Aquatic EcoSolutions, Inc.

Ecological Solutions to Environmental Challenges

Lakes • Streams • Riparian • Wetlands • Watersheds

2116 Marquis Road
Golden Valley, MN 55427
Telephone/Fax: (763) 545-0912

St. Clair Farm

Chisago, Minnesota

for

St. Clair Properties, Inc.

Wetland Delineation Report

January 25, 2002

Number: 02003JJ

St. Clair Farm

Chisago, Minnesota

for

St. Clair Properties, Inc.

prepared by

Aquatic EcoSolutions, Inc.
Number: 02003JJ

The **St. Clair Farm** is in the NW¼ of the SW¼ of Section 13, Township T. 33 N., Range R. 20 W., Chisago City and Chisago Lake Twsp., Chisago County, Minnesota.

The parcel is located adjacent to and east of Old Towne Road (County Road 24), adjacent to and north of 276th Street North along the southern edge of Chisago City, two miles south of US Highway 8.

Adjacent land usage is residential homes and vacant land that includes old field meadow, wetlands and some woodland.

This parcel is mostly old field meadow and horse pasture with the delineated wetland.

The purpose of this project was to examine the site for wetland conditions and delineate them. The Results section describes the basin observed on the site

The wetland delineation was performed on January 23, 2002 under minimal snow cover and mildly frozen conditions by Robert J.F. Merila, *Professional Wetland Scientist* #1030.

Methodology

In Minnesota, wetlands are under two jurisdictions: State and Federal. The State jurisdiction guidelines were set by the Minnesota Wetland Conservation Act of 1991 (WCA). This State jurisdiction is administered by the Local Governmental Unit (LGU) with technical guidance provided by the Board of Water and Soil Resources (BWSR).

The Federal jurisdiction is administered by the U.S. Army Corps of Engineers (COE or Corps).

Starting in 1996, both jurisdictions agreed to use the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) along with supplemental guidance by the Corps. This manual is commonly referred to as the **1987 Manual**.

The wetland delineation method used on this site was the Plant Community Assessment Procedure of the Routine Onsite Determination Method. The Routine Onsite Determination

Forms (located in the back of the report) detail the three technical criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) as described in the 1987 Manual.

The wetland edge(s) were delineated where one, two, or all three of these technical criteria drop out.

In order to expedite regulatory review, some wetland edges were delineated such that the hydrology criterion was not met below the delineated edge. At some time in the future, the landowner may choose to have the hydrology criterion below the delineated edges examined more closely in order to "tighten up" a wetland edge that was staked high. This detailed hydrologic study was not part of this wetland delineation.

At least one sample point transect perpendicularly crosses each delineated edge. These transects consist of one sample point above the edge, one sample point below the edge, and there may be one along the edge.

A **Routine Onsite Determination Form** (data form) was completed for each of the sample point locations. The data forms describe the plant community, soils information, and hydrologic indicators at each sample point. Sample points are labeled as follows:

SP**2**-T**1**-**LOW**

2=basin or edge number
1=the first transect for this edge (the second would be "2")
LOW=the sample point below the edge ("UP" is above the edge)
(additional points on a transect would be "LOW2," "UP2," and so on)

Plant species on the data forms were listed by common names, scientific names, stratum, percent cover for that stratum, and the species hydrohytic indicator status.

The delineated wetland edges were staked with sequentially numbered four-foot wooden lath and orange or pink "Wetland Boundary" flagging. The numbered side typically faces toward the upland side of the edge. Striped flagging may be tied to vegetation if the lath is tough to see.

Blue and white striped flagging was tied on the lath which mark the transect sample points. The numbers on lath placed at the edge or below typically face toward upland, while sample points on the upland side of the edge generally face toward the delineated edge.

Results

One basin was observed and delineated on the parcel. The specific location of this basin edge can be obtained from the surveyor who located it.

According to the Department of Natural Resources (DNR) **Protected Water Inventory (PWI) of Chisago County (Sheet 1 of 1)**, no "Protected Waters" were mapped on the parcel.

The **National Wetlands Inventory (NWI) (Forest Lake, MN)** identifies one PEMC wetland that coincides with Basin 1. No other wetlands were identified on the parcel. The basin identified northeast of the parcel was on the other side of a driveway north of the parcel.

The **Soil Survey of Chisago County** (page 37) identifies the soils on the parcel. The data forms describe the soil information along the edge. Soils mapped on the Soil Survey include:

40B	Nebish loam
346	Talmoon loam
544	Cathro muck

Basin Description

Basin 1 was a Type 4 wetland (PEM1F) dominated by reed canary grass, common cattail and beggartick located in the southwestern corner of the parcel.

The adjacent upland was dominated by smooth brome, timothy, tall goldenrod, common ragweed, common milkweed, and giant foxtail ground cover; staghorn sumac, tartarian honeysuckle, blackberry, and common buckthorn shrubs, and some box elder trees.

Conclusion

This wetland examination, delineation, and report of the **St. Clair Farm** was performed in accordance with the generally accepted methodology of the 1987 Manual at the time of the services rendered. No warranty, express or implied, is made.

If unavoidable impacts are planned for this project, permits or exemptions from **State** (WCA, DNR, Watershed District), **Federal** (Corps), and/or other applicable entities need to be granted before the impacts occur.

The wetland delineation was performed and report prepared by Robert J.F. Merila, *Professional Wetland Scientist* # 1030.

Robert J.F. Merila

1/25/02

Robert J.F. Merila, PWS #1030
Professional Wetland Scientist
Associate Fisheries Scientist
Aquatic EcoSolutions, Inc.

Date

Aquatic EcoSolutions, Inc.

Ecological Solutions to Environmental Challenges

Lakes • Streams • Riparian • Wetlands • Watersheds

2116 Marquis Road
Golden Valley, MN 55427
Telephone/Fax: (612) 545-0912

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	St. Clair Farm	Date:	1/23/02
Applicant/Owner:	St. Clair	County:	Chisago
Investigator:	Rob Merila	State:	MN
Do Normal Circumstances exist on the site?	Yes ___ No ___	Community ID:	1
Is the site significantly disturbed (Atypical Situation)?	Yes ___ No X	Transect ID:	1
Is the area a potential Problem Area (explain on back)?	Yes ___ No X	Plot ID:	Low

VEGETATION

Dominant Plant Species (Scientific Name)	Common Name	Stratum	% Cover	Indicator
1. Phalaris arundinacea	Reed canary grass	H	50	FACW+
2. Bidens	beggar tick	H	20	wet
3. Typha latifolia	common cattail	H	30	OBL
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth to Surface Water: — (in.)
Depth to Free Water in Pit: — (in.)
Depth to Saturated Soil: 9" (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12"
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators(2 or more required):
- ___ Oxidized Root Channels (Upper 12")
- ___ Water-Stained Leaves
- ___ Local Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

Cover class as a percentage: 6 = 95-100%; 5 = 75-95%; 4 = 50-75%; 3 = 25-50%; 2 = 5-25%; 1 = 0-5%

Aquatic EcoSolutions, Inc.

Ecological Solutions to Environmental Challenges

Lakes • Streams • Riparian • Wetlands • Watersheds

2116 Marquis Road
Golden Valley, MN 55427
Telephone/Fax: (612) 545-0912

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	St. clair Farm	Date:	1/23/02
Applicant/Owner:	St. Clair	County:	Chisago
Investigator:	Rob Merila	State:	MN

Do Normal Circumstances exist on the site?	Yes ___	No	Community ID:	1
Is the site significantly disturbed (Atypical Situation)?	Yes ___	No X	Transect ID:	1
Is the area a potential Problem Area (explain on back)?	Yes ___	No X	Plot ID:	UP

VEGETATION

Dominant Plant Species (Scientific Name)	Common Name	Stratum	% Cover	Indicator
1. Acer negundo	Box elder	T	10	FACW-
2.				
3. Rhus Typhina	Staghorn Sumac	S	80	UPL
4. Lonicera tatarica	Tartarian honeysuckle	S	20	FACU+
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50 %

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ No Recorded Data Available

Field Observations:

Depth to Surface Water:	—	(in.)
Depth to Free Water in Pit:	>18	(in.)
Depth to Saturated Soil:	>18	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12"
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators(2 or more required):
- ___ Oxidized Root Channels (Upper 12")
- ___ Water-Stained Leaves
- ___ Local Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

Cover class as a percentage: 6 = 95-100%; 5 = 75-95%; 4 = 50-75%; 3 = 25-50%; 2 = 5-25%; 1 = 0-5%

Community ID: 1-1-UP

SOILS

Map Unit Name (Series and Phase): 346 Talmoon loam

Drainage Class:

Field Observations Confirm Mapped Type? Yes ___ No ___

Taxonomy (Subgroup): Mollic Ochraqualfs

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-15	A	10YR 3/2	—	—	Fine sandy loam
15-16	B1	10YR 3/1	—	—	Fine sandy loam
16-18	B2	10YR 4/1	—	—	loamy fine sand

Hydric Soil Indicators:

___	Histosol	___	Concretions
___	Histic Epipedon	___	High Organic Content in Surface Layer in Sandy Soils
___	Sulfidic Odor	___	Organic Streaking in Sandy Soils
___	Aquic Moisture Regime	___	Listed on Local Hydric Soils List
___	Reducing Conditions	___	Listed on National Hydric Soils List
___	Gleyed or Low-Chroma Colors	___	Other (Explain in Remarks)

Remarks: 2 chroma matrix with out mottles

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes ___	No X	Is this Sampling Point Within a Wetland?	Yes ___ No X
Wetland Hydrology Present?	Yes ___	No X		
Hydric Soils Present?	Yes ___	No X		

Remarks:

SOILS

Community ID: 1-1-Low

Map Unit Name (Series and Phase): 544 Cathro muck

Drainage Class:

Taxonomy (Subgroup): Terric Borosaprists

Field Observations
Confirm Mapped Type? Yes ___ No ___

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	N/1			Fibrous
16-18	B	N/1			Saprist
END					

Hydric Soil Indicators:

- X Histosol
- X Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

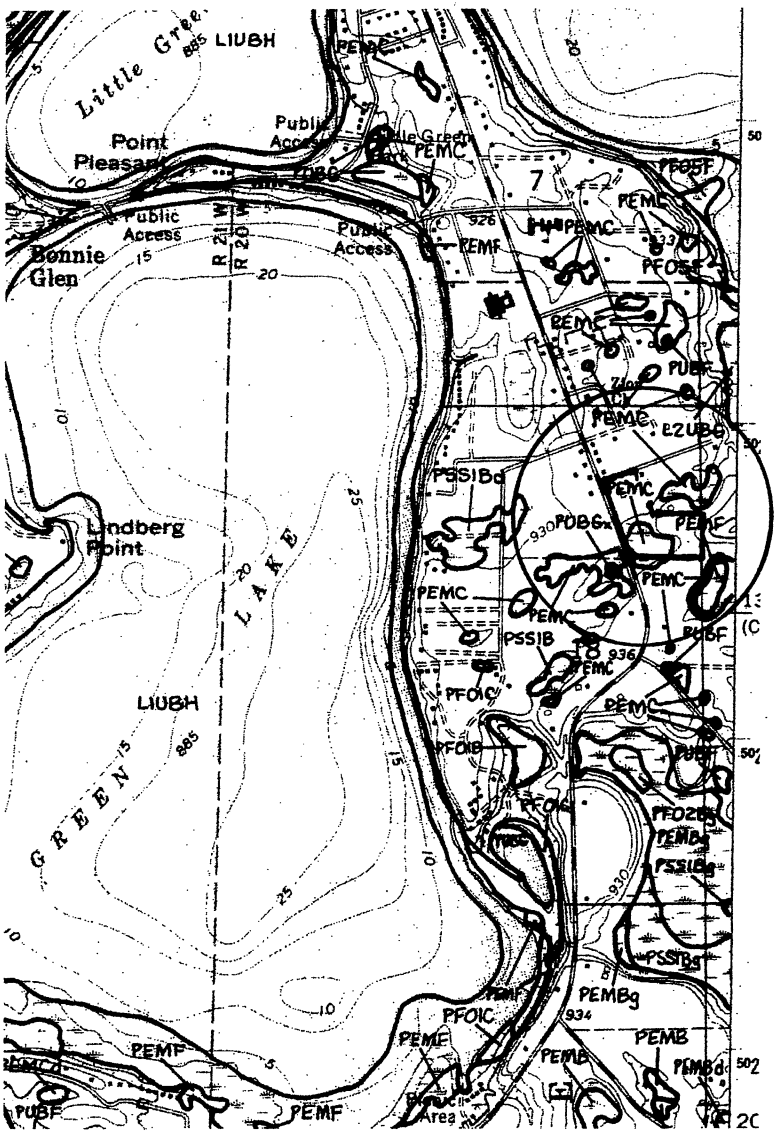
Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___
Hydric Soils Present? Yes X No ___

Is this Sampling Point Within a Wetland? Yes X No ___

Remarks:



National Wetland Inventory
US Fish and Wildlife Service
(1"=2,000' Scale)

↑N

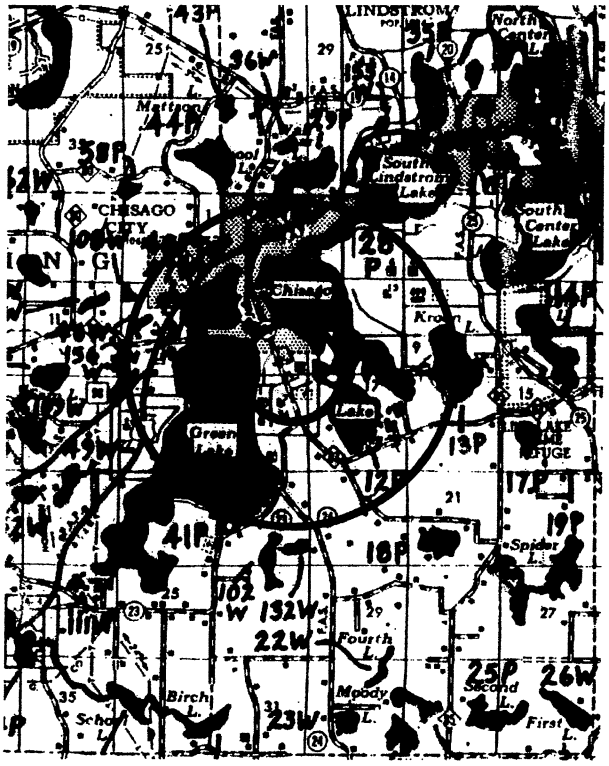
St. Clair Farm **Aquatic EcoSolutions, Inc.**

Soil Survey of Chisago County
Natural Resources Conservation Service (NRCS)

↑N

St. Clair Farm

Aquatic EcoSolutions, Inc.



Protected Waters Inventory of Chisago County

Minnesota Department of Natural Resources

(1"=1 Mile Scale)

↑N

St. Clair Farm

Aquatic EcoSolutions, Inc.

Approximate Edge Locations
US Geological Survey Aerial Photograph

↑N

St. Clair Farm

Aquatic EcoSolutions, Inc.