

Garrison Diversion is to provide assistance on maintenance of other GDU facilities as requested by Reclamation as part of the OM&R program under this cooperative agreement. Work by Garrison Diversion on other GDU facilities is coordinated through Reclamation. This work is typically smaller projects and requires equipment and personnel expertise available from Garrison Diversion. Working in this manner makes the most efficient and cost-effective use of equipment and funds provided by Reclamation. Other GDU facilities which Garrison Diversion provides assistance on include:

- Lonetree Wildlife Management Area
- Jamestown Dam and Reservoir
- Audubon and Arrowwood NWR mitigation features
- Scattered Tracts Wildlife Development Areas
- Tribal Municipal, Rural & Industrial Water Systems

VI. MILESTONES AND COMPLETION DATES

Tasks	Milestones	Completion Date
1	Annual jetting of Jamestown relief wells	April 15
2	Complete 1 st quarter water operations report	April 30
3	Complete maintenance and repairs on equipment, pumping plants and distribution systems in preparation for yearly water distribution	May 1
4	Clean and prepare Chain of Lakes facilities for public use	May 20
5	Reach Lake Audubon summer target elevation	May 25
6	Water up pipe laterals and pumping plants for irrigation season	June 10
7	Complete hay auction	June 15
8	Inspect and maintain Chain of Lakes facilities for public use	June 30
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	Inspect and maintain Chain of Lakes facilities for public use	Sept 20
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 rd quarter water samples along the McClusky Canal	Sept 30
21	Complete fall mowing of county and township road ditches	Oct 1
22	Complete 3 rd quarter water operations report	Oct 30
23	Dewater and winterize pipe laterals and pumping plants	Nov 15
24	Reach Lake Audubon winter target elevation	Nov 15
25	Complete annual vegetation management report	Dec 31
26	Complete 4 th quarter water operations report	Jan 31

VII. PAST EXPENDITURES

Past expenditures for the OM&R program are shown in the following table.

Garrison Diversion Conservancy District OM&R 2021 - 2023			
O&M Expenses	2021 Actuals	2022 Actuals	2023 Actuals
Salaries and Wages	\$ 1,157,604	\$ 1,034,123	\$ 1,203,743
Fringe Benefits	\$ 620,563	\$ 508,648	\$ 588,498
Travel	\$ 7,104	\$ 5,901	\$ 27,825
Training	\$ 748	\$ -	\$ 3,239
Equipment	\$ 462,701	\$ 545,468	\$ 736,864
Supplies/Materials	\$ 253,756	\$ 203,541	\$ 416,245
Contractual	\$ 738,563	\$ 245,645	\$ 129,713
Other	\$ 174,124	\$ 115,306	\$ 138,235
Indirect Costs	\$ 550,318	\$ 559,948	\$ 518,271
Total Expenses	\$ 3,965,481	\$ 3,258,580	\$ 3,762,635

VIII. PROPOSED OUT YEAR BUDGETS

The proposed budget that reflects the funding needs for the OM&R program from 2024 to 2028 is shown in the following table.

Garrison Diversion Conservancy District OM&R 2024 - 2028					
O&M Expenses	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
Salaries and Wages	\$ 1,188,200	\$ 1,211,964	\$ 1,574,978	\$ 1,606,477	\$ 1,638,607
Fringe Benefits	\$ 580,400	\$ 592,008	\$ 830,805	\$ 847,421	\$ 864,370
Travel	\$ 11,100	\$ 11,322	\$ 11,548	\$ 11,779	\$ 12,015
Training	\$ 2,700	\$ 2,754	\$ 2,809	\$ 2,865	\$ 2,923
Equipment	\$ 1,323,000	\$ 733,140	\$ 747,803	\$ 762,759	\$ 778,014
Supplies/Materials	\$ 451,000	\$ 460,020	\$ 469,220	\$ 478,605	\$ 488,177
Contractual	\$ 279,500	\$ 106,152	\$ 108,275	\$ 110,441	\$ 112,650
Other	\$ 143,800	\$ 171,676	\$ 149,610	\$ 177,602	\$ 155,654
Indirect Costs	\$ 698,418	\$ 679,156	\$ 821,866	\$ 838,422	\$ 855,310
Total Expenses	\$ 4,678,118	\$ 3,968,192	\$ 4,716,914	\$ 4,836,371	\$ 4,907,718

**OMR Contract # 20XX620109
Budget FY 2024**

BUDGET ITEM DESCRIPTION	Transferred Works Jan 1 to Dec 31, 2024	Other Project Works Jan 1 to Dec 31, 2024	Total Budget Jan 1 to Dec 31, 2024
SALARIES AND WAGES			
O&M Wages	\$760,500.00	\$281,300.00	\$1,041,800.00
Management Salaries	\$106,872.00	\$39,528.00	\$146,400.00
Total Wages	\$867,372.00	\$320,828.00	\$1,188,200.00
FRINGE BENEFITS			
O&M Benefits	\$378,067.00	\$139,833.00	\$517,900.00
Management Benefits	\$45,625.00	\$16,875.00	\$62,500.00
Total Benefits	\$423,692.00	\$156,708.00	\$580,400.00
TRAVEL			
Travel	\$1,221.00	\$9,879.00	\$11,100.00
TRAINING			
Training	\$1,161.00	\$1,539.00	\$2,700.00
EQUIPMENT			
Equipment Maintenance	\$297,000.00	\$3,000.00	\$300,000.00
Equipment Lease	\$7,000.00	\$0.00	\$7,000.00
Equipment Purchase	\$436,880.00	\$579,120.00	\$1,016,000.00
Total Equipment	\$740,880.00	\$582,120.00	\$1,323,000.00
SUPPLIES/MATERIALS			
Supplies	\$111,280.00	\$102,720.00	\$214,000.00
Materials	\$207,000.00	\$30,000.00	\$237,000.00
Total Supplies & Materials	\$318,280.00	\$132,720.00	\$451,000.00
CONTRACTUAL SERVICES			
Engineering	\$125,700.00	\$53,800.00	\$179,500.00
Professional Services	\$100,000.00	\$0.00	\$100,000.00
Total Contractual Services	\$225,700.00	\$53,800.00	\$279,500.00
OTHER			
Utilities	\$25,865.00	\$48,035.00	\$73,900.00
Safety	\$31,720.00	\$21,280.00	\$53,000.00
Miscellaneous	\$4,394.00	\$12,506.00	\$16,900.00
Total Other	\$61,979.00	\$81,821.00	\$143,800.00
TOTAL DIRECT COSTS	\$2,640,285.00	\$1,339,415.00	\$3,979,700.00
INDIRECT COSTS			
TOTAL INDIRECT COSTS-Rate 23.88%	\$518,053.91	\$180,364.45	\$698,418.36
TOTAL PROJECT COSTS	\$3,158,338.91	\$1,519,779.45	\$4,678,118.36

*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

**OMR Contract # 20XX620109
2024 - 2028 5-year Budgets**

BUDGET ITEM DESCRIPTION	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget
SALARIES AND WAGES					
O&M Wages	\$1,041,800.00	\$1,062,636.00	\$1,422,662.98	\$1,451,116.24	\$1,480,138.57
Management Salaries	\$146,400.00	\$149,328.00	\$152,314.56	\$155,360.85	\$158,468.07
Total Wages	\$1,188,200.00	\$1,211,964.00	\$1,574,977.54	\$1,606,477.10	\$1,638,606.64
FRINGE BENEFITS					
O&M Benefits	\$517,900.00	\$528,258.00	\$765,780.13	\$781,095.73	\$796,717.64
Management Benefits	\$62,500.00	\$63,750.00	\$65,025.00	\$66,325.50	\$67,652.01
Total Benefits	\$580,400.00	\$592,008.00	\$830,805.13	\$847,421.23	\$864,369.65
TRAVEL					
Travel	\$11,100.00	\$11,322.00	\$11,548.44	\$11,779.41	\$12,015.00
TRAINING					
Training	\$2,700.00	\$2,754.00	\$2,809.08	\$2,865.26	\$2,922.57
EQUIPMENT					
Equipment Maintenance	\$300,000.00	\$306,000.00	\$312,120.00	\$318,362.40	\$324,729.65
Equipment Lease	\$7,000.00	\$7,140.00	\$7,282.80	\$7,428.46	\$7,577.03
Equipment Purchase	\$1,016,000.00	\$420,000.00	\$428,400.00	\$436,968.00	\$445,707.36
Total Equipment	\$1,323,000.00	\$733,140.00	\$747,802.80	\$762,758.86	\$778,014.03
SUPPLIES/MATERIALS					
Supplies	\$214,000.00	\$218,280.00	\$222,645.60	\$227,098.51	\$231,640.48
Materials	\$237,000.00	\$241,740.00	\$246,574.80	\$251,506.30	\$256,536.42
Total Supplies & Materials	\$451,000.00	\$460,020.00	\$469,220.40	\$478,604.81	\$488,176.90
CONTRACTUAL SERVICES					
Engineering	\$179,500.00	\$86,152.26	\$87,875.31	\$89,632.81	\$91,425.47
Professional Services	\$100,000.00	\$20,000.00	\$20,400.00	\$20,808.00	\$21,224.16
Total Contractual Services	\$279,500.00	\$106,152.26	\$108,275.31	\$110,440.81	\$112,649.63
OTHER					
Utilities	\$73,900.00	\$75,378.00	\$76,885.56	\$78,423.27	\$79,991.74
Safety	\$53,000.00	\$79,060.00	\$55,141.20	\$81,244.02	\$57,368.90
Miscellaneous	\$16,900.00	\$17,238.00	\$17,582.76	\$17,934.42	\$18,293.10
Total Other	\$143,800.00	\$171,676.00	\$149,609.52	\$177,601.71	\$155,653.74
TOTAL DIRECT COSTS	\$3,979,700.00	\$3,289,036.26	\$3,895,048.21	\$3,997,949.18	\$4,052,408.16
INDIRECT COSTS					
TOTAL INDIRECT COSTS-Rate 23.88%	\$698,418.36	\$679,155.86	\$821,865.59	\$838,422.31	\$855,310.15
TOTAL PROJECT COSTS	\$4,678,118.36	\$3,968,192.12	\$4,716,913.81	\$4,836,371.48	\$4,907,718.31