

AUTOMATED DATA FORMS FOR WETLAND DELINEATION

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US Army Corps
of Engineers®



Automated data forms - Overview

- Following publication of the regional supplements >20 automated data forms were developed by USACE Districts, other agencies, & private companies.
- Wide variety of functionality (no automation, 50/20 calculations, etc).
- No forms correctly identified soil or hydrology indicators based on user inputs.
- Nathan Schulz (LRE) developed most functional format.
- Automated forms improve technical accuracy and document review efficiency.
- Excel spreadsheet-based data form developed for each wetland regional supplement.
- Forms utilize exact format has wetland delineation data forms - easy application, export to PDF, & incorporation into record.

Site nformation - Required Information In Yellow Essential For Indicator Application

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region			
Project/Site: _____		City/County: _____	Sampling Date: _____
Applicant/Owner: _____		State: _____	Sampling Point: _____
Investigator(s) _____		Section, Township, Range _____	
Landform (hillside, terrace, etc.) _____		Local relief (concave, convex, non _____	Slope (%): _____
Subregion (LRR or MLRA): _____	Lat: _____	Long: _____	Datum: _____
Soil Map Unit Name: _____		NWI classification: _____	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)			
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____			
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 _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

Select State From Dropdown List

Required to select plant list and soil indicators

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region			
Project/Site: _____		City/County: _____	Sampling Date: _____
Applicant/Owner: _____		State: <div><div>NC</div><div>NJ</div><div>OK</div><div>PA</div><div>SC</div><div>TN</div><div>TX</div><div>VA</div></div>	Sampling Point: _____
Investigator(s) _____		Section, Township, Range _____	
Landform (hillside, terrace, etc.) _____		Local relief (concave, convex, non _____	Slope (%): _____
Subregion (LRR or MLRA): <div></div>		Lat: _____ Long: _____	Datum: _____
Soil Map Unit Name: _____		NWI _____	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____			
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____			
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 _____ No <u>X</u>		Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>	
Hydric Soil Present? Yes _____ No <u>X</u>			
Wetland Hydrology Present? Yes _____ No <u>X</u>			

Select Appropriate LRR and MLRA

Required to select plant list and soil indicators

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: _____ City/County: _____ Sampling Date: _____
Applicant/Owner: _____ State: SC Sampling Point: _____
Investigator(s) _____ Section, Township, Range _____
Landform (hillside, terrace, etc.) _____
Subregion (LRR or MLRA): _____
Soil Map Unit Name: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Select the Land Resource Region and Major Land Resource Area for this site. This information is necessary for use of the proper hydric soil indicators and a few plant species indicator statuses in the states of AR, LA, MS, OK, and TN.

Are Vegetation _____, Soil _____, or Hydrology _____
Are Vegetation _____, Soil _____, or Hydrology _____

SUMMARY OF FINDINGS – Attach s

Hydrophytic Vegetation Present? Yes _____
Hydric Soil Present? Yes _____
Wetland Hydrology Present? Yes _____

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: _____ City/County: _____ Sampling Date: _____
Applicant/Owner: _____ State: SC Sampling Point: _____
Investigator(s) _____ Section, Township, Range _____
Landform (hillside, terrace, etc.) _____ Local relief (concave, convex, non _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS: _____ map showing sampling point locations, transects, important features, _____

Hydrophytic Vegetation Present? Yes _____ No X
Hydric Soil Present? Yes _____ No X
Wetland Hydrology Present? Yes _____ No X

Is the Sampled Area within a Wetland? Yes _____ No X

Wetland Parameter Data Initially Checked As No Until Form Is Filled Out

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
<div></div>					

**Remarks Section Allows
For Addition Of Text**

Vegetation

- Combines National Wetland Plant List and USDA plants database into a single searchable list.
- Species input via scientific name, common name, or synonym.
- Auto-fills species name with data entry.
- Automatic generation of indicator status.
- Calculation of 50/20 rule, dominance test, and prevalence index.
- 4 and 5 strata forms available in applicable regions.

As You Enter Species Name It Automatically Begins To Populate

VEGETATION (Five Strata) – Use scientific

Tree Stratum (Plot size: _____)

1. Pinus arizonica



2.

3.

4.

5.

6.

VEGETATION (Five Strata) – Use scientific n

Tree Stratum (Plot size: _____)

Abs

% C

1. Pinus palustris

2. Pinus palustris

Long-Leaf Pine

3. Pinus pinaster

4. maritime pine

5. Pinus pungens

6. Table Mountain pine

Pinus remota

papershell pinyon

Pinus resinosa

Red Pine

Sap Pinus rigida

1. Pitch Pine

Pinus serotina

2. Pond Pine

3. Pinus strobiformis

4. southwestern white pine

Pinus strobus

5. Eastern White Pine

6. Pinus sylvestris








Scots pine

50% of total cover

**Drop Down Box
Available For
Species
Selection By
Scientific Name
Or Common
Name**


Once Species Is Selected The Indicator Status Is Populated

VEGETATION (Five Strata) – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)		<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1.	Pinus palustris 			FAC 
2.				
3.				
4.				
5.				
6.				

To Search A Species By Common Name You Must First Hit The Space Bar Before Typing

VEGETATION (Five Strata) – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)		<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1.	Pinus palustris			FAC
2.	Red Maple 			
3.				
4.				
5.				
6.				
		=Total Cover		
50% of total cover _____		20% of total cover _____		

VEGETATION (Five Strata) – Use scientific names of plants

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species
1.	Pinus palustris		
2.	Red Maple		
3.	Norway Maple		
4.	Acer pseudoplatanus		
5.	sycamore maple		
6.	Acer rubrum		
	Red Maple		
	Acer saccharinum		
	Silver Maple		=Total Co
	Acer saccharum		20% of total c
	Sugar Maple		
	Acer spicatum		
1.	Mountain Maple		
2.	Acer X freemanii		
3.	Freeman maple		
4.	Achillea		
5.	yarrow		
6.	Achillea millefolium		
	Common Yarrow		
	Achillea ptarmica		
	Pearl Yarrow		=Total Co
	Achnatherum		
		50% of total cover	20% of total c
Shrub Stratum (Plot size: _____)			

**Drop Down
Box
Available
For Species
Selection
By
Scientific
Name Or
Common
Name**

Upon Entering Absolute Cover, Dominance Is Automatically Determined As Well As Dominance Test And Prevalence Index Calculated

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus palustris</i>	30	Yes	FAC
2. <i>Acer rubrum</i>	10	Yes	FAC
3. <i>Taxodium ascendens</i>	10	Yes	OBL
4. _____			
5. _____			
6. _____			

50 =Total Cover

50% of total cover 25 20% of total cover 10

Sapling Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

=Total Cover

50% of total cover _____ 20% of total cover _____

Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species: <u>0</u>	x 2 = <u>0</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals <u>50</u> (A)	<u>130</u> (B)
Prevalence Index = B/A = <u>2.60</u>	

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

If Prevalence Index Is Not Applicable Check The Following Box

Sampling Point: _____		<input checked="" type="radio"/> I wish to use this five strata page for the vegetation sampling and analysis.
		<input type="radio"/> I wish to the other four strata page for the vegetation sampling and analysis.
Dominance Test worksheet:		<input type="checkbox"/> This sampling point has passed the Rapid Test for Hydrophytic Vegetation. I do not wish to have the Dominance Test worksheet calculated.
Number of Dominant Species That Are OBL, FACW, or FAC: _____ 3 (A)		
Total Number of Dominant Species Across All Strata: _____ 3 (B)		
Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100.0% (A/B)		
Prevalence Index worksheet:		<input checked="" type="checkbox"/> This sampling point has passed the Rapid Test for Hydrophytic Vegetation and/or the Dominance Test. I do not wish to have the Prevalence Index worksheet calculated.
Total % Cover of:	Multiply by:	
OBL species _____	x 1 = _____	
FACW species: _____	x 2 = _____	
FAC species _____	x 3 = _____	
FACU species _____	x 4 = _____	
UPL species _____	x 5 = _____	
Column Totals _____ (A)	_____ (B)	
Prevalence Index = B/A = _____		
Hydrophytic Vegetation Indicators:		
____ 1 - Rapid Test for Hydrophytic Vegetation		
<u>X</u> 2 - Dominance Test is >50%		
____ 3 - Prevalence Index is $\leq 3.0^1$		
____ Problematic Hydrophytic Vegetation ¹ (Explain)		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus palustris</i>	30	Yes	FAC
2. <i>Acer rubrum</i>	10	Yes	FAC
3. <i>Taxodium ascendens</i>	10	Yes	OBL
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
50 = Total Cover			
50% of total cover	25	20% of total cover	10

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
= Total Cover			
50% of total cover	_____	20% of total cover	_____

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Morella cerifera</i>	15	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
15 = Total Cover			
50% of total cover	8	20% of total cover	3

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pteridium caudatum</i>	10	Yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
10 = Total Cover			
50% of total cover	5	20% of total cover	2

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
= Total Cover			
50% of total cover	_____	20% of total cover	_____

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>55</u>	x 3 = <u>165</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals <u>75</u> (A)	<u>225</u> (B)
Prevalence Index = B/A = <u>3.00</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

3 - Prevalence Index is $\leq 3.0^1$

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?

Yes X No _____

Hydrophytic Vegetation Parameter Automatically Checked Based On Data Entered

Automatically Accounts For Ties In Absolute Cover When Determining Dominance

VEGETATION (Five Strata) – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)		<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1.	<u>Pinus palustris</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2.	<u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
3.	<u>Taxodium ascendens</u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>
4.	<u>Pinus taeda</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
		<u>25</u>	<u>=Total Cover</u>	
50% of total cover		<u>13</u>	20% of total cover	<u>5</u>

FAC Neutral Is Automatically Checked Based On Vegetation Data As Well As Other Indicators That May Potentially Be Met

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input checked="" type="checkbox"/> Aquatic Fauna (B13) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Marl Deposits (B15) (LRR T,U) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (B14) |
| <input checked="" type="checkbox"/> Water Marks (B1) | <input checked="" type="checkbox"/> Oxidized Rhizospheres (B16) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input checked="" type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Thin Muck Surface (C7) |
| <input checked="" type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input checked="" type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> ? Sparsely Vegetated Concave Surface (B8) |
| <input checked="" type="checkbox"/> Crayfish Burrows (C8) |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> x Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> x Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> X FAC-Neutral Test (D5) |
| <input checked="" type="checkbox"/> Sphagnum Moss (D8) (LRR T,U) |

On concave land surfaces (e.g., depressions and swales), the ground surface is either unvegetated or sparsely vegetated (less than 5 percent ground cover) due to long-duration ponding during the growing season.

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text"/>
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text"/>

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Wetland Hydrology

- Provides full description of hydrology indicators.
- Updates summary information based on user inputs.
- Automatically identifies 11 hydrology indicators.
- Inserts hydrology indicators based upon information from:
 - ▶ Soil information (e.g., Hydrogen Sulfide Odor)
 - ▶ Vegetation information (e.g., FAC Neutral Test)

Wetland Hydrology Indicators

Scrolling Over Indicator Provides Description of Indicator Requirements

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Presence of a layer of any thickness containing 2 percent or more iron-oxide coatings or plaques on the surfaces of living roots and/or iron-oxide coatings or linings on soil pores immediately surrounding living roots within 12 inches (30 cm) of the surface.	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Water-Stained Leaves (B9)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Checking One Primary Indicator Will Automatically Check Yes For The Hydrology Parameter

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)			
		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)			
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Two Secondary Indicators Are Required To Be Checked To Meet The Hydrology Parameter

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

3

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Marl Deposits (B15) (LRR U)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input checked="" type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>	
Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>	
(includes capillary fringe)		

1

2

Checking Two Secondary Indicators Will Automatically Check Yes For The Hydrology Parameter

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

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

3

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations:		
Surface Water Present?	Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present?	Yes _____ No _____ Depth (inches): _____	
Saturation Present?	Yes _____ No _____ Depth (inches): _____	
(includes capillary fringe)		

1

2

Remarks Section Allows For Addition Of Text

Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: DAREM analysis depicts sampling was performed during a below normal period of rainfall. Most recent rainfall event occurred 24 days prior to site visit and totalled 0.78 inches according to closest WETS table weather station data.	

Automated wetland hydrology indicators

Surface water A1	“X” generated from Field Observations in the Hydrology section.
High Water Table (A2)	“X” generated from Field Observations
Saturation (A3)	“X” generated from Field and Restrictive Layer in the Soil section.
Sparsely Vegetated Concave Surface (B8)	“?” generated from % Bare Ground in Herb Stratum, or other vegetation information in the Vegetation section.
Biotic Crust (B12)	“?” generated from % Cover of Biotic Crust in the Vegetation section.
Hydrogen Sulfide Odor (C1)	“X” generated if Hydric Soil Indicator Hydrogen Sulfide (A4) has been checked with an “X”.
Dry-Season Water Table (C2)	“?” generated from Field Observations in the Hydrology section.
Presence of Reduced Iron (C4)	“X” generated from Profile Description in the Soil section.
Thin Muck Surface (C7)	“X” generated from Profile Description in the Soil section.
Shallow Aquitard (D3)	In most regions, “?” generated from Restrictive Layer data in the Soil section. NCNE and WMVC “X” generated if Surface Water (A1) or High Water Table (A2) are also present. Not automatically generate in the Arid West Region.
FAC-Neutral Test (D5)	“X” generated from information in the Vegetation section.

Hydric soils

- Correct format required for depth and color inputs
- Drop down menus for all other soil inputs
- Automatic calculation of contrast features
- Calculation of most soil indicators and common indicator combinations


Soil Layer Thickness Data Requires Proper Entry (0-2, 2-8, 8-20, etc.)

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
2								

Incorrect Depth

 Please enter the [Starting Depth] - [Ending Depth] downward from the surface. Spaces are allowed, but please do not enter any additional characters besides the single dash. Please verify that the starting depth from this layer matches the ending depth of the layer above. Document any leaf litter above the soil profile under Remarks.

¹Type: C=... ...ing, M=Matrix.

Hydric Soils **Schematic Hydric Soils³:**

- ▼ Histosol (A1)
- ▼ Histic Ep... (A2)
- ▼ Black Histic (A3)
- ▼ Hydrogen Sulfide (A4)
- ▼ Stratified Layers (A5)
- ▼ Organic Bodies (A6) (LRR, P, T, U)
- ▼ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ▼ Loamy Mucky Mineral (F1) (LRR O)
- ▼ Loamy Gleyed Matrix (F2)
- ▼ Depleted Matrix (F3)
- ▼ Redox Dark Surface (F6)
- ▼ ... (outside MLRA 150A)
- ▼ Reduced Vertic (F18)
- ▼ ... (outside MLRA 150A, 150B)
- ▼ Piedmont Floodplain Soils (F19) (LRR P, T)


Soil Color Requires Proper Entry (10YR 3/2, etc.)

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR							

Incorrect Soil Color X

 Enter soil color as a hue[space]value/chroma, e.g. 10YR 3/2.
For neutral hue (N) on gley page enter hue[space]value/(blank), e.g. N 2.5/ .
Rounding intermediate colors should not be done to meet requirements of an indicator.

Retry
Cancel
Help

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) 	<ul style="list-style-type: none"> <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) <input type="checkbox"/> (MLRA 153B, 153D) 	Indicators for Problematic Hydric Soils³: <ul style="list-style-type: none"> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Coast Prairie Redox (A16)
--	---	---

Drop Down Box Depicts Available Textures Based On Indicator Requirements And Simplified Textural Triangle

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					<div style="border: 1px solid black; padding: 2px;"> <div style="border: 1px solid green; display: flex; justify-content: space-between; align-items: center;"> ▼ </div> <div style="margin-top: 5px;"> Loamy/Clayey Sandy Mucky Loam/Clay Mucky Sand Muck Mucky Peat Peat </div> </div>	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> ? Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input checked="" type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | ³ Indicators of hydrophytic vegetation and |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | wetland hydrology must be present, |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | <input type="checkbox"/> (MLRA 149A, 153C, 153D) | unless disturbed or problematic. |
| (LRR S, T, U) | | |

Restrictive Layer (if observed):

Type:

Depth (inches):

Remarks:

Hydric Soil Present? Yes ☒ No

**Indicator
Automatically
Populated
And Presence
Of Hydric Soil
Checked
Based On
Data Entered**

Potential Indicators Met That May Require Additional Information Are Indicated By ?

[illegible]

Scrolling Over Red Triangle Will Display Indicator Requirements

Drop Brown Depicts Choices For Redox Type

SOIL							Sampling Point: _____	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2	80	10YR 6/8	20	<div style="border: 1px solid green; padding: 2px; display: inline-block;"> <div style="border-bottom: 1px solid gray; width: 100%;"></div> <div>C</div> <div>D</div> <div>RM</div> <div>MS</div> </div>		Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Drop Brown Depicts Choices For Redox Location

**Faint, Distinct, Or
Prominent Redox Color
Automatically Determined**

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2	80	10YR 6/8	20	C	<div><div></div><div>PL</div><div>M</div><div>PL/M</div></div>	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Problematic Soil Indicators Potentially Met Are Marked By A ?

SOIL

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2	80	10YR 6/8	20	C		Loamy/Clayey	Prominent redox concentrations

A layer starting within 6 inches (15 cm) of the soil surface that is at least 4 inches (10 cm) thick and has a matrix chroma of 3 or less with 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings. These hydric soils occur mainly on depressional landforms and portions of the intermound landforms on the Lissie Formation.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☒ Histosol (A1)

☒ Histic Epipedon (A2)

☒ Black Histic (A3)

☒ Hydrogen Sulfide (A4)

☒ Stratified Layers (A5)

☒ Organic Bodies (A6) (LRR, P, T, U)

☒ 5 cm Mucky Mineral (A7) (LRR P, T, U)

☒ Muck Presence (A8) (LRR U)

☒ 1 cm Muck (A9) (LRR P, T)

☒ Thin Dark Surface (S9) (LRR S, T, U)

☒ Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)

☒ Loamy Mucky Mineral (F1) (LRR O)

☒ Loamy Gleyed Matrix (F2)

☒ Depleted Matrix (F3)

☒ Redox Dark Surface (F6)

☒ Depleted Dark Surface (F7)

☒ Redox Depressions (F8)

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils²:

☒ 1 cm Muck (A9) (LRR O)

☒ 2 cm Muck (A10) (LRR S)

☒ ? Coast Prairie Redox (A16) (outside MLRA 150A)

☒ ? Reduced Vertic (F18) (outside MLRA 150A, 150B)

☒ ? Piedmont Floodplain Soils (F19) (LRR P, T)

☒ Anomalous Bright Floodplain Soils (F20) (MLRA 153B)

☒ Red Parent Material (F21)

☒ Very Shallow Dark Surface (F22)

☒ P, T Barrier Islands Low Chroma Matrix (TS7) (MLRA 152B, 152D)

On flood plains, a mineral layer at least 6 inches (15 cm) thick, starting within 10 inches (25 cm) of the soil surface, with a matrix (60 percent or more of the volume) chroma of less than 4 and 20 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings.

... wetland hydrology must be present, unless disturbed or problematic.

In Vertisols and Vertic intergrades, a positive reaction to alpha-alpha-dipyridyl that:

a. Is the dominant (60 percent or more) condition of a layer at least 4 inches thick within the upper 12 inches (or at least 2 inches thick within the upper 6 inches) of the mineral or muck soil surface,

b. Occurs for at least 7 continuous days and 28 cumulative days, and

c. Occurs during a normal or drier season and month (within 16 to 84 percent of probable precipitation).

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No

Scroll Over Red Triangle To View Indicator Requirements And Determine If Applicable

Hydric soils with limited automation

- Hydrogen Sulfide (A4)
- Organic Bodies (A6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Reduced Vertic (F18)

When All Three Parameters Are Met Summary Of Findings Will Automatically Check That The Sampled Area Is Within A Wetland

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

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>

Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
--	------------------	------------------

Remarks:

Testing

- Testing conducted using 270 delineations from 9 regions
- Testing demonstrated accuracy of automated data forms ensuring:
 - ▶ Correct spelling of plant names, correct application of 50/20 Rule, correct indicator status, and hydrophytic vegetation results
 - ▶ Application of FAC neutral test, secondary indicators, hydrogen sulfide odor, presence of reduced iron
 - ▶ Correct format of soil data entry, identification of omitted soil indicators, avoids erroneous soil indicators

Updating

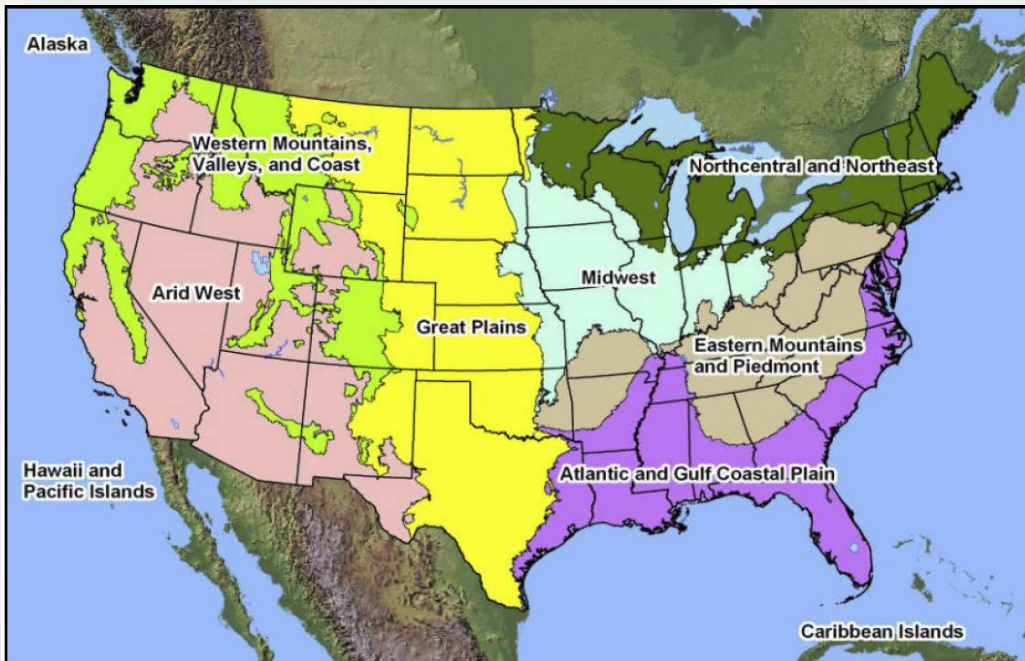
To date, automated data forms have been updated based upon changes to the National Wetland Plant list.

Over time, additional updates may be required with changes to plant indicator status, wetland hydrology indicators, or indicators of hydric soils occur.

The schedule for updates will be determined by Headquarters.

Products

- Automated data forms developed for each wetland delineation region
<https://cops.usace.army.mil/sites/RD/SitePages/Regulatory%20Topics.aspx?Topic=Science%20and%20Technology>
- Draft Technical Note (User guide) and Journal Article in management review
- Forms submitted for posting on USACE HQ website
- Email address for comments, questions, bug reports:
autodataform@usace.army.mil



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Title: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Land Use (habitat, resource, etc.): _____ Local (valley, concave, convex, nose): _____ Slope (1/2): _____
 Subregion (SRR or MRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ Soil description: _____

Are observed hydrologic conditions on the site typical for this time of year? Yes ___ No ___ (If no, explain in Remarks)
 Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Stemmed Circumstances" present? Yes ___ No ___
 Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any concerns in Remarks)

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

Hydrologic Vegetation Present? Yes ___ No ___	Is the Sampled Area within a Wetland? Yes ___ No ___
Hydroic Soil Present? Yes ___ No ___	
Wetland Hydrology Present? Yes ___ No ___	

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

<ul style="list-style-type: none"> Surface Water (S1) High Water Table (S2) Saturation (S3) Water Marks (S4) Endemic Deposition (S5) Dark Deposition (S6) Algal Mats or Crusts (S7) Iron Deposition (S8) Inundation Visible on Aerial Imagery (S9) Water Shading/Lenses (S10) Aquatic Fauna (S11) 	<ul style="list-style-type: none"> Tree Aquatic Plants (S12) Hydrophytic Plants (S13) Occurrence of Rhizomes on Living Root (S14) Presence of Rooted Iron (S15) Presence Iron Reduction in Tilled Soil (S16) Thin Muck Surface (S17) Other (Explain in Remarks) 	<ul style="list-style-type: none"> Surface Soil Cracks (S18) Sparsely Vegetated Concave Surface (S19) Drainage Patterns (S20) Mud-Trip Lines (S21) Deep Seasonal Water Tables (S22) Original Burrows (S23) Saturation Visible on Aerial Imagery (S24) Shaded or Discolored Plants (S25) Geomorphic Position (S26) Shallow Aquifers (S27) Monotopographic Relief (S28) FAC Natural Test (S29)
--	--	--

Field Observations:

Surface Water Present? Yes ___ No ___	Depth (inches) _____
Water Table Present? Yes ___ No ___	Depth (inches) _____
Saturation Present? Yes ___ No ___	Depth (inches) _____

Wetland Hydrology Present? Yes ___ No ___

Describe (Standard Data) (stream gauge, monitoring well, water photo, previous report, etc.)

Remarks: _____

Questions

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