

2001 Project Abstract

For the Period Ending June 30, 2004

TITLE: Wildlife Lakes Initiative (part 2f of CH-01 "Restoring Minnesota's Fish and Wildlife Habitat Corridors")

PROJECT MANAGER: Jon Schneider

ORGANIZATION: Ducks Unlimited, Inc.

ADDRESS: 311 East Lake Geneva Road, Alexandria, MN 56308

WEB ADDRESS: www.ducks.org, www.prairie.ducks.org, www.mnducks.org

FUND: Minnesota Environment and Natural Resources Trust Fund

LEGAL CITATION: Minnesota Laws First Special Session 2001 Chap. 2, Sec. 14, Subd. 4 (e).



APPROPRIATION AMOUNT: \$879,234.30

Overall Project Outcome and Results

In support of the Minnesota DNR's shallow lakes program, Ducks Unlimited (DU) **enhanced 4,863 acres of shallow lake wetlands and provided technical assistance on 41,617 acres** to private landowners and DNR in and around shallow lakes in Corridors Project Areas 3, 6, 7, 8, and 10 through this grant. These areas constitute the heart of Minnesota's waterfowl migration corridor, especially for diving ducks such as lesser scaup (a duck species in population decline) that rely heavily on shallow lake habitat. Specifically, this project resulted in the enhancement of the 4,076-acre Christina-Anka shallow lake wetland complex by chemically removing fish and barring their reentry with a unique electric rotating screen drum fish barrier, the engineering and installation of outlet structures and fish barriers to enhance five other shallow lakes totaling 787 wetland acres, the survey and engineering design of velocity tube fish barrier structures on outlets of four other shallow lakes, and 41,617 acres of technical assistance provided by a contract bio-tech to DNR on 50 shallow lakes and to 81 landowners surrounding shallow lakes in west-central Minnesota. The three velocity tube fish barriers that were surveyed and engineered but not installed require DNR to secure easements from landowners and permits from DNR Waters (which first require engineering designs before they can be secured), and will be fully implemented along with several other shallow lake projects previously engineered by DU in the Phase II Corridors project through DU's wildlife lakes component. The accomplishments summarized above were achieved by DU using \$879,234.30 in grant funds and \$220,678.80 in DU funds. Importantly, much of this project expense was subsequently used by DU as non-federal match to leverage a \$1 million North American Wetlands Conservation Act grant to enhance wetlands on Big Stone National Wildlife Refuge in Corridors Project Area 6 in 2006.

Project Results, Use, and Dissemination

The bio-engineering efforts provided by DU to DNR, USFWS, and private landowners through this grant project resulted in the improvement of several important shallow lakes and the innovation of several new rough fish barrier designs that will be used by DU, DNR, USFWS, and other partners to enhance other lakes in the future. The outreach effort of DU's shallow lake technician was especially effective in disseminating information about shallow lake ecology and enhancement techniques, and in promoting conservation program information to private landowners and lake associations that will benefit shallow lakes in the future. Summaries and pictures of projects completed under this grant will be disseminated through DU's state newsletter Cattails, and on DU's state website www.mnducks.org and regional website www.prairie.ducks.org.

Date of Report: June 30, 2004
LCMR Final Work Program Report

Date of Work Program Approval: July 24, 2001 (amended 2/18/02, 8/27/02, 2/3/03, 6/4/03, 11/22/03, 2/6/04, 2/10/04, 4/29/04, & 5/27/04).

Project Completion Date: June 30, 2004

I. Project Title: Wildlife Lakes Initiative (part 2f of CH-01 "Restoring Minnesota's Fish and Wildlife Habitat Corridors")

Project Manager: Jon Schneider
Affiliation: Ducks Unlimited, Inc.
Mailing Address: 311 E. Lake Geneva Rd., Alexandria, MN 55308
Telephone Number: 320-762-9916
E-Mail: jschneider@ducks.org
Fax: 320-759-1567
Web Address: www.ducks.org, www.prairie.ducks.org, www.mnducks.org



Total Biennial Project Budget: \$879,234.30 - \$879,234.30 = \$0

Fiscal Year	Appropriation	Spent to date	Balance	Other Funds
2002	\$150,000.00	\$150,000	\$0	\$47,172.00
2003	\$729,243.30	\$729,243.30	\$0	\$173,506.80
Total	\$879,234.30	\$879,234.30	\$0	\$220,678.80

Legal Citation: Minnesota Laws First Special Session 2001 Chap. 2, Sec. 14, Subd. 4 (e).

Appropriation Language: 4 (e) Restoring Minnesota's Fish and Wildlife Habitat Corridors \$5,873,000 the first year and \$5,872,000 the second year are from the trust fund to the commissioner of natural resources for acceleration of agency programs and cooperative agreements with Minnesota Waterfowl Association, Minnesota Deer Hunters Association, Ducks Unlimited, Inc., National Wild Turkey Federation, Pheasants Forever, The Nature Conservancy, Minnesota Land Trust, Trust for Public Land, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, Natural Resources Conservation Service, and the U.S. Forest Service to restore and acquire fragmented landscape corridors that connect areas of quality habitat to sustain fish, wildlife, and plants. \$352,000 is for program coordination, corridor identification, and mapping. \$3,343,000 is for restoration and management activities in wildlife management areas, wetland habitat, lakes, wild rice beds, grasslands, and fisheries habitat. \$2,650,000 is for conservation easement programs on riparian areas, big woods forests, native prairies and wetlands. \$5,400,000 is for habitat acquisition activities on prairies, riparian areas, and other fish and wildlife habitat corridors. As part of the required work program, criteria and priorities for planned habitat acquisition and restoration activities must be submitted to the legislative commission on Minnesota resources for review and approval. Land acquired with this appropriation must be sufficiently improved to meet at least minimum management standards as determined by the commissioner of natural resources. Any land acquired in fee title must be designated: (1) as an outdoor recreation unit under Minnesota Statutes, section 86A.07; or (2) as provided in Minnesota Statutes. The commissioner may so designate any lands acquired in less than fee title. This appropriation is available until June 30, 2004, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

II. and III. FINAL PROJECT SUMMARY:

In support of the Minnesota DNR's shallow lakes program, Ducks Unlimited (DU) **enhanced 4,863 acres of shallow lake wetlands and provided technical assistance on 41,617 acres** to private landowners and DNR in and around shallow lakes in Corridors Project Areas 3, 6, 7, 8, and 10 through this grant. These areas constitute the heart of Minnesota's waterfowl migration corridor, especially for diving ducks such as lesser scaup (a duck species in population decline) that rely heavily on shallow lake habitat. Specifically, this project resulted in the enhancement of the 4,076-acre Christina-Anka shallow lake wetland complex by chemically removing fish and barring their reentry with a unique electric rotating screen drum fish barrier, the engineering and installation of outlet structures and fish barriers to enhance five other shallow lakes totaling 787 wetland acres, the survey and engineering design of velocity tube fish barrier structures on outlets of four other shallow lakes, and 41,617 acres of technical assistance provided by a contract bio-tech to DNR on 50 shallow lakes and to 81 landowners surrounding shallow lakes in west-central Minnesota. The three velocity tube fish barriers that were surveyed and engineered but not installed require DNR to secure easements from landowners and permits from DNR Waters (which first require engineering designs before they can be secured), and will be fully implemented along with several other shallow lake projects previously engineered by DU in the Phase II Corridors project through DU's wildlife lakes component. The accomplishments summarized above were achieved by DU using \$879,234.30 in grant funds and \$220,678.80 in DU funds. Importantly, much of this project expense was subsequently used by DU as non-federal match to leverage a \$1 million North American Wetlands Conservation Act grant to enhance wetlands on Big Stone National Wildlife Refuge in Corridors Project Area 6 in 2006.

IV. OUTLINE OF PROJECT RESULTS:

Result 1: Lake Christina Reclamation Project

Grant Budget \$452,653.06 - Spent \$452,653.06 = Balance \$0 Wetland Enhancement Acres = 4,076

In 2001, DU began assisting the Minnesota Department of Natural Resources (DNR), Christian-Ina-Anka Lake Association (CIALA), and US Fish & Wildlife Service through the DNR-sponsored "Lake Christina Workgroup" in an effort to return Lakes Christina and Anka to a clean, clear water state for waterfowl and other wildlife by using a two-step approach. First, a fish barrier was identified as needed at the major fish ingress locations between lakes Ina (65 feet deep) and Anka (10 feet deep). Second, the density of fish in lakes Anka and Christina needed to be reduced using the fish toxicant rotenone. The Lake Christina Workgroup estimated that this combination of treatments was the most practical and cost-effective way to remove and bar fish from the lakes and hopefully stabilize the lakes in a clear water state. The DNR requested DU to lead the engineering and installation of fish barriers (Result 2 of this grant) and to cost-share the chemical treatment (Result 1). DU and DNR worked together to solicit bids for the fish toxicant chemical rotenone and contracted aerial application in summer 2003, and Lakes Anka and Christina were subsequently treated with the chemical on October 21, 2003. A graduate student was also contracted to assess the fish affected by the treatment and give some insight into the fish community present prior to the treatment, and that assessment indicated that the largest biomass of fish affected by the treatment were black bullheads but the most numerous individuals affected were fathead minnows. A total of 4,076 wetland acres were improved by the treatment, and further evaluation by DNR in 2004 indicated the treatment was a success due to significant improvements in water clarity and both aquatic plant and invertebrate abundance.

Result 2: Shallow Lake Outlet Improvements

Grant Budget \$310,004.92 - Spent \$310,004.92 = Balance \$0 Wetland Enhancement Acres = 787

As requested by the DNR-sponsored Lake Christina Workgroup, DU engineered and installed an innovative fish barrier for the water connection between Lakes Ina and Anka that features three rotating screen drums with small holes 0.75 millimeters in diameter that allows water but not fish nor their fertilized eggs to pass through with the flow of water from deep lake Ina into shallow lakes Anka and Christina in Douglas County. The barrier was designed in 2002 with consultant engineering assistance from a Washington state firm that specializes in fish barriers and installed in September and October 2003 after DNR secured a donated easement from the landowner of the site. The wetland acres enhanced (4,076) are the same acres enhanced and reported in Result 1.

In addition to the Ina/Anka fish barrier at Lake Christina, DU also engineered and installed five other structures that enhanced five other shallow lakes totaling 787 acres as outlined in the table below. At Towner Slough WMA in Grant County, DU engineered and installed an outlet structure and permanent electric pump to provide DNR wildlife managers with the ability to actively manage and lower water levels in the 162-acre Towner Lake to winterkill fish and rejuvenate aquatic plants such as bulrush and sago pondweed. Similarly, DU engineers installed a new steel sheet-pile weir water control structure and fish barrier on the outlet of the 80-acre Logue Lake on the Lick WMA in Rice County that will allow DNR wildlife managers to actively manage water levels and enhance wetland vegetation.

DU also paid for fish barrier materials installed by DU shallow lake technician Josh Kavanagh and DNR and USFWS field staff on outlets of Lake Cyrus (245 acres) in Pope County, and Lakes Madrena (168 acres) and Madison (132 acres) in Lac Qui Parle County.

Finally, DU also surveyed and engineered large fish barrier designs for three other shallow lake outlets, but construction of these three projects during Phase I of this grant project was not possible due to DNR permit and easement requirements that could not be satisfied in time for construction to start. These three projects involve installation of velocity tube style fish barriers in the outlet channels of the Kube-Swift WMA in Grant County, Simon Lake in Pope County, and Smith Lake in Wright County. Easements and permits for these three and several other projects previously engineered by DU will be secured by DNR during Phase II of this grant, and each project will be promptly implemented by DU soon thereafter upon notice from DNR that construction can proceed.

Shallow Lake Project Name	County	Corridor Project Area	Result & Wetland Acres Enhanced
Lakes Anka/Christina	Douglas	Border Prairie (#3)	Fish Barrier Engineered & Installed, 4,076 acres
Towner Lake WMA	Grant	Border Prairie (#3)	Outlet Tube & Pump Engineered & Installed, 162 acs
Kube-Swift WMA	Grant	Border Prairie (#3)	Fish Barrier Engineered, project delayed to Phase II
Lake Cyrus	Pope	Border Prairie (#3)	Fish Barrier Installed, 245 acres enhanced
Madrena WMA	Lac Qui Parle	Upper Minn. R. (#6)	Fish Barrier Installed, 168 acres enhanced
Madison WMA	Lac Qui Parle	Upper Minn. R. (#6)	Fish Barrier Installed, 132 acres enhanced
Simon Lake	Pope	Alexan. Moraine (#7)	Fish Barrier Engineered, project delayed to Phase II
Smith Lake	Wright	Big Woods N. (#8)	Fish Barrier Engineered, project delayed to Phase II
Logue Lake, Lick WMA	Rice	South. Lakes (#10)	Outlet Weir & Fish Barrier Installed, 80 acres

Result 3: Technical Assistance**Grant Budget \$116,576.32 - Spent \$116,576.32 = Balance \$0 Technical Assistance Acres = 41,617**

A contract biological technician (Josh Kavanagh) provided technical assistance on 41,617 acres by (1) working with private landowners around shallow lakes to implement conservation programs, and (2) assisting the DNR's shallow lakes program, DNR Area Wildlife Managers, and DU engineers to conduct biological and engineering surveys on selected wildlife lakes to implement enhancement techniques (e.g., reverse aeration or drawdowns) and structural improvement projects such as fish barriers and water level management structures on lake outlets. The technician focused his efforts on shallow lakes that were identified by DNR wildlife field staff as being important for wildlife in Corridors Project Areas 3, 6, and 7 within west-central Minnesota counties covered by the DNR's Appleton, Glenwood, and Willmar Area Wildlife Managers, and affected a total of 41,617 acres. His technical assistance efforts were either: (1) promoting USDA conservation programs (largely CRP) to 81 landowners affecting 17,495 acres around shallow lakes, and (2) assisting landowners, DNR biologists, and DU engineers with 50 shallow lake assessment and enhancement projects totaling 24,122 acres. The six summary tables by Corridor Project Area below detail the specifics of his activities:

Corridors Project Area #3 Landowner Name:	USDA Conservation Program Promotion			Total Acres
	County	Wetland Acres	Upland Acres	
Neil Hanson	Grant	100	302	402
Richard Hauptert	Grant	70	300	370
Byron Glibertson	Grant	3	50	53
Angeline Christians	Grant	15	130	145
John Miller	Grant	10	150	160
Connie Johnson	Grant	29	130	159
Randy Larson	Grant	10	50	60
Terry Christians	Grant	10	221	231
Jerry Werk	Grant	40	439	479
Rick Schmidts	Grant	15	25	40
Keith Brosh	Pope	50	104	154
Randy Schlieff	Pope	10	42	52
Wencil Pronek	Pope	20	60	80
Rod Brown	Pope	1	53	54
Jay Gullickson	Pope	0	8	8
Robert Paulzine	Pope	10	55	65
Dan McIver	Pope	30	42	72
Patty Mohr	Pope	25	30	55
Arven Graff	Stevens	20	107	127
Ruben Jergensen	Stevens	12	60	72
Warren Vavra	Stevens	70	247	317
Orlyn Cin	Stevens	25	225	250
Hazel Fynbah	Stevens	50	410	460
Larry Fynbah	Stevens	15	44	59
Lyla Cin	Stevens	12	200	212
Gary Smith	Stevens	56	100	156
David Werk	Stevens	20	148	168
Ray Cook	Stevens	20	80	100
Rudolph Raths	Stevens	60	748	808
Patricia Nelson	Stevens	20	86	106
Chester Larson	Stevens	50	262	312
Jim Aanerud	Stevens	20	200	220
Richard Stark	Pope	14	160	174

TOTAL		912	5,268	6,180 acres
--------------	--	------------	--------------	--------------------

Corridors Project Area #6 USDA Conservation Program Promotion

Landowner Name:	County	Wetland Acres	Upland Acres	Total Acres
Walter Ahrndt	Big Stone	10	35	45
Roger Koosman	Swift	20	60	80
Craig Wilkening	Swift	192	800	992
Donald Schaefer	Swift	20	140	160
Ross Chistenson	Swift	70	280	350
Jim Nelson	Big Stone	50	170	220
Norman Anderson	Big Stone	80	300	380
Bill Clemens	Swift	15	65	80
Marlyn Vagsness	Big Stone	64	200	264
Farifield Genetics	Swift	100	240	340
Ron Thompson	Big Stone	65	400	465
David Botker	Big Stone	44	130	174
Wilbert Bartz	Swift	15	20	35
TOTAL		745	2,840	3,585 acres

Corridors Project Area #7 USDA Conservation Program Promotion

Landowner Name:	County	Wetland	Upland	Total
Charles Sanvik	Pope	178	267	445
Allen Loen	Swift	80	200	280
Betty Rice	Swift	20	210	230
Vanderwyst Farms	Swift	78	540	618
Jack Nugent	Pope	230	734	964
Keith Nybakke	Pope	20	55	75
Jeff Zervas	Pope	20	103	123
Sean Hemmingf	Pope	40	90	130
Mary Sennott	Swift	35	80	115
Jim Mathews	Swift	50	532	582
Carleton Nelson	Swift	13	170	183
Riley Gufstason	Kandiyohi	5	15	20
Gary Sherrick	Pope	10	58	68
Eric Turnquist	Swift	23	195	218
Vyke Breene	Swift	0	10	10
Doug Anderson	Swift	70	362	432
Elda Behrens	Swift	10	70	80
Harold Gaudarian	Pope	50	306	356
Dale Kannegiesser	Swift	90	301	391
Janet Mittness	Swift	200	182	382
Duane Grube	Swift	30	130	160
Gene Sell	Swift	20	54	74
Marty Arneson	Swift	87	70	157
Gene Wentzel	Swift	15	25	40
Alan Braaten	Pope	37	175	212
M. Baker	Kandiyohi	25	55	80
Steve Shores	Swift	10	30	40
Bob Schoen	Swift	5	40	45
Keith Brosh	Pope	50	104	154
Joe Cannon	Swift	24	135	160
Dennis Holt	Swift	50	100	150
Tom Vondahaar	Swift	77	105	183

Chester Lee	Swift	5	15	20
Brian Honn	Swift	20	220	240
William Ferrell	Pope	75	238	313
TOTAL		1,752	5,976	7,730 acres

Corridor Project Area #3 DNR Lake Tech Assistance

Lake Name:	County	Basin Acres
Big Lake	Grant	262
Ohlsrud Lake	Grant	183
Nelson Lake	Grant	105
Sherstad Slough	Stevens	162
Harstad Slough	Stevens	264
Gorder Lake	Stevens	520
Flax Lake	Stevens	132
Clear Lake	Stevens	185
Kube/Swift WMA	Grant	236
Long Lake	Stevens	588
Towner Slough	Grant	162
Lake Christina	Douglas	3,732
Upper Lightning	Ottertail	509
TOTAL		7,040 acres

Corridor Project Area #6 DNR Lake Tech Assistance

Lake Name:	County	Basin Acres
Madison WMA	LQP	168
Madrena WMA	LQP	132
Unnamed Basin	Big Stone	80
Large Henry Lake	Swift	350
Small Henry Lake	Swift	81
Shible /Dry Lakes	Swift	1055
Hart Lake	Swift	127
Drywood Lakes	Swift	672
Mud Lake	Traverse	1,640
Marsh Lake	LQP	5,100
TOTAL		9,405 acres

Corridor Project Area #7 DNR Lake Tech Assistance

Lake Name:	County	County
Henchien Lake	Kandiyohi	61
Frovold Lake	Swift	59
Hollerberg Lake	Swift	260
Frank Lake	Swift	145
Mud Lake	Kandiyohi	2,516
St. John's Lake	Kandiyohi	221
Cedar Lake	Stearns	243
Johnson Lake	Swift	157

Hefta Lake	Kandiyohi	115
Anderson Lake	Pope	90
Lake Celia	Pope	110
Lake Mary	Pope	72
Jennum Slough	Pope	48
Nelson Lake	Pope	303
Helle Lake	Pope	86
Lindgren Lake	Kandiyohi	75
West Lindgren	Kandiyohi	70
Church Lake	Kandiyohi	63
Sperry Lake	Kandiyohi	142
Wheeler Lake	Kandiyohi	238
Simon Lake	Pope	620
Lake Moore	Swift	227
Lake Hassel	Swift	706
Cyrus Lake	Stevens	245
Danielson Slough	Pope	110
Larson Lake	Pope	135
West Solomon	Kandiyohi	560
TOTAL		7,677 acres

Result 4: DU Professional Services and Other Non-grant Expenses DU Contribution: \$220,678.80

Additional expense constituting DU’s match contribution to the project includes administration and coordination staff, un-recovered salary and operational expenses, and private donations to DU from individuals and other non-state partners to accomplish the work detailed above. These expenses were not billed to LCMR or DNR and represent DU’s “other” contribution to this project.

V. DISSEMINATION:

News of the project and individual accomplishments will be disseminated by news releases from partners (DNR, FWS, lake associations) and DU, including coverage in the state DU newsletter, and on the DU web pages (www.mnducks.org and www.prairie.ducks.org).

VI. CONTEXT:

Shallow “wildlife” lake conservation is a major concern of both DU and the Minnesota DNR due to the value of large wetlands to migrating and breeding waterfowl and other wetland dependent wildlife species. The DNR’s shallow lakes program and related efforts improve shallow lakes that is guided by the plan “Restoring Minnesota’s Wetland and Waterfowl Hunting Heritage” combined with DU’s focus on shallow lakes under it’s Living Lakes Initiative provide the opportunity for DU to assist DNR in conserving shallow lakes throughout Minnesota. To help accelerate DNR’s shallow lake conservation efforts in Corridors Project Areas, this LCMR grant project was designed to provide funding for professional DU bio-engineering services to help assess, buffer, and enhance key shallow lakes in partnership with DNR.

VII. COOPERATION:

DU staff cooperated closely with several Minnesota DNR field offices and many DNR field staff in the assessment and enhancement of shallow lakes. In addition, DU staff worked very closely with the Christina-Ina-Anka Lake Association, 81 individual landowners, several Watershed Districts, three USFWS Wetland Management Districts, and several USDA's FSA & NRCS field offices in completing this project.

VIII. LOCATION:

The following is a table of projects locations for structural enhancements implemented through this project:

Shallow Lake Enhancement		Corridor	Location (T/R/S, Latitude, Longitude)
Project Name	County	Project Area	
Lakes Anka/Christina	Douglas	Border Prairie (#3)	T130N, R40W, Section 8 46 deg 05' 10" N Lat, 95 deg 44' 09" W Long
Towner Lake WMA	Grant	Border Prairie (#3)	T127N, R43W, Section 33 45 deg 46' 01" N Lat, 96 deg 4' 32" W Long
Lake Cyrus	Pope	Border Prairie (#3)	T125N, R40W, Section 30 45 deg 36' 23" N Lat, 95 deg 44' 09" W Long
Madrena WMA	Lac Qui Parle	Upper Minn. R. (#6)	T118N, R45W, Section 12 45 deg 02' 29" N Lat, 96 deg 14' 17" W Long
Madison WMA	Lac Qui Parle	Upper Minn. R. (#6)	T118N, R44W, Section 7 45 deg 02' 27" N Lat, 96 deg 13' 03" W Long
Logue Lake, Lick WMA	Rice	South. Lakes (#10)	T111N, R22W, Section 10 44 deg 25' 56" N Lat, 93 deg 27' 08" W Long

ATTACHMENT A. Final Work Program Budget, June 30, 2004.

Project Title: Wildlife Lakes Initiative

Project Number: CH01 (part 2f)

LCMR Recommended Funding: \$879,234.30

2001 LCMR Project Biennial Budget

		Result 1 Budget:	Result 1 Spent:	Result 1 Balance:	Result 2 Budget:	Result 2 Spent:	Result 2 Balance:	Result 3 Budget:	Result 3 Spent:	Result 3 Balance:	PROJECT TOTAL:		
Budget Item (Title of Result)		Title: Lake Christina Reclamation			Title: Shallow Lake Outlet Improvements			Title: Technical Assistance			BUDGET TOTAL:	SPENT TO DATE:	BALANCE TOTAL:
Wages, salaries & benefits	Detail												
DU Grp. 2 Professional Staff (engineers, project supervisors, biologists, surveyors, etc.)	125 hrs. @ \$60/hr	\$0	\$0	\$0	\$26,456.46	\$26,456.46	\$0	\$0	\$0	\$0	\$26,456.46	\$26,456.46	\$0
DU Grp. 3 Technical Staff (technicians, drafters, construction managers, etc.)	188 hrs @ \$40/hr	\$0	\$0	\$0	\$16,358.00	\$16,358.00	\$0	\$0	\$0	\$0	\$16,358.00	\$16,358.00	\$0
Contract Biological Technicians	3960 hrs @ \$38/hr	\$0	\$0	\$0	\$0	\$0	\$0	\$116,576.32	\$116,576.32	\$0	\$116,576.32	\$116,576.32	\$0
Wages subtotal		\$0	\$0	\$0	\$42,814.46	\$42,814.46	\$0	\$116,576.32	\$116,576.32	\$0	\$159,390.78	\$159,390.78	\$0
Contracts													
Fish toxicant and application for Lake Christina (MN-309-04)	~17,000 gal @ \$30	\$443,629.25	\$443,629.25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$443,629.25	\$443,629.25	\$0
Contract Professional Services (surveying, engineering, fish consult)	Various	\$9,023.81	\$9,023.81	\$0	\$57,841.99	\$57,841.99	\$0	\$0	\$0	\$0	\$66,865.80	\$66,865.80	\$0
Heavy Equipment and Structure Fabrication Contracts	3-5 structures	\$0	\$0	\$0	\$209,241.91	\$209,241.91	\$0	\$0	\$0	\$0	\$209,241.91	\$209,241.91	\$0
Outlet Structure Materials	1-2 outlets	\$0	\$0	\$0	\$106.56	\$106.56	\$0	\$0	\$0	\$0	\$106.56	\$106.56	\$0
Contract subtotal		\$452,653.06	\$452,653.06	\$0	\$267,190.46	\$267,190.46	\$0	\$0	\$0	\$0	\$719,843.52	\$719,843.52	\$0
COLUMN TOTAL		\$452,653.06	\$452,653.06	\$0	\$310,004.92	\$310,004.92	\$0	\$116,576.32	\$116,576.32	\$0	\$879,234.30	\$879,234.30	\$0

