

Critical Definitions for Wetland Delineation: Normal Circumstances

Barbara Walther

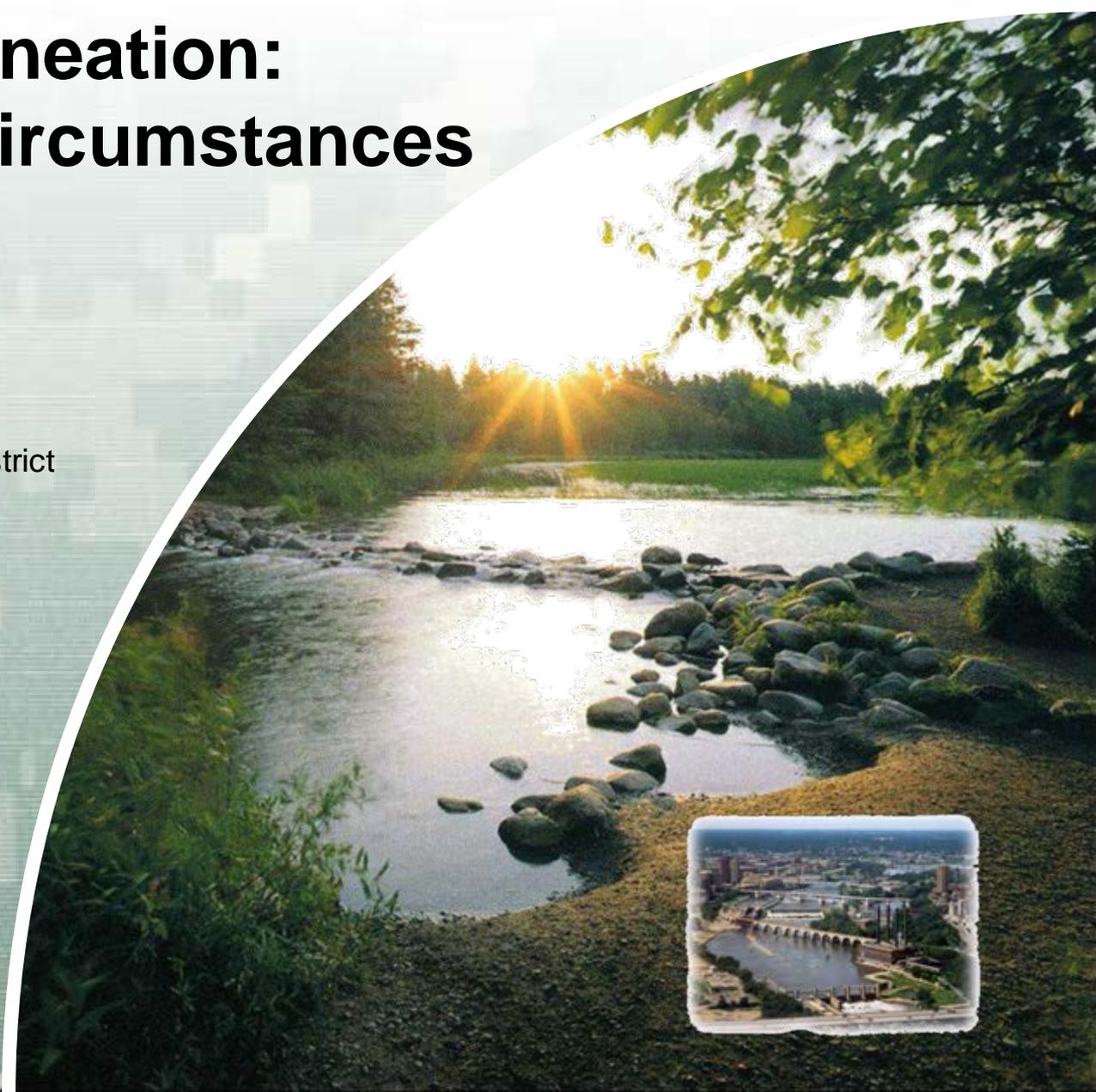
TSS Chief/Sr. Ecologist, St. Paul District

WDNR Critical Methods

March 11, 2015



US Army Corps of Engineers
BUILDING STRONG®



What is a Wetland?

- Technical definition:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances

do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Answer the Question

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:		City/County:		Sampling Date:	
Applicant/Owner:		State:		Sampling Point:	
Investigator(s):		Section, Township, Range:			
Landform (hillslope, terrace, etc.):		Local relief (concave, convex, none):			
Slope (%):		Lat:		Long:	
				Datum:	
Soil Map Unit Name:		NWI Classification:			
Are climatic/hydrologic conditions of the site typical for this time of the year?			(If no, explain in remarks)		
Are vegetation		, soil		, or hydrology	
				significantly disturbed?	
Are vegetation		, soil		, or hydrology	
				naturally problematic?	
				Are "normal circumstances"	
				present?	
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)			
Hydrophytic vegetation present?		N			
Hydric soil present?				Is the sampled area within a wetland?	N
Indicators of wetland hydrology present?				If yes, optional wetland site ID:	
Remarks: (Explain alternative procedures here or in a separate report.)					

If yes, data collection is based on current conditions.

If no, data collection is based on conditions that would exist in absence of disturbance.

NEC vs. NC

WETLAND DETERMINATION DATA FORM - Midwest Region

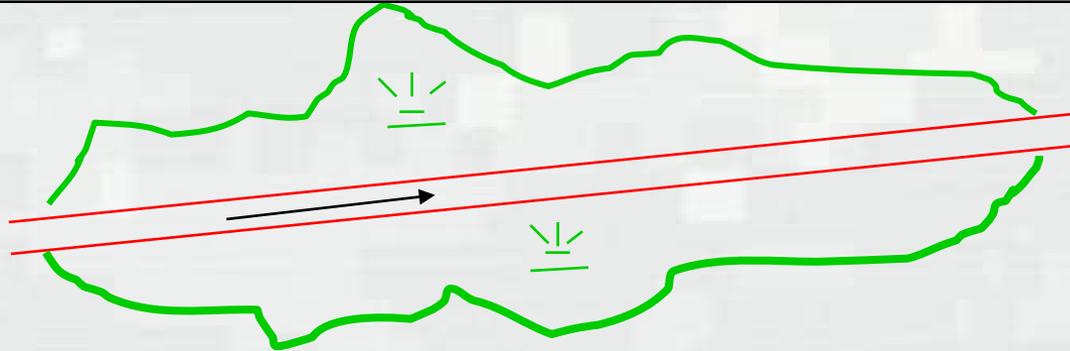
Project/Site:		City/County:		Sampling Date:	
Applicant/Owner:		State:		Sampling Point:	
Investigator(s):		Section, Township, Range:			
Landform (hillslope, terrace, etc.):		Local relief (concave, convex, none):			
Slope (%):		Lat:		Long:	
				Datum:	
Soil Map Unit Name:		NWI Classification:			
Are climatic/hydrologic conditions of the site typical for this time of the year?		(If no, explain in remarks.)			
Are vegetation	, soil	, or hydrology	significantly disturbed?	Are "normal circumstances" present?	
Are vegetation	, soil	, or hydrology	naturally problematic?		
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)					
Hydrophytic vegetation present?		N		Normal circumstances?	
Hydric soil present?				Is the sampled area within a wetland?	N
Indicators of wetland hydrology present?				If yes, optional wetland site ID:	
Remarks: (Explain alternative procedures here or in a separate report.)					

Normal Circumstances

- The long-term or stable condition of a site including any authorized or other legal alterations, such as highways, dams, and other relatively permanent infrastructure and development.
- The conditions indicated by the soils and hydrology normally present on a site, in cases where the vegetation has been altered or removed.
- The conditions that would exist on a site in the absence of any active and discretionary manipulation of hydrology.

Normal Circumstances

A new, **legal** alteration that is relatively permanent can establish a new normal circumstance (e.g., concrete dam, authorized wetland fill, ditch)



Ditch constructed in 1950s and maintained since = ditch is established as the normal circumstance; partially drained is the normal circumstance for hydrology

Ditch constructed last year = ?

1987 Manual: Mere presence of artificial drainage system does not necessarily mean wetland hydrology has been eliminated

Normal Circumstances



Recent, unauthorized fill that buried native soils and altered hydrology is not the normal circumstance



Normal Circumstances

- Regular cropping of an agricultural field is NOT the normal circumstance.
- Normal circumstances can exist in an agricultural field.



- Determine the soils and hydrology driving the site.
- Applying the “Mapping Conventions” will help determine ‘normal’ hydrology in agricultural settings.



30

360th St NW

30

360th St

Normal Circumstances

1. Alterations that occurred before implementation of the Clean Water Act.
2. Alterations that were authorized, exempt, or did not require authorization.
3. Hydrologic modifications, such as functioning ditches or subsurface drains, that were installed legally, are relatively permanent, are maintained, and operate by gravity without any artificial input of energy or manpower.
4. Ongoing hydrologic manipulation that is permanent and non-discretionary, such as pumping of surface or groundwater for municipal water supply, done under a court order, or required for public safety.
5. A site with undisturbed conditions, including those wetlands identified as problem areas

RELATIVE PERMANENCE

NOT normal circumstances

1. Unauthorized or illegal activities or activities done with the intent of evading Clean Water Act jurisdiction.
2. Total or partial clearing of vegetation, or selective removal of plant species (i.e., managed plant community).
3. The presence of a crop, tree farm, improved pasture, other planted vegetation, or cultivars (i.e., managed plant community).
4. Destruction of hydric soil indicators by cultivation or mixing of soil layers.
5. Irrigation.
6. Discretionary pumping of surface or groundwater, such as pumping for agricultural purposes.
7. Active and discretionary manipulation of water tables, such as subirrigation and other active water-table management for crop production or management of soil moisture and nutrients.

NONPERMANENT

What is a Wetland?

- Technical definition:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Difficult Wetland Situations

ERDC/EL TR-12-1

Environmental Laboratory



US Army Corps
of Engineers®
Engineer Research and
Development Center

Wetlands Regulatory Assistance Program

**Regional Supplement to the Corps
of Engineers Wetland Delineation Manual:
Northcentral and Northeast Region**
(Version 2.0)

U.S. Army Corps of Engineers January 2012



Approved for public release; distribution is unlimited.

Disturbed/Atypical Situations:

- ▶ One or more parameters absent due to recent human activity or natural event
 - Unauthorized activities
 - Natural events
 - Man-induced wetlands

Checking the Boxes

TERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Minnetonka/Hennepin Sampling Date: 10/14/2010
Applicant/Owner: _____ State: MIN Sampling Point: 1-1 Wet
Investigator(s): _____ Section, Township, Range NE 1/4 Sec. 16, T117N, R22W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave
Slope (%): 1 Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Klossner NW/ or WW/ classification: PERMfd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (if no, explain in Remarks.)
Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

Above average precipitation, wetland area continuously mowed (manicured lawn)



WETLAND DETERMINATION DATA FORM - Midwest Region

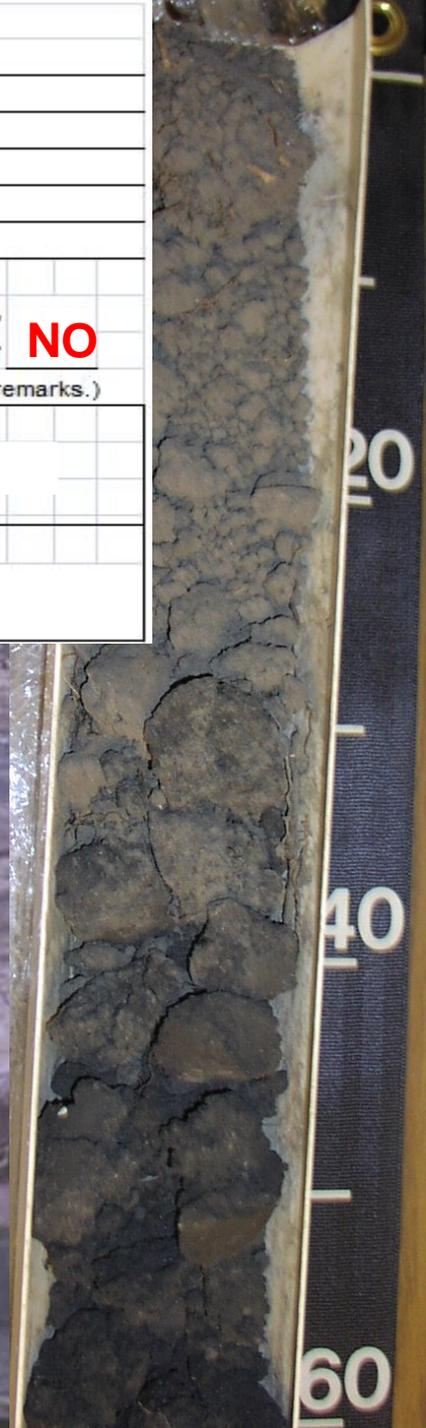
Project/Site:		City/County:		Sampling Date:	
Applicant/Owner:			State:		Sampling Point:
Investigator(s):			Section, Township, Range:		
Landform (hillslope, terrace, etc.):			Local relief (concave, convex, none):		
Slope (%):	Lat:	Long:		Datum:	
Soil Map Unit Name:			NW1 Classification:		
Are climatic/hydrologic conditions of the site typical for this time of the year?					(If no, explain in remarks)
Are vegetation	X	, soil	X	, or hydrology	significantly disturbed?
Are vegetation		, soil		, or hydrology	naturally problematic?
Are "normal circumstances" present?					NO
SUMMARY OF FINDINGS			(If needed, explain any answers in remarks.)		
Hydrophytic vegetation present?					
Hydric soil present?					
Indicators of wetland hydrology present?					
			Is the sampled area within a wetland?		
			If yes, optional wetland site ID:		

Remarks: (Explain alternative procedures here or in a separate report.)

Recently discharged fill material. Date of discharge reported as 4/12/14.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____		City/County: _____		Sampling Date: _____	
Applicant/Owner: _____		State: _____		Sampling Point: _____	
Investigator(s): _____		Section, Township, Range: _____			
Landform (hillslope, terrace, etc.): _____		Local relief (concave, convex, none): _____			
Slope (%): _____	Lat: _____	Long: _____		Datum: _____	
Soil Map Unit Name: _____			NWI Classification: _____		
Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)					
Are vegetation X , soil X , or hydrology _____	significantly disturbed?		Are "normal circumstances" present? NO		
Are vegetation _____, soil _____, or hydrology _____	naturally problematic?		present? NO		
SUMMARY OF FINDINGS			(If needed, explain any answers in remarks.)		
Hydrophytic vegetation present?	N				
Hydric soil present?		Is the sampled area within a wetland? _____			
Indicators of wetland hydrology present?		If yes, optional wetland site ID: _____			
Remarks: (Explain alternative procedures here or in a separate report.)					



Areas affected by grazing



WETLAND DETERMINATION DATA FORM - Midwest Region			
Project/Site:	City/County:	Sampling Date:	
Applicant/Owner:	State:	Sampling Point:	
Investigator(s):	Section, Township, Range:		
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):		
Slope (%):	Lat:	Long:	Datum:
Soil Map Unit Name:	NWI Classification:		
Are climatic/hydrologic conditions of the site typical for this time of the year? <input type="checkbox"/> (If no, explain in remarks)			
Are vegetation <input type="checkbox"/> , soil <input type="checkbox"/> , or hydrology <input type="checkbox"/>	<input type="checkbox"/> significantly disturbed?	Are "normal circumstances" present?	YES
Are vegetation <input type="checkbox"/> , soil <input type="checkbox"/> , or hydrology <input type="checkbox"/>	<input type="checkbox"/> naturally problematic?		
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)			
Hydrophytic vegetation present?		Is the sampled area within a wetland?	
Hydric soil present?		If yes, optional wetland site ID: _____	
Indicators of wetland hydrology present?			
Remarks: (Explain alternative procedures here or in a separate report.)			
Area is regularly grazed by livestock.			

Areas affected by grazing



WETLAND DETERMINATION DATA FORM - Midwest Region											
Project/Site:				City/County:				Sampling Date:			
Applicant/Owner:				State:				Sampling Point:			
Investigator(s):				Section, Township, Range:							
Landform (hillslope, terrace, etc.):				Local relief (concave, convex, none):							
Slope (%):		Lat:		Long:				Datum:			
Soil Map Unit Name:						NW1 Classification:					
Are climatic/hydrologic conditions of the site typical for this time of the year?										(If no, explain in remarks)	
Are vegetation X , soil, or hydrology				significantly disturbed?				Are "normal circumstances" NO			
Are vegetation, soil, or hydrology				naturally problematic?				present?			
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)											
Hydrophytic vegetation present?						N					
Hydric soil present?						Is the sampled area within a wetland?					
Indicators of wetland hydrology present?						If yes, optional wetland site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)											
Area is regularly overgrazed by livestock.											



WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____		City/County: _____		Sampling Date: _____	
Applicant/Owner: _____			State: _____		Sampling Point: _____
Investigator(s): _____			Section, Township, Range: _____		
Landform (hillslope, terrace, etc.): _____			Local relief (concave, convex, none): _____		
Slope (%): _____	Lat: _____		Long: _____		Datum: _____
Soil Map Unit Name: _____			NWI Classification: _____		
Are climatic/hydrologic conditions of the site typical for this time of the year? <input type="checkbox"/>				(If no, explain in remarks) _____	
Are vegetation X	, soil X	, or hydrology X	significantly disturbed?		Are "normal circumstances" NO
Are vegetation _____	, soil _____	, or hydrology _____	naturally problematic?		present? _____
SUMMARY OF FINDINGS					(If needed, explain any answers in remarks.)
Hydrophytic vegetation present?		N			
Hydric soil present?				Is the sampled area within a wetland?	
Indicators of wetland hydrology present?				If yes, optional wetland site ID: _____	

R Area is currently a golf course; regular irrigation and turf management (not NC); hydrology and soils disturbed years ago for construction (NC).

Difficult Wetland Situations

ERDC/EL TR-12-1



US Army Corps
of Engineers®
Engineer Research and
Development Center

Wetlands Regulatory Assistance Program

Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region

(Version 2.0)

U.S. Army Corps of Engineers

January 2012



Environmental Laboratory

Approved for public release; distribution is unlimited.

Problem Areas:

- ▶ One or more parameters absent due to normal seasonal or annual variability, or permanently due to the nature of the soils or plant species
 - Seasonal wetlands
 - Prairie potholes
 - Floodplain wetlands
 - Interdunal swales



WETLAND DETERMINATION DATA FORM - Midwest Region

July 15, 2013

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	State:	Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	
Slope (%):	Lat:	Long:
Soil Map Unit Name:	NWI Classification:	Datum:
Are climatic/hydrologic conditions of the site typical for this time of the year? YES		(If no, explain in remarks)
Are vegetation	, soil	, or hydrology
Are vegetation	, soil	, or hydrology
naturally problematic? X		Are "normal circumstances" present? YES
SUMMARY OF FINDINGS		
(If needed, explain any answers in remarks.)		
Hydrophytic vegetation present?		
Hydric soil present?		
Indicators of wetland hydrology present?		
Is the sampled area within a wetland?		
If yes, optional wetland site ID:		

Remarks: (Explain alternative procedures here or in a separate report.)

The area is a wicked big puddle and it's July, so it's wicked dry.



WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____		City/County: _____		Sampling Date: _____	
Applicant/Owner: _____			State: _____		Sampling Point: _____
Investigator(s): _____			Section, Township, Range: _____		
Landform (hillslope, terrace, etc.): _____			Local relief (concave, convex, none): _____		
Slope (%): _____	Lat: _____	Long: _____		Datum: _____	
Soil Map Unit Name: _____			NWI Classification: _____		
Are climatic/hydrologic conditions of the site typical for this time of the year?				NO	
(If no, explain in remarks)					
Are vegetation _____, soil _____, or hydrology _____		significantly disturbed?		Are "normal circumstances" present?	
Are vegetation _____, soil _____, or hydrology _____		X		YES	
naturally problematic?				present?	
SUMMARY OF FINDINGS					
(If needed, explain any answers in remarks.)					
Hydrophytic vegetation present?			_____		
Hydric soil present?			_____		
Indicators of wetland hydrology present?			_____		
			Is the sampled area within a wetland?		
			If yes, optional wetland site ID: _____		

Remarks: (Explain alternative procedures here or in a separate report.)

The site is a prairie pothole wetland following a 3-year drought.



WETLAND DETERMINATION DATA FORM - Midwest Region											
Project/Site:				City/County:				Sampling Date:			
Applicant/Owner:				State:				Sampling Point:			
Investigator(s):				Section, Township, Range:							
Landform (hillslope, terrace, etc.):				Local relief (concave, convex, none):							
Slope (%):		Lat:		Long:				Datum:			
Soil Map Unit Name:						NWI Classification:					
Are climatic/hydrologic conditions of the site typical for this time of the year?										(If no, explain in remarks)	
Are vegetation		, soil		, or hydrology		significantly disturbed?		Are "normal circumstances" present?			
Are vegetation		, soil		, or hydrology		naturally problematic?		present? YES			
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)											
Hydrophytic vegetation present?						Is the sampled area within a wetland?					
Hydric soil present?						If yes, optional wetland site ID:					
Indicators of wetland hydrology present?											
Remarks: (Explain alternative procedures here or in a separate report.)											
The site is a floodplain, with alluvial soils and seasonal hydrology.											



Problem area
Disturbed area

WETLAND DETERMINATION DATA FORM - Midwest Region											
Project/Site:				City/County:				Sampling Date:			
Applicant/Owner:				State:				Sampling Point:			
Investigator(s):				Section, Township, Range:							
Landform (hillslope, terrace, etc.):				Local relief (concave, convex, none):							
Slope (%):		Lat:		Long:				Datum:			
Soil Map Unit Name:						NW1 Classification:					
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)											
Are vegetation		soil		or hydrology		significantly disturbed?		Are "normal circumstances" present?			
X		X				NO		NO			
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)											
Hydrophytic vegetation present?				N				Is the sampled area within a wetland?			
Hydric soil present?								If yes, optional wetland site ID:			
Indicators of wetland hydrology present?											

Remarks: (Explain alternative procedures here or in a separate report.)

Agricultural field where vegetation has been removed and soils bulldozed.



WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____		City/County: _____		Sampling Date: _____	
Applicant/Owner: _____			State: _____		Sampling Point: _____
Investigator(s): _____			Section, Township, Range: _____		
Landform (hillslope, terrace, etc.): _____			Local relief (concave, convex, none): _____		
Slope (%): _____	Lat: _____	Long: _____	Datum: _____		
Soil Map Unit Name: _____			NWI Classification: _____		
Are climatic/hydrologic conditions of the site typical for this time of the year? _____				(If no, explain in remarks) _____	
Are vegetation _____, soil _____, or hydrology _____		significantly disturbed?		Are "normal circumstances" present? YES	
Are vegetation _____, soil _____, or hydrology _____		naturally problematic?			
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)					
Hydrophytic vegetation present?					
Hydric soil present?		Is the sampled area within a wetland?			
Indicators of wetland hydrology present?		If yes, optional wetland site ID: _____			

Remarks: (Explain alternative procedures here or in a separate report.)

Normal Circumstances

The conditions that would exist if humans hadn't screwed with them.

Determine if one or more parameters is MISSING or OBSCURED due to disturbance.



I THINK YOU'VE CONFUSED ME

WITH SOMEONE WHO BUILDS A DAM.