

2007 Project Inspection Report

Prepared for
**Clearwater River
Watershed
District**



Wenck

May 2007



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May 8, 2007

Mr. Marvin Brunsell, Chairperson
Clearwater River Watershed District
PO Box 481
Annandale, MN 55302

Re: 2007 Project Inspection Report
Wenck File #0002-101

Dear Mr. Brunsell:

This 2007 Project Inspection Report was prepared for the Clearwater River Watershed District as part of the operation and maintenance activities for the District's Projects.

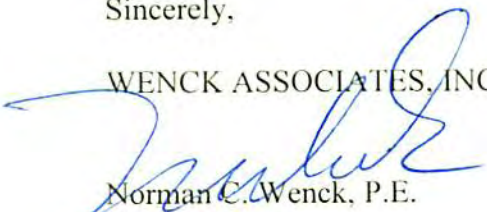
The District's projects were inspected by Merle Anderson and Wes Boll, in April 2007. The attached Table 1 contains the inspection results and our recommendations of maintenance activities with estimated costs. The figures show where maintenance activities are required and the photographs show existing conditions for each project. Repair work at the Kingston Wetland Treatment System, Lake Augusta Erosion Control Project, and Annandale Wetland Treatment System are recommended for this year.

Our recommendation is to solicit three quotes and complete the required maintenance work this summer or fall as weather permits.

The estimated Contractor costs are \$8,000 for lake restoration projects plus an optional task of \$6,000; \$2,000 for Hidden River Septic Tank Pumping; and 80 hours and \$1,000 for equipment rental and supplies for Kevin Wittrock to perform minor maintenance items.

Sincerely,

WENCK ASSOCIATES, INC.


Norman C. Wenck, P.E.
Chairman

cc: CRWD Board of Managers
Merle Anderson, Administrator

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Photographs

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Table 1
Clearwater River Watershed District
Annual Project Inspection
April 2007

Project	Maintenance			Estimated Cost
	Required	Optional	No Action Now	
Upper Watkins Wetland Isolation Project (North) (see Figure 1 and Photo 1)				
1. Summer weed control	✓			Kevin- 8 hrs + \$300 for equipment
Watkins Wetland Treatment System (South) (see Figure 2 and Photo2)				
1. East side (Channel B) in good condition			✓	
2. Overflows vegetated.			✓	
3. Tile inlet and outlet in good condition.			✓	
4. Ports in good condition.			✓	
Clear Lake Inlet V-Notch (North) (see Photo 3)				
1. Outlet structure in good condition.			✓	
Nistler Sedimentation Basin (South) (see Photos 4,5, & 6).				
1. Sedimentation basin in good condition.			✓	
Kingston Wetland Treatment System (see Figures 3 & 4 and Photos 7 & 8)				
1. Repair wooden structure at bend in channel.	✓			\$4,000
2. Remove vegetation and debris from some ports. Most ports in good condition.		✓		Kevin - 16 hrs + \$100 for equipment
3. Reshape channel and reinforce dike to alleviate further problems with dike washouts.		✓		\$6,000
Aerator Buildings (see Photo 9 & 10)				
1. Lake Augusta-Good condition, no maintenance needed.			✓	
2. Lake Marie- Good condition, no maintenance needed.			✓	

Table 1
Clearwater River Watershed District
Annual Project Inspection
April 2007

Project	Maintenance			Estimated Cost
	Required	Optional	No Action Now	
School Section Lake Outlet Project (see Photo 11).				
1. Sand ridge in front of outlet structure.		✓		\$1,000
Rest-a-While Wastewater Treatment System (see Photo 12, 13, & 14)				
1. System in good condition.			✓	
2. Sedimentation basin in good condition.			✓	
Hidden River Wastewater Treatment System (see Photos 15 & 16).				
1. Summer weed control	✓			Kevin- 12 hrs
2. Sand filter and drain field in good condition.			✓	
3. Pump 8 septic tanks as required per schedule.	✓			Contract Pumper: \$2,000
Clearwater Harbor Wastewater Treatment System (See Photos 17 & 18)				
1. Summer weed control	✓			Kevin- 12 hrs
2. Drain field and sand filter in good condition.			✓	
Annandale Wetland Treatment System (see Figure 5 and Photos 19,20, 21 & 22).				
1. Vegetation needs to be removed from channel near diversion structure and two ports.	✓			Kevin - 16 hrs + \$300 for equipment
2. Beaver dam that is blocking south channel needs to be removed.	✓			Kevin - 16 hrs + \$300 for equipment
Pleasant Lake Outlet Project (see Photo 23).				
1. No Maintenance Needed			✓	

Table 1
 Clearwater River Watershed District
 Annual Project Inspection
 April 2007

Project	Maintenance			Estimated Cost
	Required	Optional	No Action Now	
Henshaw Lake Outlet (see Photo 24).				
1. Outlet in good condition.			✓	
Swartout Lake Fish Barrier (see Photo 25 & 26).				
1. Fish barrier installed at lake outlet.			✓	
Illsley Ave Fish Barrier (see Photos 27 & 28).				
1. Fish barrier installed in stream near Illsley Ave and Hwy 55.			✓	
Lake Augusta Erosion Control Project (see Figure 6 and Photos 29, 30, 31, & 32).				
1. Sedimentation boxes in good shape.			✓	
2. Riser has crack in bottom of concrete, needs repair.	✓			Repair crack in concrete base: \$4,000
3. Structure outlet in good condition.			✓	

Table 2
SEWER SYSTEM MAINTENANCE

Hidden River Wastewater System

1. Individual septic tank pump out , based on sludge and scum depth, checked every two years.
2. Check inspection riser on drain field for broken or cracked pipes and caps.
3. Flush distribution lines in the sand filter.
4. Open control panel and check pump run lights at lift stations and treatment site.
5. Pull out pump effluent filters in dosing tank and clean
6. Check vegetation at treatment site, mow grass, and remove unwanted trees.
7. Open all manholes in the collection lines and look for signs of debris or plugging.

Rest-a-While Wastewater Treatment System

1. Individual septic tank pump out, based on sludge and scum depth, checked every two years.
2. Check inspection riser on drain field for broken or cracked pipes and caps.
3. Check aerator for proper operation.
4. Open control panel and check pump run lights at lift stations and treatment site.
5. Pull out pump effluent filters in dosing tank and clean.
6. Check vegetation at treatment site, mow grass, and remove unwanted trees.
7. Open all manholes in the collection lines and look for signs of debris or plugging.
8. Check access road for erosion. Crushed rock may need to be applied.
9. Check sediment basins for depth to sediment and erosion.

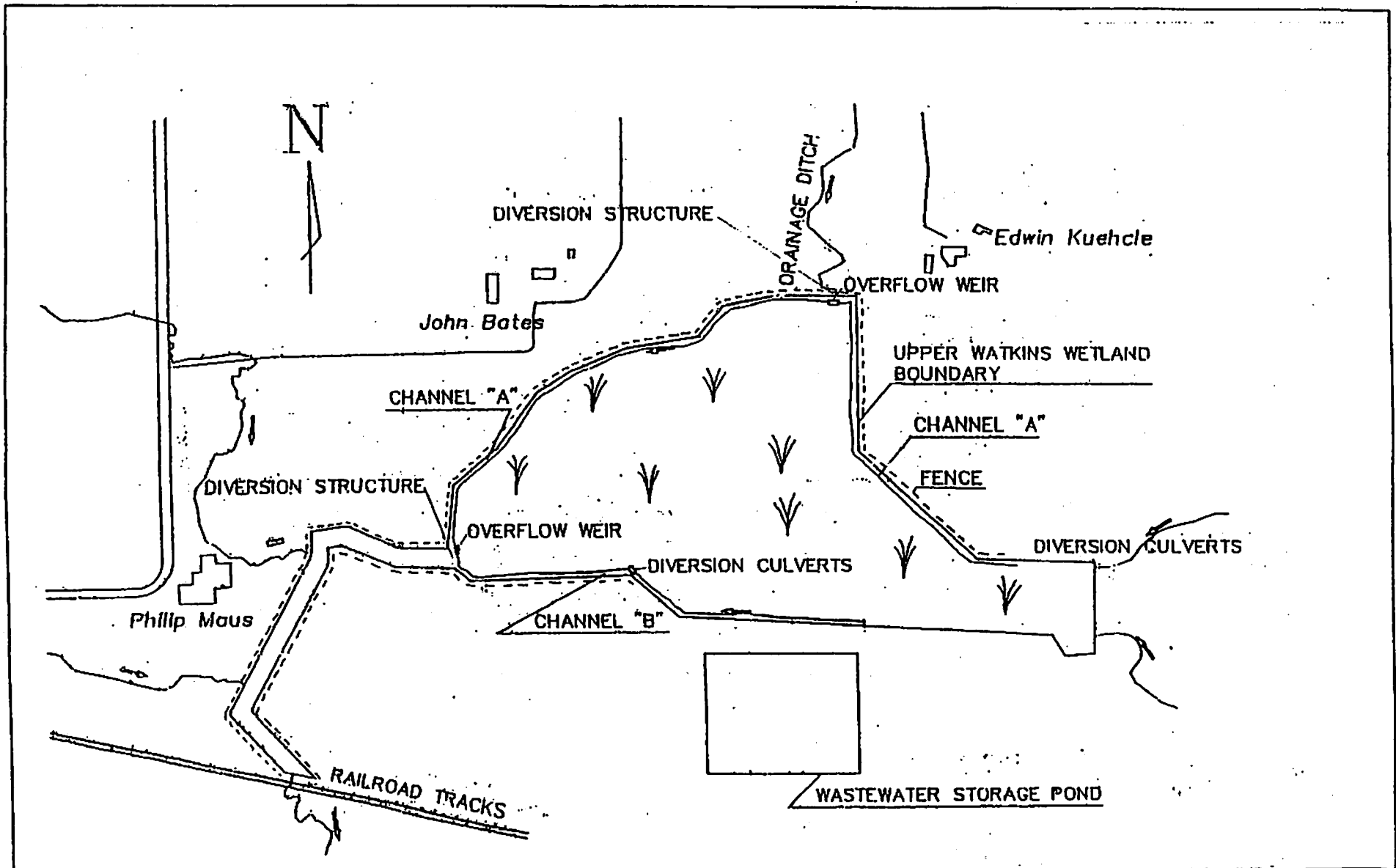
Clearwater Harbor Wastewater Treatment System

1. Check community septic tank monthly. Pump as needed.
2. Check inspection riser on drain field for broken or cracked pipes and caps.
3. Flush distribution lines in the sand filter.
4. Open control panel and check pump run lights at lift stations and treatment site.
5. Pull out pump effluent filters in dosing tank and clean.
6. Check vegetation at treatment site, mow grass, and remove unwanted trees.
7. Open all manholes in the collection lines and look for signs of debris plugging.

**Table 3
Hidden River Pumping Schedule**

Parcel ID #	Address	Date Tank Installed	Permit #	Block	Lot	2003	2004	2005	2006	2007	2008
19.10722.560	14656 Hidden River Dr.	8/1/2003	18-18458	5	2			05		07	
19.10722.565	14687 Hidden River Dr.	NO RECORDS FOUND		OUTLOT A							
19.10722.558	14688 Hidden River Dr.	9/23/2004	19-19331	5	1				06		
19.10722.556	14714 Hidden River Dr.	NO RECORDS FOUND		4	5						
19.10722.554	14736 Hidden River Dr.	9/12/2003	19-18397	4	4			05		07	
19.10722.552	14758 Hidden River Dr.	10/28/2005	19-20191	4	3						08
19.10722.550	14782 Hidden River Dr.	NO RECORDS FOUND		4	2						
19.10722.520	14791 Hidden River Dr.	11/5/2003	19-18717	2	7				06		08
19.10722.548	14804 Hidden River Dr.	9/9/2003	19-18580	4	1				06		08
19.10722.518	14825 Hidden River Dr.	10/30/2001	19-17222	2	6		04		06		08
19.10722.546	14826 Hidden River Dr.	10/27/2005	19-20237	3	13						08
19.10722.516	14683 Hidden River Dr.	10/7/2002	19-17999	2	5			05		07	
19.10722.542	14872 Hidden River Dr.	11/16/2004	19-19513	3	10				06		08
19.10722.538	14916 Hidden River Dr.	NO RECORDS FOUND		3	9						
19.10722.514	14917 Hidden River Dr.	12/15/2000	19-16679	2	4	03		05		07	
19.10722.536	14938 Hidden River Dr.	8/3/2005	19-20008	3	8						08
19.10722.534	14962 Hidden River Dr.	NO RECORDS FOUND		3	7						
19.10722.532	14984 Hidden River Dr.	NO RECORDS FOUND		3	6						
19.10722.512	15015 Hidden River Dr.	NO RECORDS FOUND		2	3						
19.10722.530	15016 Hidden River Dr.	NO RECORDS FOUND		3	5						
19.10722.528	15028 Hidden River Dr.	8/19/2002	19-17670	3	4			05		07	
19.10722.526	15042 Hidden River Dr.	9/25/2003	19-18739	3	3				06		08
19.10722.510	15057 Hidden River Dr.	9/10/2003	19-18744	2	2				06		08
19.10722.524	15074 Hidden River Dr.	12/21/2001	19-17522	3	2		04		06		08
19.10722.508	15085 Hidden River Dr.	10/10/2003	19-18676	2	1				06		08
19.10722.522	15096 Hidden River Dr.	11/19/2002	19-18169	3	1			05		07	
19.10722.506	15112 Hidden River Dr.	8/10/2005	19-19439	1	4						08
19.10722.504	15144 Hidden River Dr.	5/20/2002	19-17451	1	3			05		07	
19.10722.502	15176 Hidden River Dr.	4/3/2001	19-16793	1	2	03		05		07	
19.10722.500	15198 Hidden River Dr.	10/19/2001	19-17223	1	1		04		06		08

Figures

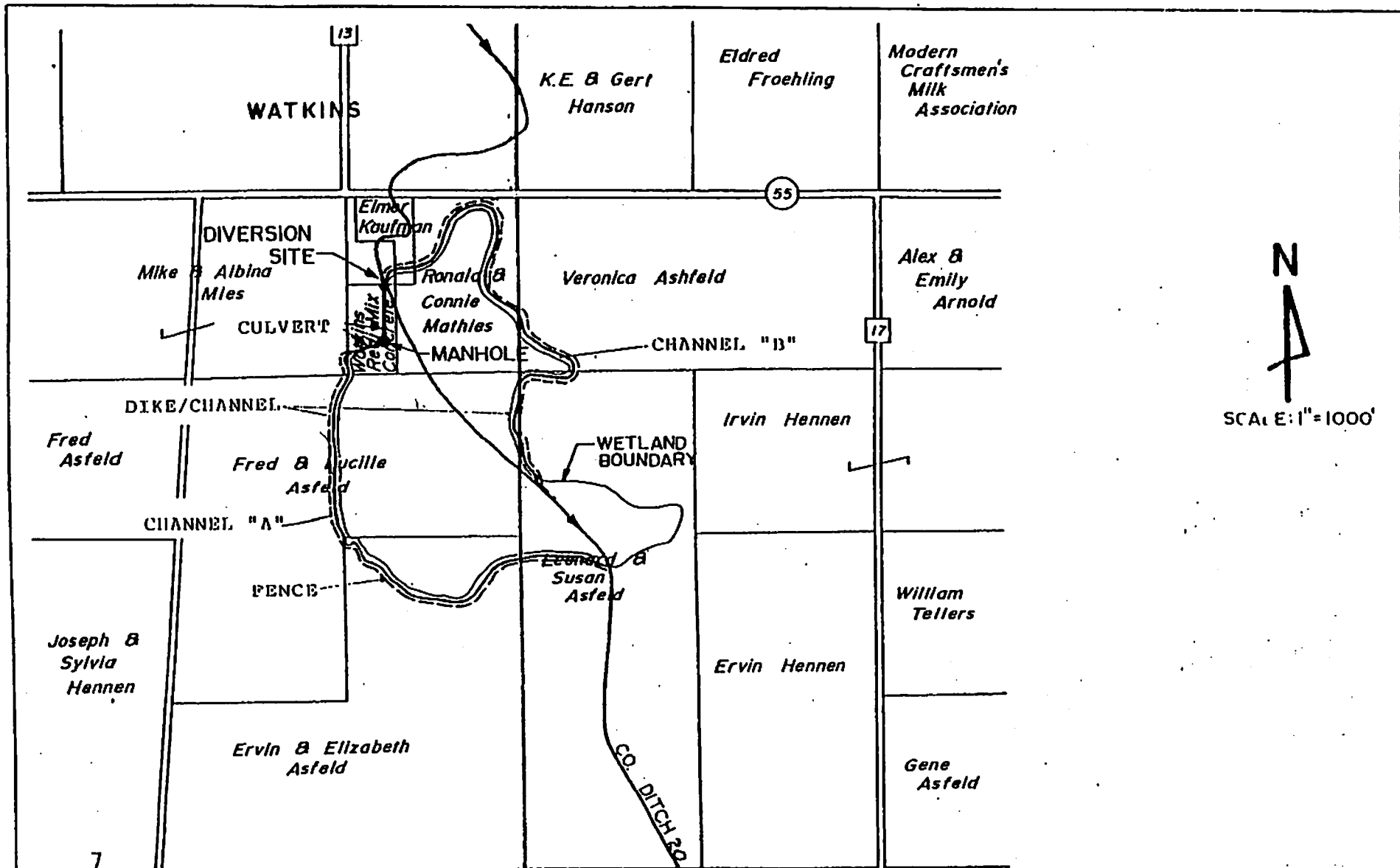


CLEARWATER RIVER WATERSHED DISTRICT

Upper Watkins Wetland Isolation Project


Wenck
 Wenck Associates, Inc. 1870 Pioneer Creek Center
 Environmental Engineers Maple Plain, MN 55359

Figure 1



SCALE: 1" = 1000'

CLEARWATER RIVER WATERSHED DISTRICT

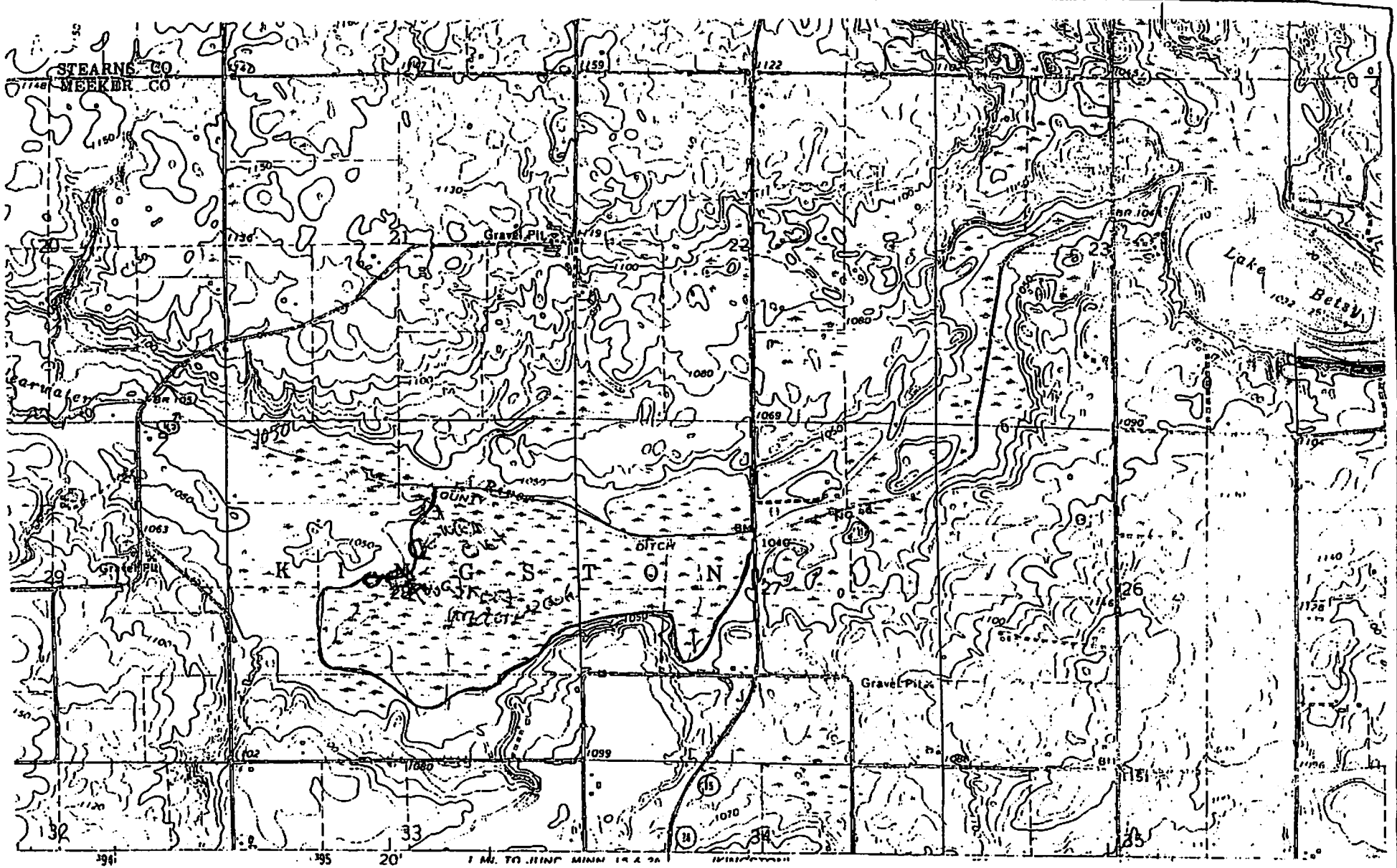
Watkins Wetland Treatment Project



Wenck

Wenck Associates, Inc. Environmental Engineers
1800 Pioneer Creek Center
Maple Park, MI 49659

Figure 2



CLEARWATER RIVER WATERSHED DISTRICT

Kingston Wetland Treatment Project

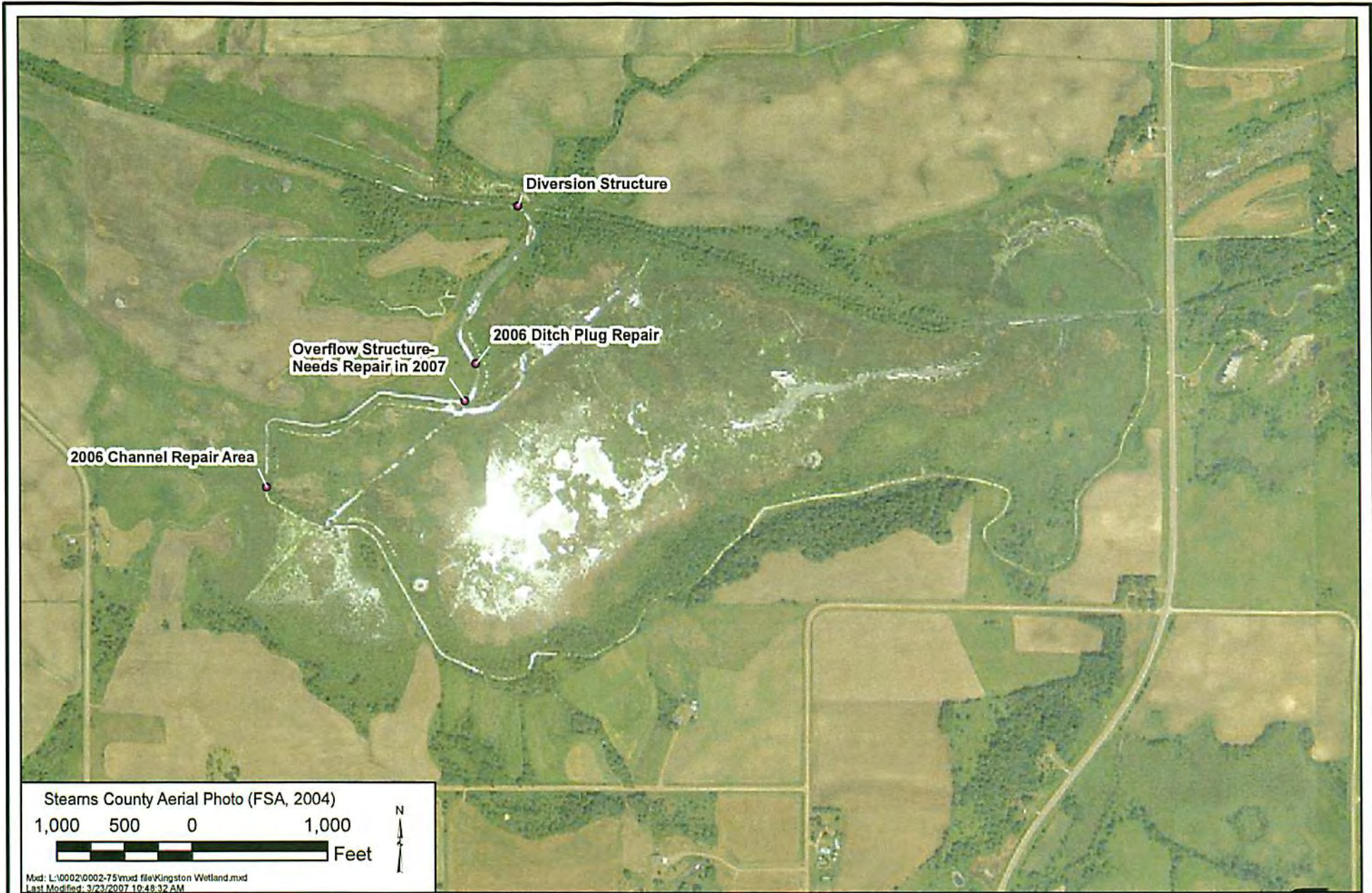
Wenck Associates, Inc.
Environmental Engineers



Wenck

1800 Pioneer Creek Center
Maple Plain, MN 55359

Figure 3



Stearns County Aerial Photo (FSA, 2004)
 1,000 500 0 1,000
 Feet
Mxd: L:\0002\0002-75\mxd file\Kingston Wetland.mxd
 Last Modified: 3/23/2007 10:48:32 AM

CLEARWATER RIVER WATERSHED DISTRICT

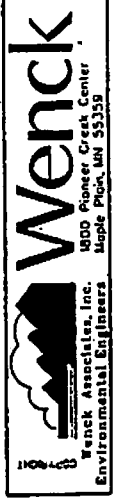
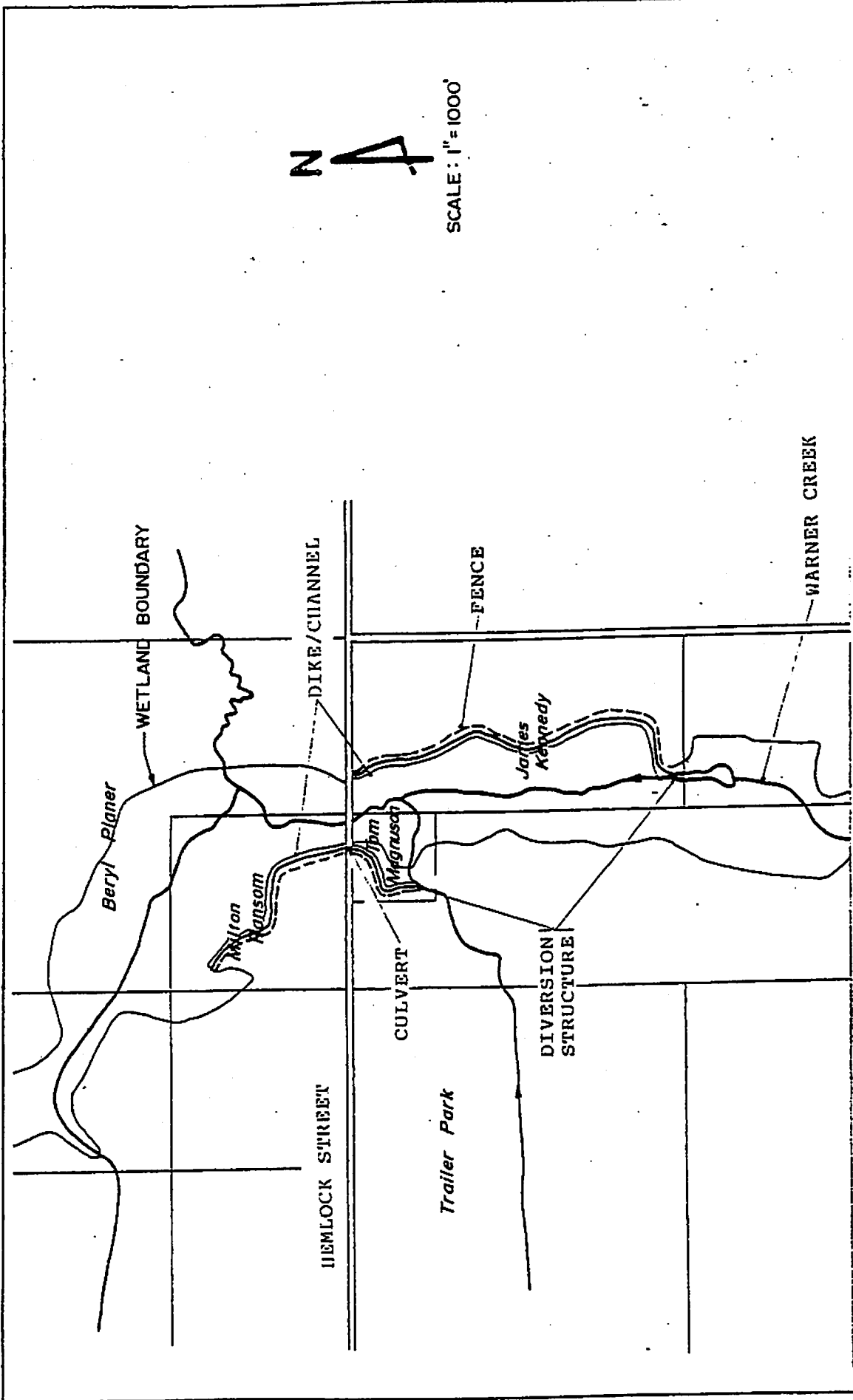
Kingston Wetland Treatment System

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 Environmental Engineers Maple Plain, MN 55359-0429

MAY 2007

Figure 4



CLEARWATER RIVER WATERSHED DISTRICT
 Annandale Wetland Treatment Project

Figure 5

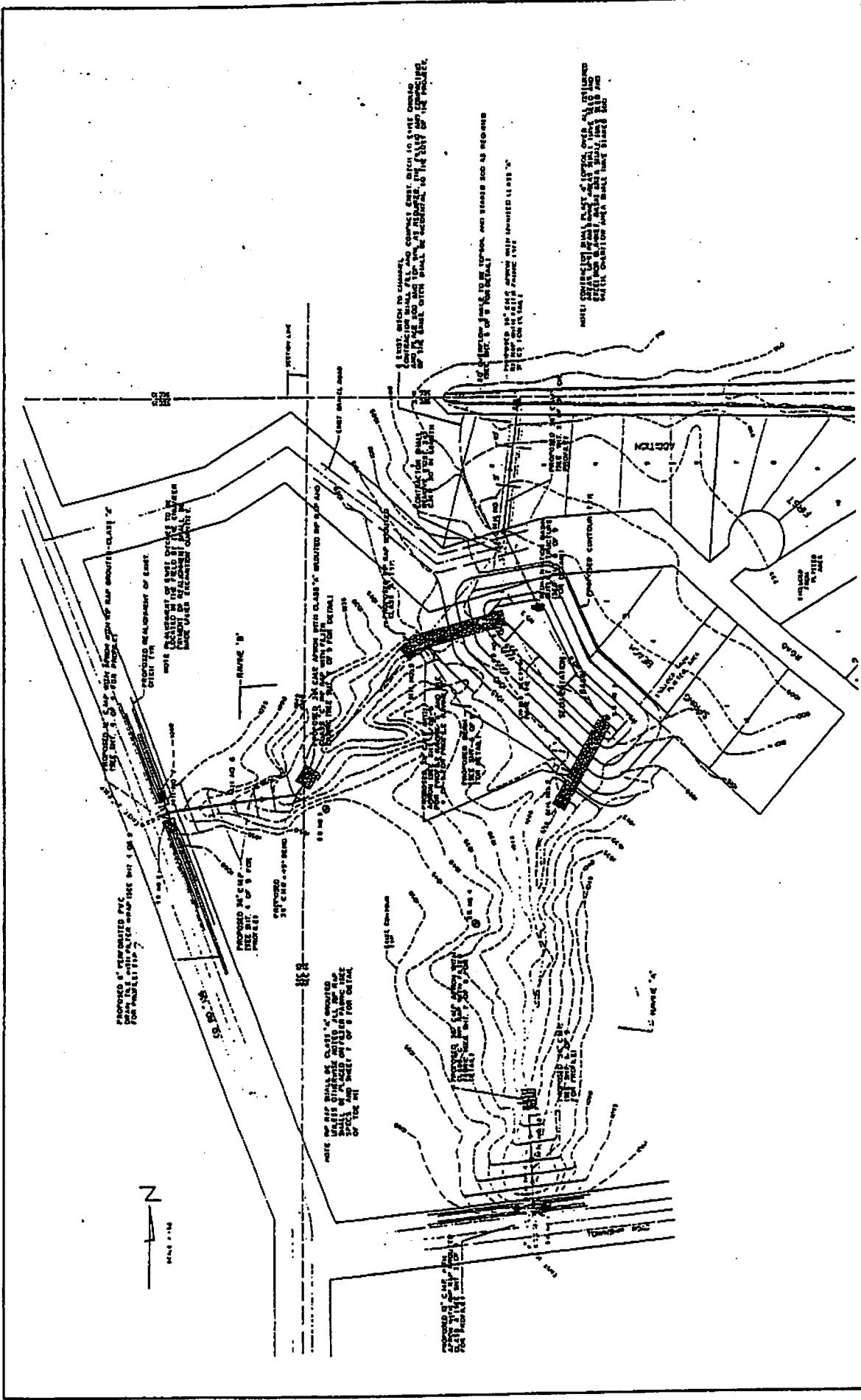


Figure 6

Wenck
 Wenck Associates, Inc.
 1000 Pioneer Creek Center
 Maple Plain, MN 55359
 Environmental Engineers

CLEARWATER RIVER WATERSHED DISTRICT
 Lake Augusta Erosion Control Project

Photographs



Photo 1-Upper Watkins Wetland Isolation Project
(North)



Photo 2-Watkins Wetland Treatment System
(South)

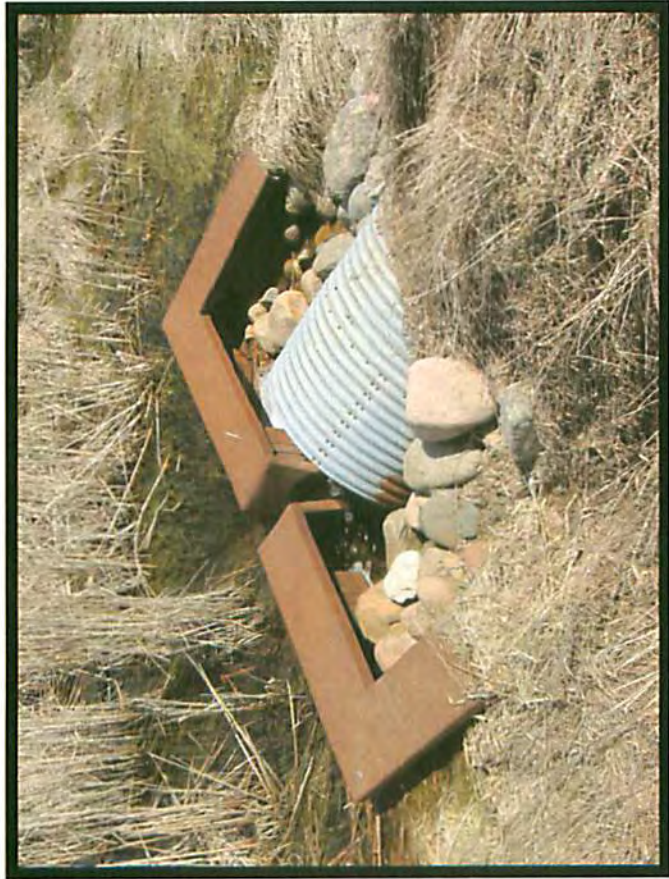


Photo 3-Clear Lake Inlet V-Notch (North)



Photo 4-Nistler Sedimentation Basin



Photo 5-Nistler Sedimentation Basin



Photo 6-Nistler Sedimentation Basin

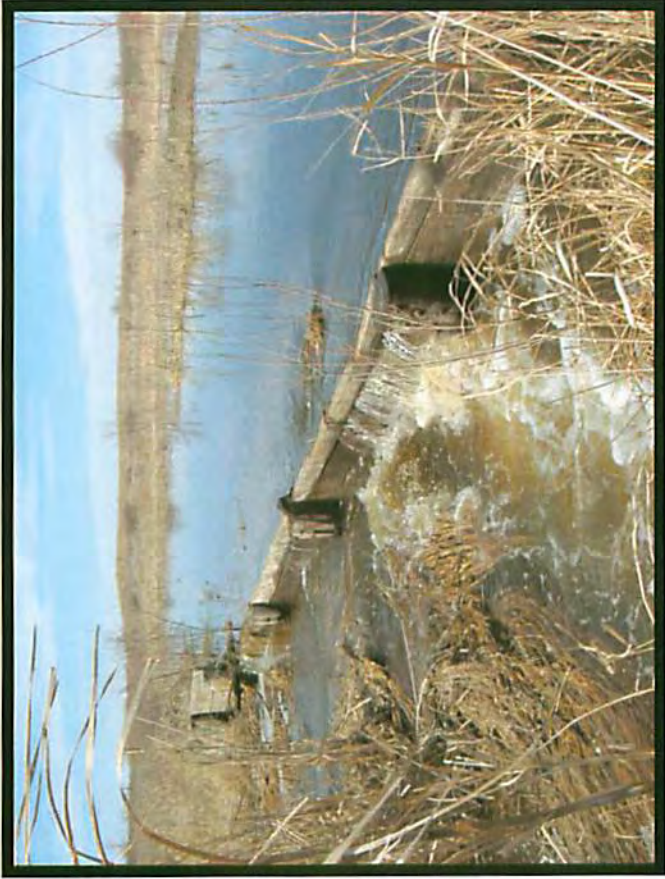


Photo 7-Kingston Wetland Piling Structure Needs
Repair



Photo 8-Kingston Wetland Area of 2006 Channel
Repair



Photo 9-Lake Marie Aerator Building



Photo 10-Lake Augusta Aerator Building



Photo 11-School Section Lake Outlet Project



Photo 12-Rest-a-while Drainfield



Photo 13-Rest-a-while Sedimentation Basin
(West)



Photo 14-Rest-a-while Sedimentation Basin
(East)



Photo 15-Hidden River Wastewater Treatment
System Sand Filter



Photo 16-Hidden River Wastewater Treatment
System Drainfield

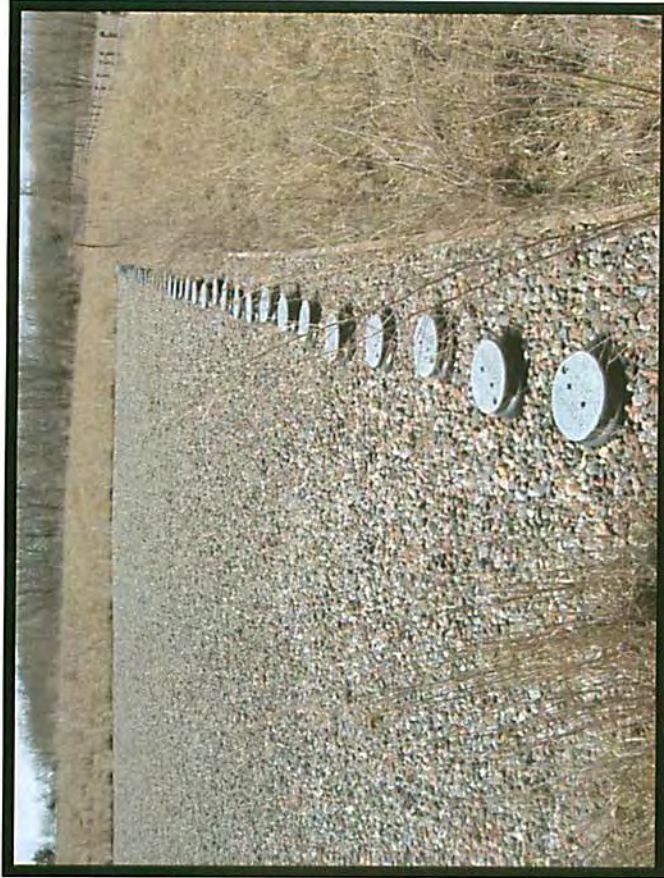


Photo 17-Clearwater Harbor Wastewater
Treatment System Sand Filter



Photo 18-Clearwater Harbor Wastewater
Treatment System Drainfield

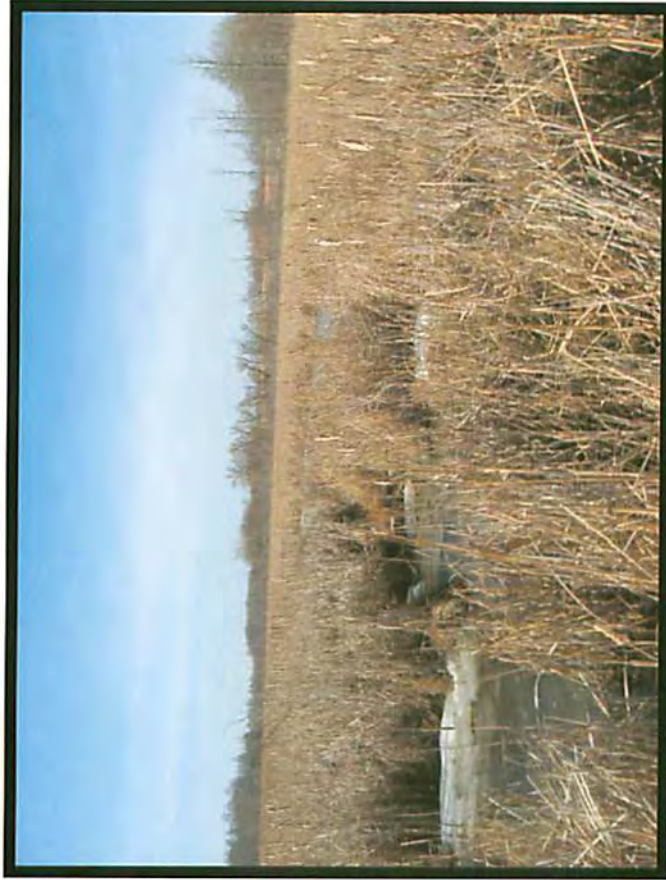


Photo 19-Annandale Wetland Treatment System
Channel Blockage Near Diversion Structure



Photo 20-Annandale Wetland Treatment System
Beaver Dam Blocking Flow



Photo 21-Annandale Wetland Treatment System
Dry Channel Downstream of Beaver Dam



Photo 22-Annandale Wetland Treatment System
Outlet Structure



Photo 23-Pleasant Lake Outlet Structure



Photo 24-Henshaw Lake Outlet



Photo 25-Swartout Lake Fish Barrier



Photo 26-Swartout Lake Fish Barrier



Photo 27-Illsley Ave Fish Barrier



Photo 28-Illsley Ave Fish Barrier



Photo 29-Lake Augusta Erosion Control Project
Sedimentation Box (West)



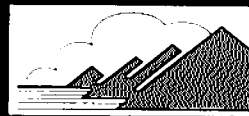
Photo 30-Lake Augusta Erosion Control Project
Sedimentation Box (East)



Photo 31-Lake Augusta Erosion Control System
Riser (Cracks in bottom of structure to be repaired
in 2007)



Photo 32-Lake Augusta Erosion Control Project
Outlet Structure



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