1.0 EXECUTIVE SUMMARY

The Milk River is the economic mainstay of North Central Montana from Havre to Glasgow. The majority of Milk River flows, utilized by irrigators, municipalities, and for recreational and wildlife benefits, is diverted from the St. Mary River basin near Glacier National Park into the North Fork of the Milk River via a 90-year old, 29-mile long facility. Separate components include a diversion dam, canal headgates, several inverted siphons, check and wasteway structures, five hydraulic drops, and approximately 29 miles of canal. The diversion facilities are owned and operated by the U.S. Bureau of Reclamation (BOR), and many portions are in danger of failure. Sudden failure would result in severe environmental damage to the Blackfeet Indian Reservation and the St. Mary River or the North Fork of the Milk River and an economic catastrophe for the economies of North Central Montana.

Besides an economic disaster to the irrigators and the State of Montana, a loss of diverted water to the Milk River Basin would also detrimentally impact the following:

- Municipalities that depend on the Milk River as a source of drinking water,
- Ft. Belknap Indian Nation Reserved Water Rights Compact, which is contingent on diverted water,
- State and Federal wildlife refuges and preserves,
- Recreational and fishing facilities along the Milk River and related storage reservoirs,
- Numerous endangered, threatened and proposed species including the Piping Plover (threatened) and Pallied Sturgeon (endangered), which benefit from supplemented Milk River flows, and
- Missouri River flows below the mouth of the Milk River, thereby increasing shortages.

Continued degradation of the diversion and conveyance system has resulted in a diminished capacity. Originally designed to deliver 850 cfs of water during the irrigation season, current capacity is on the order of 670 cfs. Deterioration of the facilities and lack of modernization further impacts operating efficiency and diversion opportunity. Annual water shortages in the Milk River Basin have been well documented. The BOR and the Montana DNRC both agree that rehabilitation of the St. Mary Facilities back to its original capacity or greater would significantly reduce these shortages.

The diversion facilities lie entirely within the boundaries of the Blackfeet Nation, and as such, they are an important stakeholder. For the last 90 years, environmental issues and concerns, both Tribal and Federal, have arisen regarding the operation of the facilities. For example, the diversion dam precludes passage of bull trout (a threatened species) during operation, and bull trout, as well as other fish species, are permanently lost into the conveyance canal each season. Also, the canal prism and elevated siphons impact elk migration. Improvements are warranted to mitigate these environmental shortcomings, as well as many others.

Since its conception, the Milk River Project, including the St. Mary Diversion Facilities, was authorized by the Federal Government as a single-use irrigation project. As such, the Milk River Project irrigators are obligated by Federal Law to pay nearly 100% of the costs to operate and maintain the facilities through annual assessments on their irrigated lands. Within the last 15 years, maintenance costs, just to maintain a minimum level of service and to avert failure of the system, have escalated commensurate with the accelerating deterioration of the aging facilities. These costs have exceeded the irrigators' maintenance payments and their ability to pay.

The BOR's "North Central Montana Regional Feasibility Report" (BOR, 2004) screened numerous alternatives to reduce water shortages in the Milk River Basin and concluded that the rehabilitation of the St. Mary Diversion Facilities was the most viable option and the only one that would produce positive economic benefits. The following report summarizes the existing studies and background information available on the Facilities, summarizes our site inspections with respect to existing conditions and deficiencies, and presents a Rehabilitation Plan or "roadmap" towards the ultimate goal of overall rehabilitation of the St. Mary Diversion Facilities. This report represents the first step in an iterative process extending through the final phase of construction. The Blackfeet Nation will be an involved party throughout the entire process. The remaining steps are as follows:

- Perform related studies pertaining to slope instability at the St. Mary River Siphon, Basin Hydrology, Economics and Hydropower Feasibility.

- Conduct environmental studies and prepare NEPA compliance documents.
- Evaluate and select the optimum rehabilitated capacity of the Diversion Facilities (referred to in this report as the “Preferred Alternative”).
- Conduct feasibility studies of the major structures comprising the overall facilities.
- Prepare designs and construction documents.
- Construct the recommended rehabilitation improvements.

Due to the preliminary nature of the project, detailed cost estimates are beyond the scope of this report. However, this report does establish a project budget based on a review of existing BOR data. Depending on the rehabilitated canal capacity, (Preferred Alternative), current estimates (updated and revised by TD&H) to rehabilitate the Diversion Facilities range from $120,000,000 to $127,000,000 and assume a 2007 construction start date. The current overall project costs are summarized on Tables 1.1 and 1.2 for rehabilitated capacities of 850 cfs and 1000 cfs, respectively. These cost estimates reflect the BOR’s initial or “appraisal-level” efforts for the construction costs developed in 2002 and 2003. It is not the intent of this report to criticize or endorse the BOR”s previous work and reports or pass judgment on the BOR’s design approach or methodologies. In order to identify the Preferred Alternative, it is necessary to summarize existing conditions and deficiencies and review preexisting information and studies. We have provided additional information when prudent so that future decisions can be made effectively. In addition, we believe there are additional alternatives that should be further evaluated during the Feasibility Study phases that would help to reduce the overall construction and design costs, as well as future O&M costs.

Rehabilitation costs will continue to increase, simply from inflation, by ± $3,000,000 per year. Constant and fruitful progress must be made toward this goal to avoid system failure and avert environmental and economic catastrophes.

TABLE 1.1 OVERALL ESTIAMTED PROJECT COSTS – 850 cfs

Line Items	Diversion Dam and Headgates	Kennedy Creek Siphon	Kennedy Creek and Wasteway	St. Mary River Siphon	Hall Coulee Siphon	Hydraulic Drops No. 1 – No. 5	Canal Prism Rehab.	TOTALS
Approx. Construction Costs	$6,608,700	$504,300	$849,300	$4,512,300	$2,176,500	$2,351,600	$32,466,900	$49,469,600
Inflation Costs (1)	$1,052,600(2)	$63,300	$106,600	$566,300	$273,200	$295,200	$4,074,900	$6,432,100
Subtotal	$7,661,300	$567,600	$955,900	$5,078,600	$2,449,700	$2,646,800	$36,541,800	$55,901,700
Unlisted Items (10%)	$1,149,200(3)	$56,800	$95,600	$507,900	$244,900	$264,700	$3,654,200	$5,973,300
Subtotal	$8,810,500	$624,400	$1,051,500	$5,586,500	$2,694,600	$2,911,500	$40,196,000	$61,875,000
Contingencies (25%)	$2,202,600	$156,100	$262,900	$1,396,600	$673,700	$727,800	$10,048,500	$15,468,200
Subtotal	$11,013,100	$780,500	$1,314,400	$6,983,100	$3,368,300	$3,639,300	$50,244,500	$77,343,200
Non-Contract Costs (37%)	$4,074,900	$288,700	$486,400	$2,583,700	$1,246,300	$1,346,600	$18,590,500	$28,617,100
Subtotal	$15,088,000	$1,069,200	$1,800,800	$9,566,800	$4,614,600	$4,985,900	$68,835,000	$105,960,300
TD&H Recommended Items	$100,000 (4)	$0	$50,000 (4)	$0	$0	$0	$7,816,000 (5)	$7,966,000
Subtotal	$15,188,000	$1,069,200	$1,850,800	$9,566,800	$4,614,600	$4,985,900	$76,651,000	$113,926,300
Tribal Fees (5%)	$759,400	$53,500	$92,500	$478,400	$230,700	$249,300	$3,832,500	$5,696,300
Total Costs per Structure	$15,947,400	$1,222,700	$1,943,300	$10,045,200	$4,845,300	$5,235,200	$80,483,500	$119,622,600

Notes:
1. Inflation costs are based on 3% growth rate over 4 years (12.55%), except where noted.
2. Inflation costs are based on 3% growth rate over 5 years (15.93%).
3. 15% used to calculate unlisted items.
4. SCADA
5. SCADA and considerations for canal realignment, relocation, armoring and two-bank construction.

TABLE 1.2 OVERALL ESTIAMTED PROJECT COSTS – 1000 cfs

Line Items	Diversion Dam and Headgates	Kennedy Creek Siphon	Kennedy Creek and Wasteway	St. Mary River Siphon	Hall Coulee Siphon	Hydraulic Drops No. 1 – No. 5	Canal Prism Rehab.	TOTALS
Approx. Construction Costs	$6,956,500	$663,600	$913,000	$6,104,800	$2,229,600	$2,431,300	$33,368,500	$52,667,300
Inflation Costs (1)	$1,108,000(2)	$83,200	$114,600	$766,200	$279,800	$305,200	$4,188,000	$6,845,000
Subtotal	$8,064,500	$746,800	$1,027,600	$6,871,000	$2,509,400	$2,736,500	$37,556,500	$59,512,300
Unlisted Items (10%)	$1,209,700(3)	$74,700	$102,800	$687,200	$251,000	$273,600	$3,755,700	$6,354,700
Subtotal	$9,274,200	$821,500	$1,130,400	$7,558,200	$2,760,400	$3,010,100	$41,312,200	$65,867,000
Contingencies (25%)	$2,318,600	$205,400	$282,600	$1,889,500	$690,100	$752,600	$10,328,100	$16,466,900
Subtotal	$11,592,800	$1,026,900	$1,413,000	$9,447,700	$3,450,500	$3,762,700	$51,640,300	$82,333,900
Non-Contract Costs (37%)	$4,289,300	$380,000	$522,800	$3,495,600	$1,276,600	$1,392,200	$19,106,800	$30,463,300
Subtotal	$15,882,100	$1,406,900	$1,935,800	$12,943,300	$4,727,100	$5,154,900	$70,747,100	$112,797,200
TD&H Recommended Items	$100,000 (4)	$0	$50,000 (4)	$0	$0	$0	$8,038,600 (5)	$8,188,600
Subtotal	$15,982,100	$1,406,900	$1,985,800	$12,943,300	$4,727,100	$5,154,900	$78,785,700	$120,985,800
Tribal Fees (5%)	$779,100	$70,300	$99,300	$647,200	$236,400	$257,700	$3,939,300	$6,049,300
Total Costs per Structure	$16,781,200	$1,477,200	$2,085,100	$13,590,500	$4,963,500	$5,412,600	$82,725,000	$127,035,100

Notes:
1. Inflation costs are based on 3% growth rate over 4 years (12.55%), except where noted.
2. Inflation costs are based on 3% growth rate over 5 years (15.93%).
3. 15% used to calculate unlisted items.
4. SCADA
5. SCADA and considerations for canal realignment, relocation, armoring and two-bank construction.