

Appendix B – Wetland Determination Data Forms

DRAFT

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 1A
Investigator(s): M. Lukas, V. Hershey Section, Township, Range: S17 T107 R19W
Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None
Slope (%): 1-3 Lat: 44.07015834166667 Long: -93.14611852833336 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Nicollet clay loam NWI classification: PEM1A

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 ☐
Hydric Soil Present? Yes ☒ No ☐
Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

Remarks:

Grassland plain in low-lying area draining to stream to north, east of road. Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Phalaris arundinacea</i>		100	Yes	FACW
2. <i>Solidago gigantea</i>		15	No	FACW
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		115 =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (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>0</u>	x 1 = <u>0</u>
FACW species <u>115</u>	x 2 = <u>230</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>115</u> (A)	<u>230</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sampling Point: 1A

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		
0-7	10YR 2/1	100					Loamy/Clayey	
7-18	10YR 2/1	98	10YR 6/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
18-36	10YR 2/1	100					Loamy/Clayey	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Red Parent Material (F21)	
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Very Shallow Dark Surface (F22)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)	☐ Other (Explain in Remarks)	
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)		
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☐ Thick Dark Surface (A12)	☒ Redox Dark Surface (F6)		
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)		
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☒ No ☐ Depth (inches): 26 Saturation Present? Yes ☒ No ☐ Depth (inches): 18 (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 1B
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S17 T107 R19W
Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex
Slope (%): 1-3 Lat: 44.07007889166667 Long: -93.14613667833333 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Nicollet clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes No X

Is the Sampled Area
within a Wetland? Yes No X

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix interior</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>
2.				
3.				
4.				
5.				
		<u>20</u> =Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>		<u>40</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Solidago gigantea</u>		<u>30</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Dactylis glomerata</u>		<u>30</u>	<u>Yes</u>	<u>FACU</u>
4. <u>Silphium perfoliatum</u>		<u>5</u>	<u>No</u>	<u>FACW</u>
5.				
6.				
7.				
8.				
9.				
10.				
		<u>105</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species
Across All Strata: 4 (B)
Percent of Dominant Species That
Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>125</u> (A)	<u>310</u> (B)
Prevalence Index = B/A = <u>2.48</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes X No

SOIL

Sampling Point: 1B

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		
0-10	10YR 2/1	100					Loamy/Clayey	
10-22	10YR 3/2	100					Loamy/Clayey	
22-26.5	10YR 4/1	100					Sandy	
26.5-36	2.5Y 4/3	100					Sandy	

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

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No <u>X</u>	Depth (inches): _____
Water Table Present?	Yes _____	No <u>X</u>	Depth (inches): _____
Saturation Present?	Yes _____	No <u>X</u>	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 2A
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S18 T107 R19W
Landform (hillside, terrace, etc.): Bank of roadway ditch Local relief (concave, convex, none): Convex
Slope (%): _____ Lat: 44.069821081666674 Long: -93.14659388166667 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Nicollet clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No _____
Hydric Soil Present? Yes _____ No X
Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Antecedent precipitation conditions are drier than normal. Sample point is located along roadside drainage ditch.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solidago gigantea</u>		<u>50</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Dactylis glomerata</u>		<u>50</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Phalaris arundinacea</u>		<u>30</u>	<u>Yes</u>	<u>FACW</u>
4. <u>Monarda fistulosa</u>		<u>2</u>	<u>No</u>	<u>FACU</u>
5.				
6.				
7.				
8.				
9.				
10.				
		<u>132</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>52</u>	x 4 = <u>208</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>132</u> (A)	<u>368</u> (B)
Prevalence Index = B/A = <u>2.79</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetations along bank slope transitions: Reed Canay Grass --> Dogwood --> Cattail

SOIL

Sampling Point: 2A

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		
0-21	10YR 2/1	100					Loamy/Clayey	
21-36	2.5Y 4/1	100					Loamy/Clayey	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3)	☐ Red Parent Material (F21)
☐ Hydrogen Sulfide (A4)	☐ Very Shallow Dark Surface (F22)
☐ Stratified Layers (A5)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 2B
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S18 T107 R19W
Landform (hillside, terrace, etc.): Ditch Local relief (concave, convex, none): Concave
Slope (%): _____ Lat: 44.06984883166666 Long: -93.14657050666668 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Nicollet clay loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

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

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Typha angustifolia</u>		<u>70</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Solidago gigantea</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		<u>90</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species
Across All Strata: 2 (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>70</u>	x 1 = <u>70</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>110</u> (B)
Prevalence Index = B/A = <u>1.22</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2B

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		
0-22	10GY 5/1	100					Loamy/Clayey	
22-23	5GY 5/1	100					Loamy/Clayey	
23-26.5	10YR 4/4	100					Loamy/Clayey	
26.5-36	5GY 5/1	100					Loamy/Clayey	

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

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ³ :		
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)			
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)			
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Red Parent Material (F21)			
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Very Shallow Dark Surface (F22)			
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)	☐ Other (Explain in Remarks)			
☐ 2 cm Muck (A10)	☒ Loamy Gleyed Matrix (F2)				
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)				
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)				
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)				
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)				

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (inches): 0.25 Water Table Present? Yes ☒ No ☐ Depth (inches): _____ Saturation Present? Yes ☒ No ☐ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 3A
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S18 T107 R19W
Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None
Slope (%): 0-2 Lat: 44.068602690000006 Long: -93.14671513500001 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Webster Clay Loam NWI classification: PEM1A

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 ☐
Hydric Soil Present? Yes ☐ No ☒
Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area
within a Wetland? Yes ☐ No ☒

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fraxinus pennsylvanica</i>		5	Yes	FACW
2.				
3.				
4.				
5.				
		5	=Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Cornus sericea</i>		35	Yes	FACW
2. <i>Frangula alnus</i>		2	No	FACW
3.				
4.				
5.				
		37	=Total Cover	

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Phalaris arundinacea</i>		98	Yes	FACW
2. <i>Urtica dioica</i>		2	No	FACW
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		100	=Total Cover	

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
			=Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)

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>0</u>	x 1 = <u>0</u>
FACW species <u>142</u>	x 2 = <u>284</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>142</u> (A)	<u>284</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes ☒ No ☐

SOIL

Sampling Point: 3A

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		
0-11	10YR 2/1	100					Loamy/Clayey	
11-36	10YR 2/2	100					Loamy/Clayey	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)
	☐ Coast Prairie Redox (A16)
	☐ Iron-Manganese Masses (F12)
	☐ Red Parent Material (F21)
	☐ Very Shallow Dark Surface (F22)
	☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-17-2024
Applicant/Owner: Steele County State: MN Sampling Point: 3B
Investigator(s): M. Lukas, V. Holland Section, Township, Range: concave
Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none): Concave
Slope (%): _____ Lat: 44.06860337 Long: -93.14651194 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Webster clay loam NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

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

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Poa pratensis</u>		<u>80</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Phalaris arundinacea</u>		<u>40</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Solidago gigantea</u>		<u>2</u>	<u>No</u>	<u>FACW</u>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		<u>122</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (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>0</u>	x 1 = <u>0</u>
FACW species <u>42</u>	x 2 = <u>84</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>122</u> (A)	<u>324</u> (B)
Prevalence Index = B/A = <u>2.66</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No _____

SOIL

Sampling Point: 3B

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		
0-17	10YR 2/1	100					Loamy/Clayey	
17-36	10YR 2/1	95	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

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

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

No depleted horizon met. Assumed Thick Dark Surface due to presence of perennial obligate vegetation and strong hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0.5
 Water Table Present? Yes ☒ No ☐ Depth (inches): _____
 Saturation Present? Yes ☒ No ☐ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-18-2024
Applicant/Owner: Steele County State: MN Sampling Point: 4A
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S17 T107 R19W
Landform (hillside, terrace, etc.): Sloping floodplain Local relief (concave, convex, none): none
Slope (%): _____ Lat: 44.06830833333334 Long: -93.14138833333334 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Glencoe clay loam NWI classification: PEM1D

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

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

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix amygdaloides</u>		<u>5</u>	<u>Yes</u>	<u>FACW</u>
2. _____		_____	_____	_____
3. _____		_____	_____	_____
4. _____		_____	_____	_____
5. _____		_____	_____	_____
		<u>5</u> =Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix discolor</u>		<u>5</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Sambucus canadensis</u>		<u>2</u>	<u>Yes</u>	<u>FAC</u>
3. _____		_____	_____	_____
4. _____		_____	_____	_____
5. _____		_____	_____	_____
		<u>7</u> =Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>		<u>100</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Cirsium discolor</u>		<u>5</u>	<u>No</u>	<u>FACU</u>
3. <u>Symphotrichum lanceolatum</u>		<u>2</u>	<u>No</u>	<u>FAC</u>
4. _____		_____	_____	_____
5. _____		_____	_____	_____
6. _____		_____	_____	_____
7. _____		_____	_____	_____
8. _____		_____	_____	_____
9. _____		_____	_____	_____
10. _____		_____	_____	_____
		<u>107</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____		_____	_____	_____
2. _____		_____	_____	_____
		_____ =Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species
Across All Strata: 4 (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>0</u>	x 1 = <u>0</u>
FACW species <u>110</u>	x 2 = <u>220</u>
FAC species <u>4</u>	x 3 = <u>12</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>119</u> (A)	<u>252</u> (B)
Prevalence Index = B/A = <u>2.12</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes X No _____

SOIL

Sampling Point: 4A

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		
0-5	10YR 3/1	100					Loamy/Clayey	
5-26.5	10YR 2/1	98	7.5YR 5/8	2	C	M	Loamy/Clayey	Prominent redox concentrations
26.5-36	10GY 6/1	100					Loamy/Clayey	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Red Parent Material (F21)	
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Very Shallow Dark Surface (F22)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)	☐ Other (Explain in Remarks)	
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)		
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☒ Thick Dark Surface (A12)	☒ Redox Dark Surface (F6)		
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)		
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

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 ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-18-2024
Applicant/Owner: Steele County State: MN Sampling Point: 4B
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S17 T107 R19W
Landform (hillside, terrace, etc.): Crest of slope Local relief (concave, convex, none): Convex
Slope (%): 2 Lat: 44.068394999999995 Long: -93.14142666666667 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Webster clay loam NWI classification: PEM1D

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 ☒
Hydric Soil Present? Yes ☐ No ☒
Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area
within a Wetland? Yes ☐ No ☒

Remarks:

Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Populus nigra</u>		<u>25</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Salix amygdaloides</u>		<u>5</u>	<u>No</u>	<u>FACW</u>
3. <u>Salix discolor</u>		<u>2</u>	<u>No</u>	<u>FACW</u>
4. _____				
5. _____				
		<u>32</u>	=Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus sericea</u>		<u>2</u>	<u>No</u>	<u>FACW</u>
2. _____				
3. _____				
4. _____				
5. _____				
		<u>2</u>	=Total Cover	

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>		<u>70</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Cirsium discolor</u>		<u>30</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Symphotrichum lanceolatum</u>		<u>5</u>	<u>No</u>	<u>FAC</u>
4. <u>Daucus carota</u>		<u>2</u>	<u>No</u>	<u>UPL</u>
5. <u>Solidago gigantea</u>		<u>2</u>	<u>No</u>	<u>FACW</u>
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
		<u>109</u>	=Total Cover	

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____				
2. _____				
			=Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species
Across All Strata: 3 (B)
Percent of Dominant Species That
Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>81</u>	x 2 = <u>162</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>27</u>	x 5 = <u>135</u>
Column Totals: <u>143</u> (A)	<u>432</u> (B)
Prevalence Index = B/A = <u>3.02</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes ☐ No ☒

SOIL

Sampling Point: 4B

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		
0-35	10YR 2/1	100					Loamy/Clayey	
35-36	10YR 5/4	100					Sandy	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)
	☐ Coast Prairie Redox (A16)
	☐ Iron-Manganese Masses (F12)
	☐ Red Parent Material (F21)
	☐ Very Shallow Dark Surface (F22)
	☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-18-2024
Applicant/Owner: Steele County State: MN Sampling Point: 5A
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S18 T107 R19W
Landform (hillside, terrace, etc.): drainage ditch Local relief (concave, convex, none): concave
Slope (%): 2 Lat: 44.0683560566667 Long: -93.14626988500001 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Nicollet clay loam NWI classification: None

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 ☐
Hydric Soil Present? Yes ☒ No ☐
Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

Remarks:

Antecedent precipitation conditions drier than normal. Sample point taken in mowed ditch east of County Road 180.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex vulpinoidea</u>		<u>70</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Typha angustifolia</u>		<u>20</u>	<u>No</u>	<u>OBL</u>
3. <u>Echinochloa crus-galli</u>		<u>20</u>	<u>No</u>	<u>FACW</u>
4. <u>Cornus sericea</u>		<u>5</u>	<u>No</u>	<u>FACW</u>
5. <u>Solidago gigantea</u>		<u>2</u>	<u>No</u>	<u>FACW</u>
6.				
7.				
8.				
9.				
10.				
		<u>117</u>	=Total Cover	

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (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>20</u>	x 1 = <u>20</u>
FACW species <u>97</u>	x 2 = <u>194</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>117</u> (A)	<u>214</u> (B)
Prevalence Index = B/A = <u>1.83</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sampling Point: 5A

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		
0-12	10YR 3/1	100					Loamy/Clayey	
12-36	10Y 7/1	60	10YR 4/6	40	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Red Parent Material (F21)	
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Very Shallow Dark Surface (F22)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)	☐ Other (Explain in Remarks)	
☐ 2 cm Muck (A10)	☒ Loamy Gleyed Matrix (F2)		
☒ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)		
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)		
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)		

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	Wetland Hydrology Present? Yes ☒ No ☐
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☒ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		
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)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CSAH2-CR180 Intersection City/County: Havana/Steele County Sampling Date: 10-18-2024
Applicant/Owner: Steele County State: MN Sampling Point: 5B
Investigator(s): M. Lukas, V. Holland Section, Township, Range: S18 T107 R19W
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): convex
Slope (%): 10-15 Lat: 44.06682282666668 Long: -93.14630408666666 Datum: D NAD 1983 HARN Adj MN Steele
Soil Map Unit Name: Biscay clay loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No _____
Hydric Soil Present? Yes _____ No X
Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Antecedent precipitation conditions are drier than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>
2.				
3.				
4.				
5.				
		<u>20</u> =Total Cover		

Herb Stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phalaris arundinacea</u>		<u>90</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Solidago gigantea</u>		<u>10</u>	<u>No</u>	<u>FACW</u>
3. <u>Cirsium discolor</u>		<u>5</u>	<u>No</u>	<u>FACU</u>
4. <u>Pastinaca sativa</u>		<u>5</u>	<u>No</u>	<u>UPL</u>
5. <u>Echinocystis lobata</u>		<u>5</u>	<u>No</u>	<u>FACW</u>
6.				
7.				
8.				
9.				
10.				
		<u>115</u> =Total Cover		

Woody Vine Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species
Across All Strata: 2 (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>0</u>	x 1 = <u>0</u>
FACW species <u>125</u>	x 2 = <u>250</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>135</u> (A)	<u>295</u> (B)
Prevalence Index = B/A = <u>2.19</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.

**Hydrophytic
Vegetation**

Present? Yes X No _____

SOIL

Sampling Point: 5B

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		
0-12	10YR 3/1	100					Loamy/Clayey	
12-36	10YR 6/6	100					Sandy	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3)	☐ Red Parent Material (F21)
☐ Hydrogen Sulfide (A4)	☐ Very Shallow Dark Surface (F22)
☐ Stratified Layers (A5)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

Appendix C – Photo Log of Site Conditions

DRAFT



Photo 1 –East bank of Unnamed stream, looking north



Photo 2 – East bank of Unnamed stream, looking south



Photo 3 – Field east of unnamed stream, parcel 07-018-2201



Photo 4 – East bank of Unnamed stream, looking south



Photo 5 – East bank of Unnamed stream, looking south



Photo 6 – Stand of trees east of Unnamed stream



Photo 7 – East bank of Unnamed stream, looking north



Photo 8 – Railway bridge over Unnamed stream, looking northeast



Photo 9 - Railway bridge over Unnamed stream, looking north



Photo 10 – SE 18th St bridge over unnamed stream, looking southwest



Photo 11 – unnamed stream south of SE 18th St bridge, looking southwest



Photo 12 – SE 18th St looking southeast



Photo 13 – Fields south of SE 18th St, split by unnamed steam



Photo 14 – surface soil crack at edge of field



Photo 15 – Drainageway southwest of intersection of CR 180 and Hwy 43



Photo 16 – Southern end of drainageway in parcel 07-020-4100, looking northwest



Photo 17 - Southern end of drainageway in parcel 07-020-4100, looking southwest



Photo 18 –Parcel 07-017-2400, near drainageway



Photo 19 – Roadside drainageway east of Hwy 43

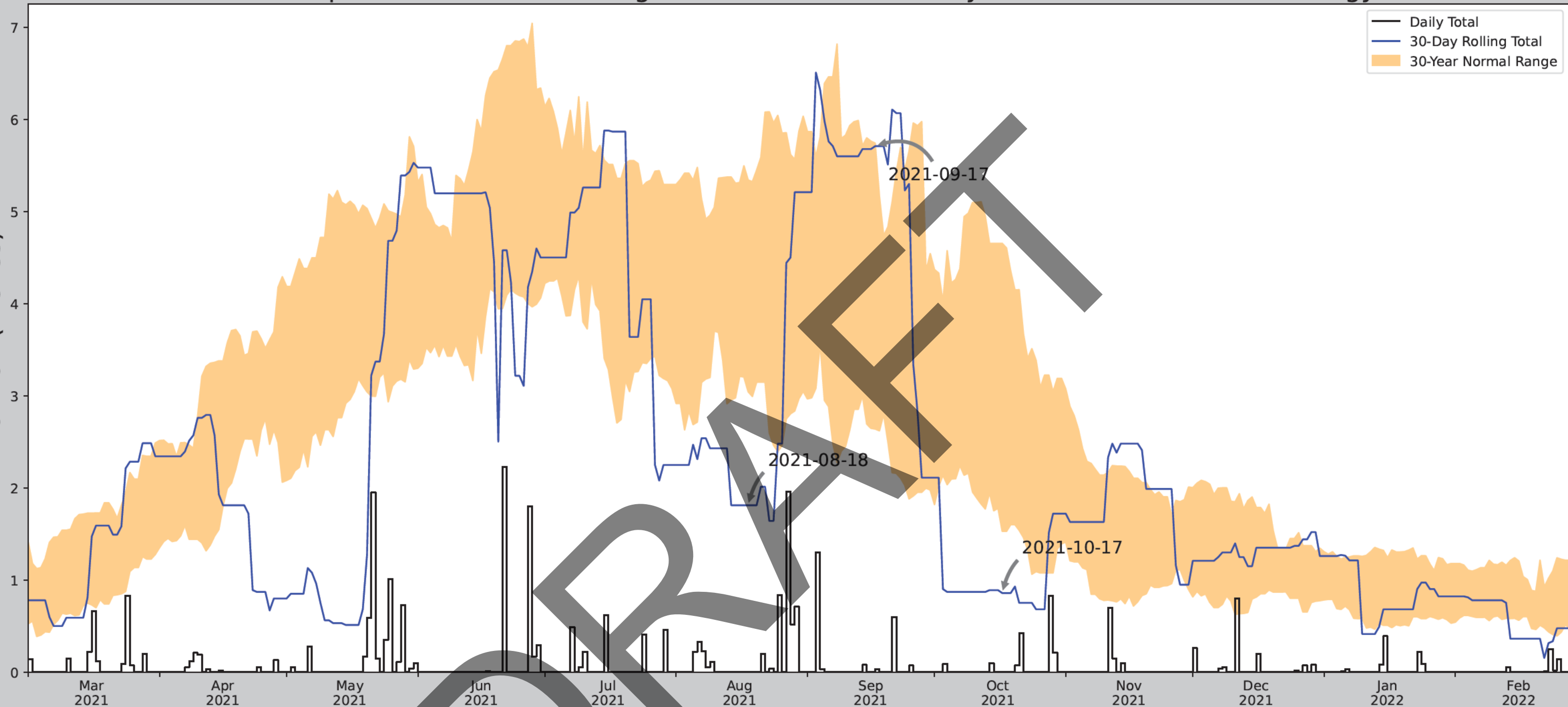


Photo 20 - Roadside drainageway west of Hwy 43

DRAFT

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	44.07615834166667, -93.14611852833336
Observation Date	2021-10-17
Elevation (ft)	1209.853
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-10-17	1.527953	4.65315	0.858268	Dry	1	3	3
2021-09-17	2.638583	5.740551	5.708662	Normal	2	2	4
2021-08-18	3.043701	5.340945	1.811024	Dry	1	1	1
Result							Drier than Normal - 8



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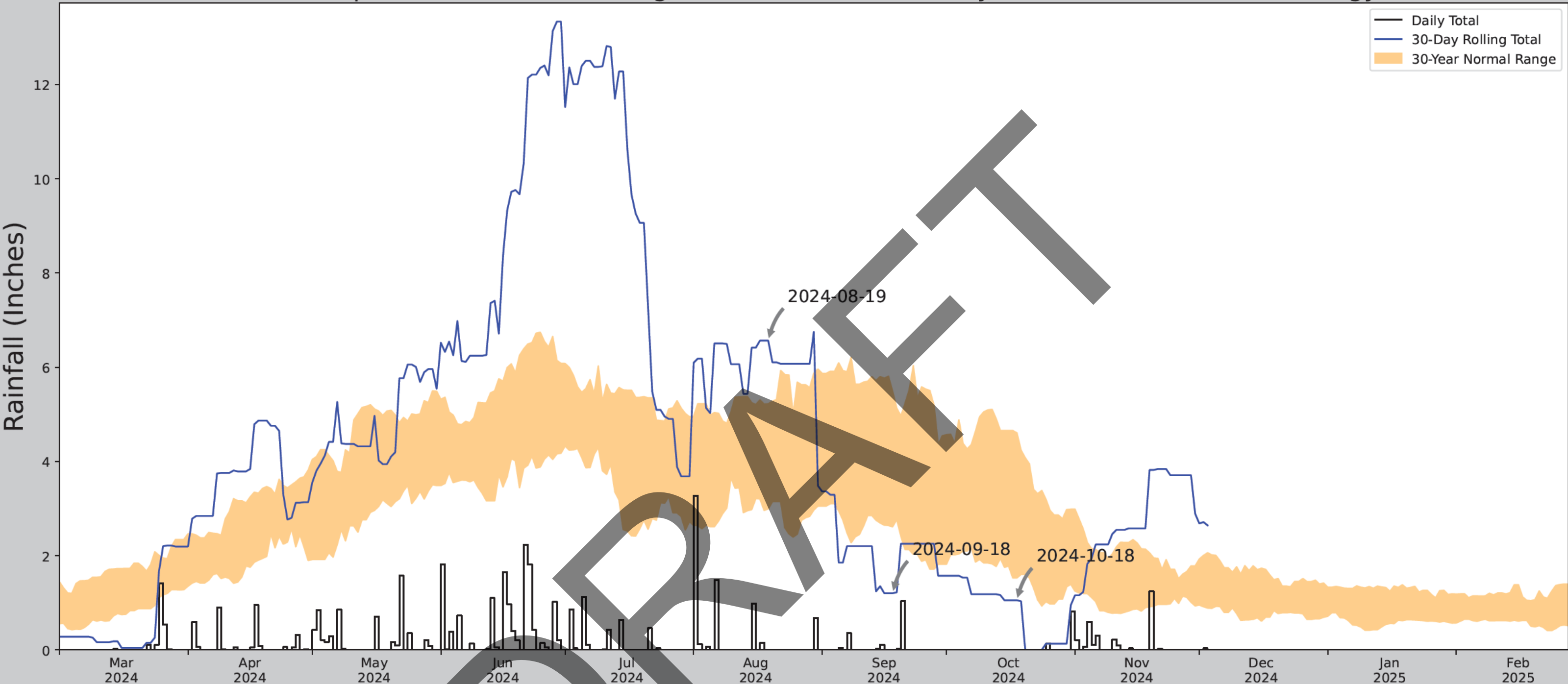


Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
OWATONNA	44.0975, -93.2317	1140.092	4.649	69.761	2.416	11257	90
OWATONNA 0.8 E	44.0917, -93.2138	1159.121	0.974	19.029	0.457	7	0
WASECA S RSCH & OUTREACH CTR	44.0706, -93.5264	1146.982	14.744	6.89	6.736	85	0
FARIBAULT	44.3092, -93.2661	970.144	14.726	169.948	9.129	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.0683, -93.1413
Observation Date	2024-10-18
Elevation (ft)	1219.97
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-10-18	1.527953	4.603543	1.051181	Dry	1	3	3
2024-09-18	2.612599	5.484646	1.200787	Dry	1	2	2
2024-08-19	2.992126	5.221654	6.562992	Wet	3	1	3
Result							Drier than Normal - 8



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Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

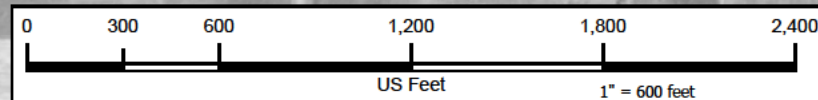
Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
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OWATONNA 0.8 E	44.0917, -93.2138	1159.121	0.974	19.029	0.457	7	0
OWATONNA 1.0 ENE	44.0952, -93.2111	1188.976	1.034	48.884	0.516	0	10
WASECA S RSCH & OUTREACH CTR	44.0706, -93.5264	1146.982	14.744	6.89	6.736	81	0
FARIBAULT	44.3092, -93.2661	970.144	14.726	169.948	9.129	4	0

DRAFT

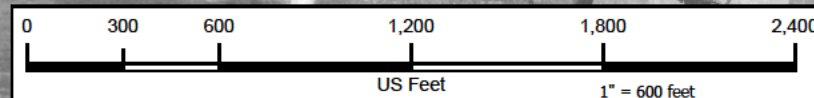
Off-Site Hydrology Assessment
Steele County, Minnesota

April 30, 1938
WET



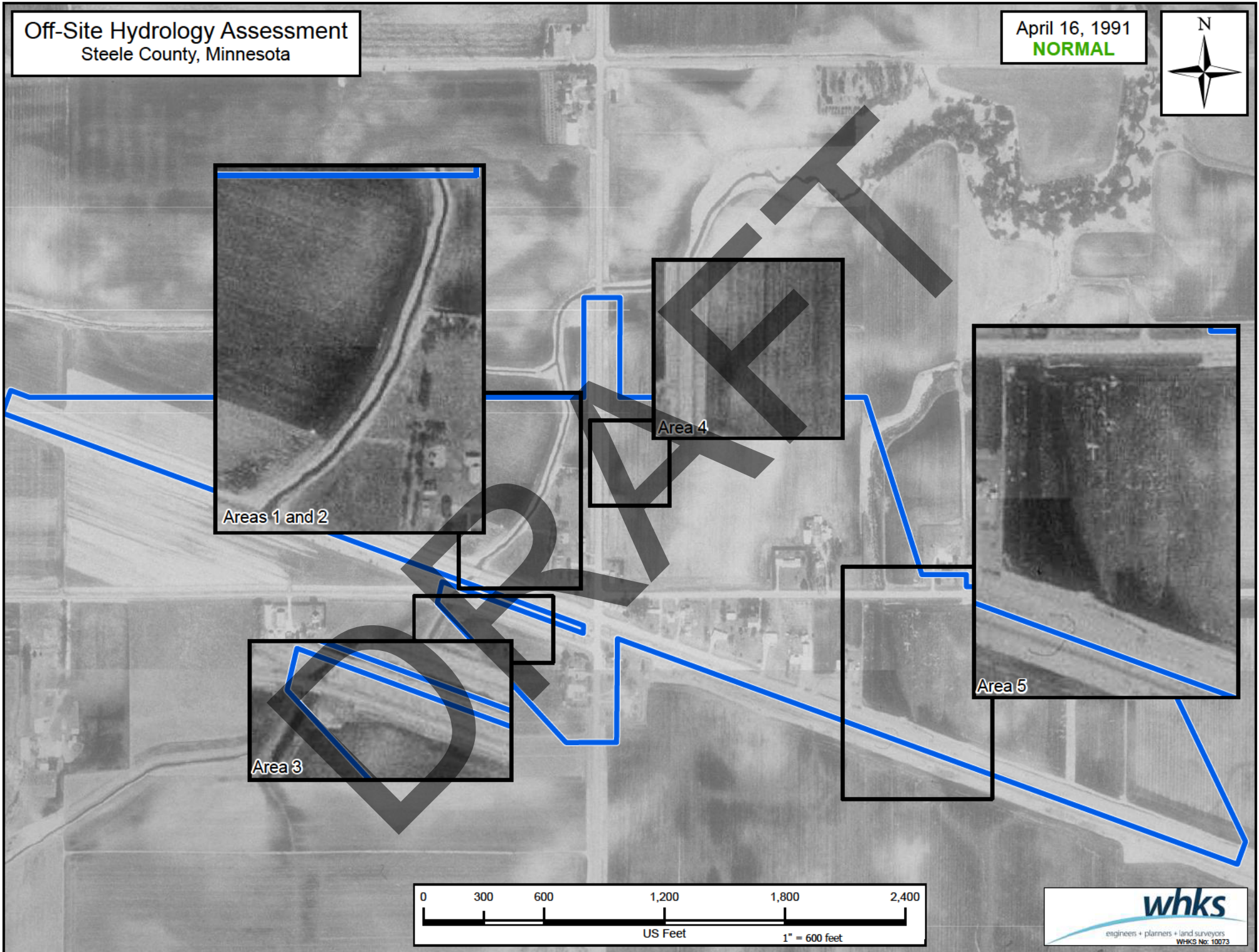
Off-Site Hydrology Assessment
Steele County, Minnesota

April 6, 1959
NORMAL



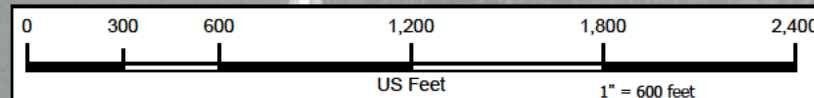
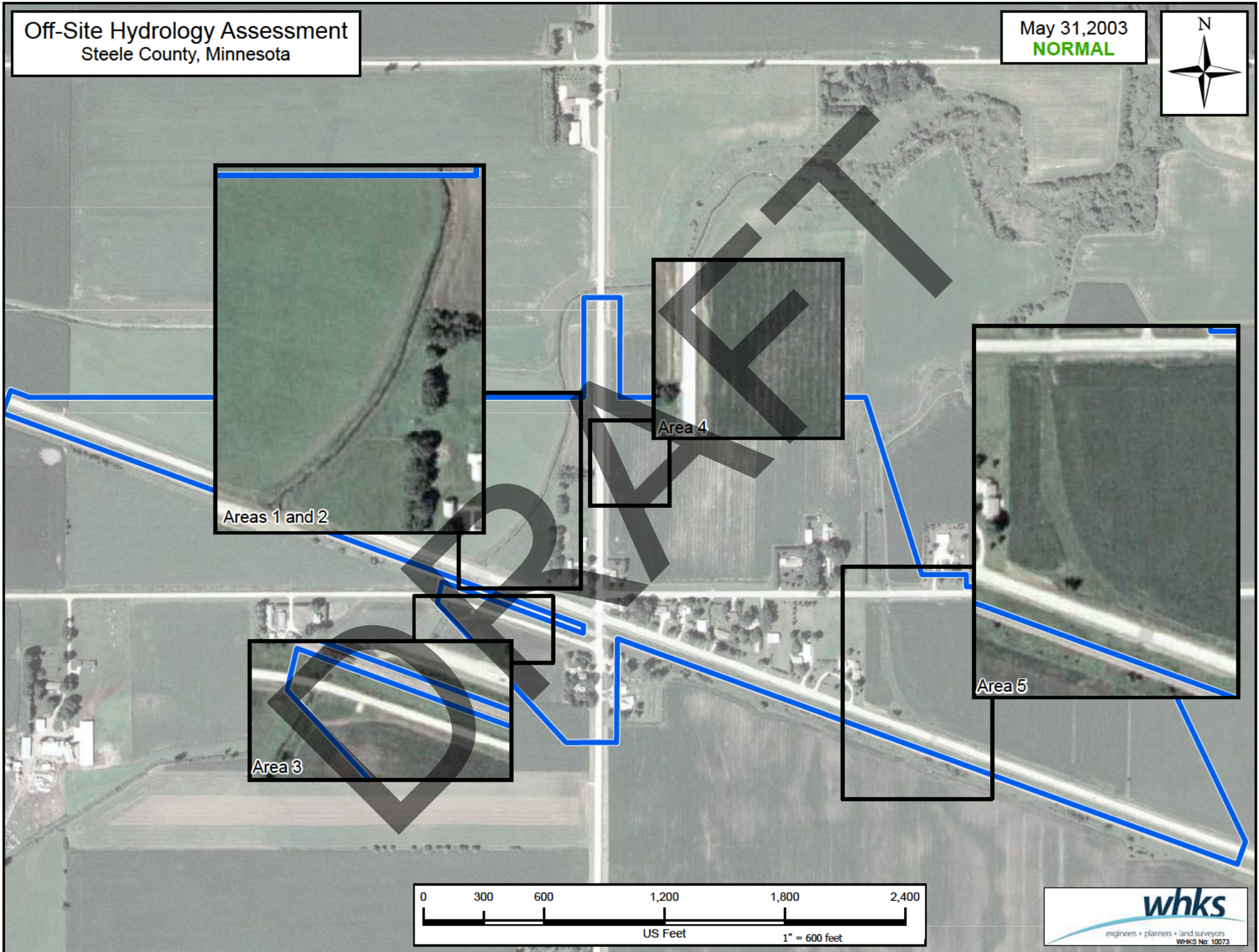
Off-Site Hydrology Assessment
Steele County, Minnesota

April 16, 1991
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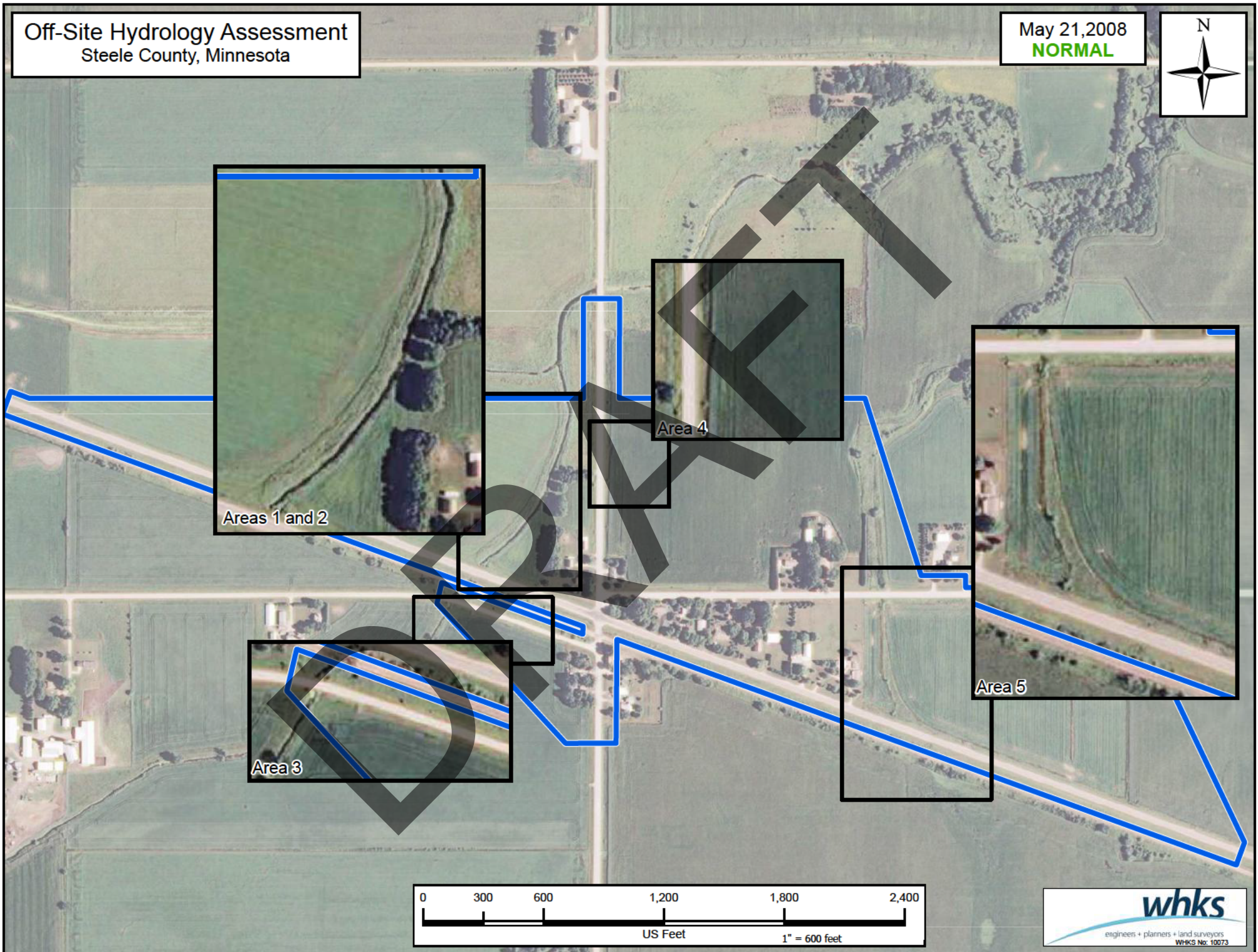
Off-Site Hydrology Assessment
Steele County, Minnesota

May 31, 2003
NORMAL



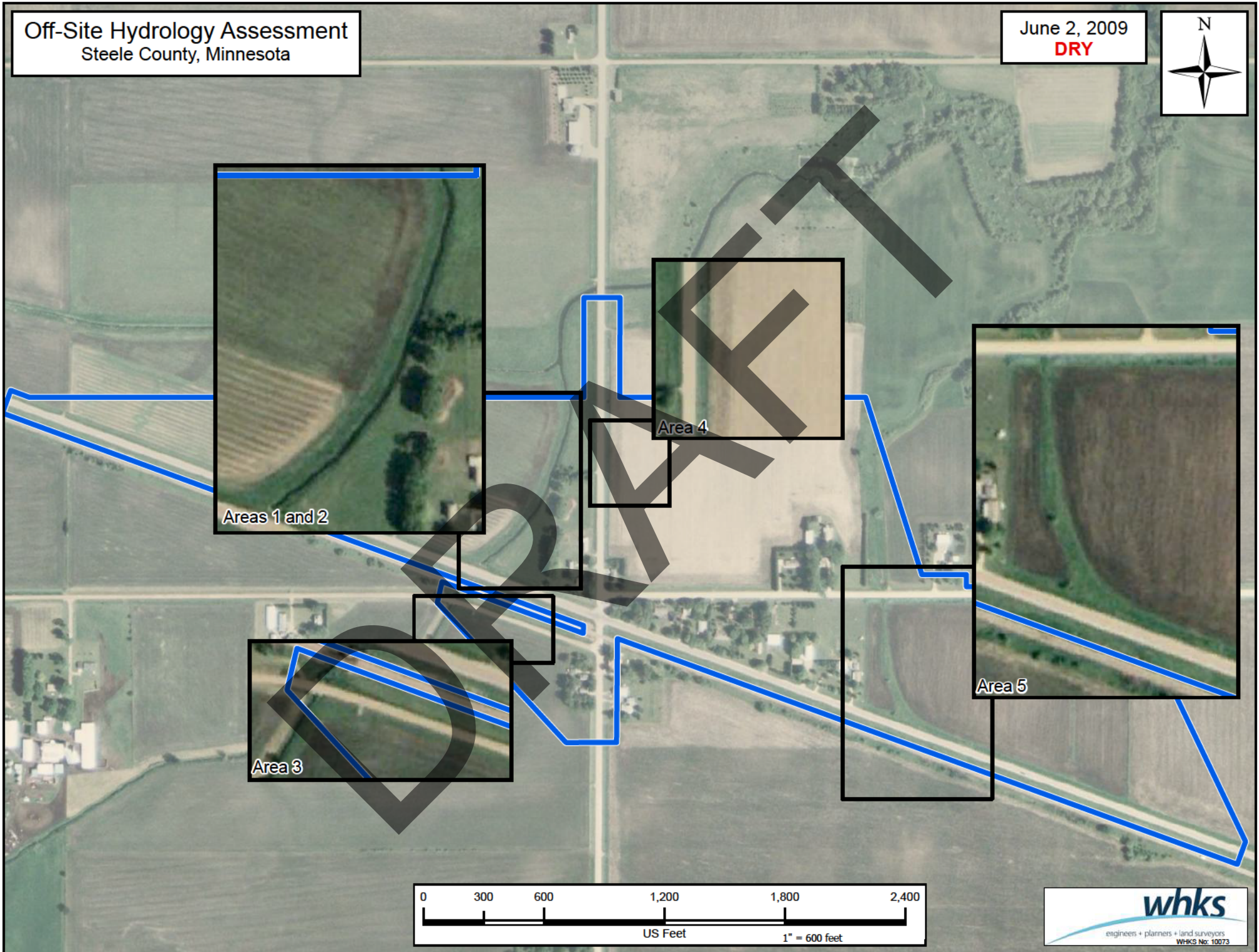
Off-Site Hydrology Assessment
Steele County, Minnesota

May 21, 2008
NORMAL



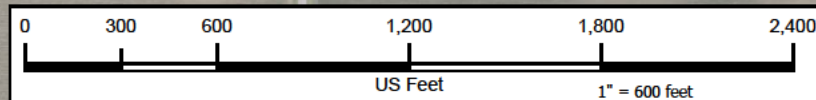
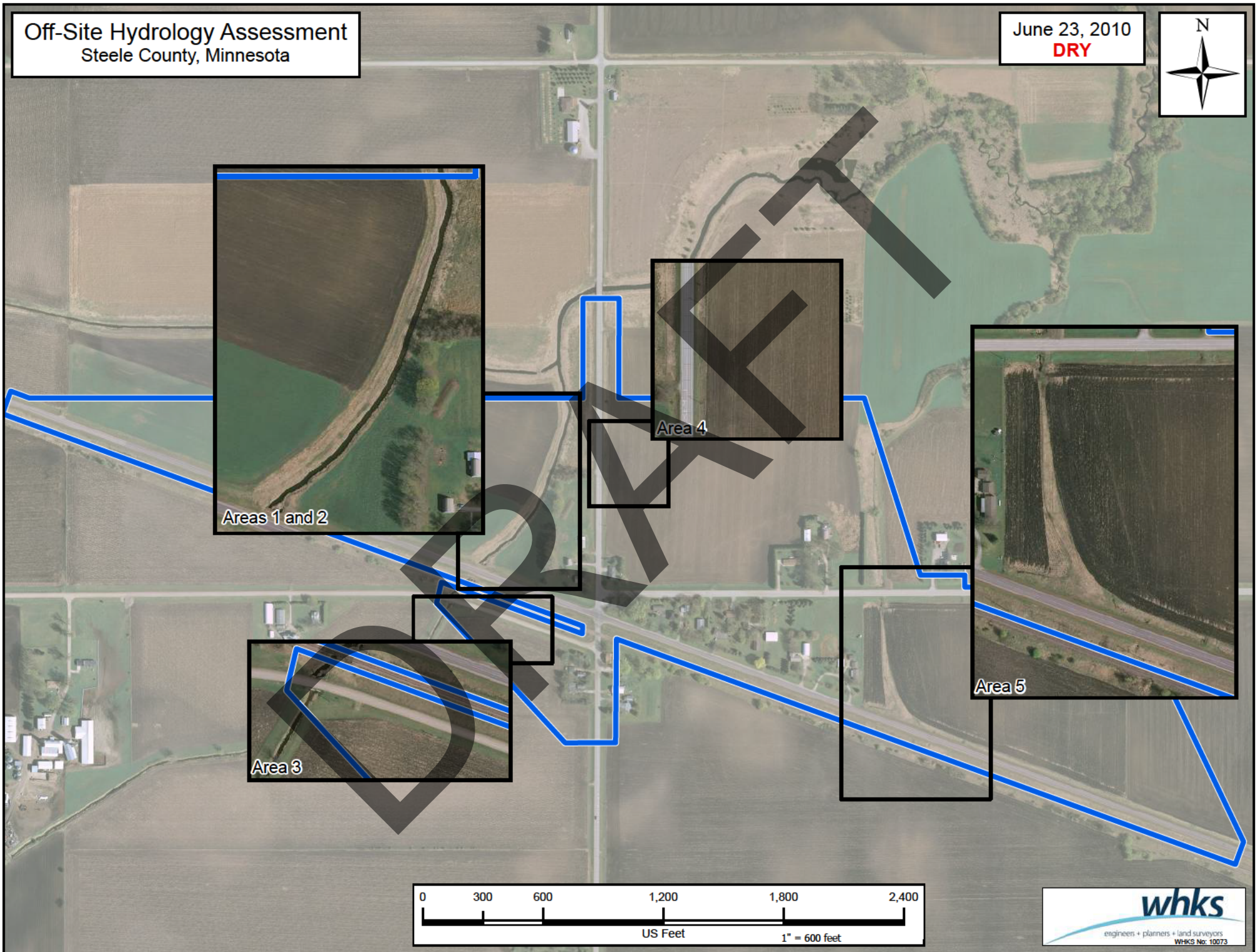
Off-Site Hydrology Assessment
Steele County, Minnesota

June 2, 2009
DRY



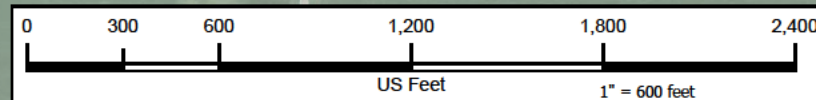
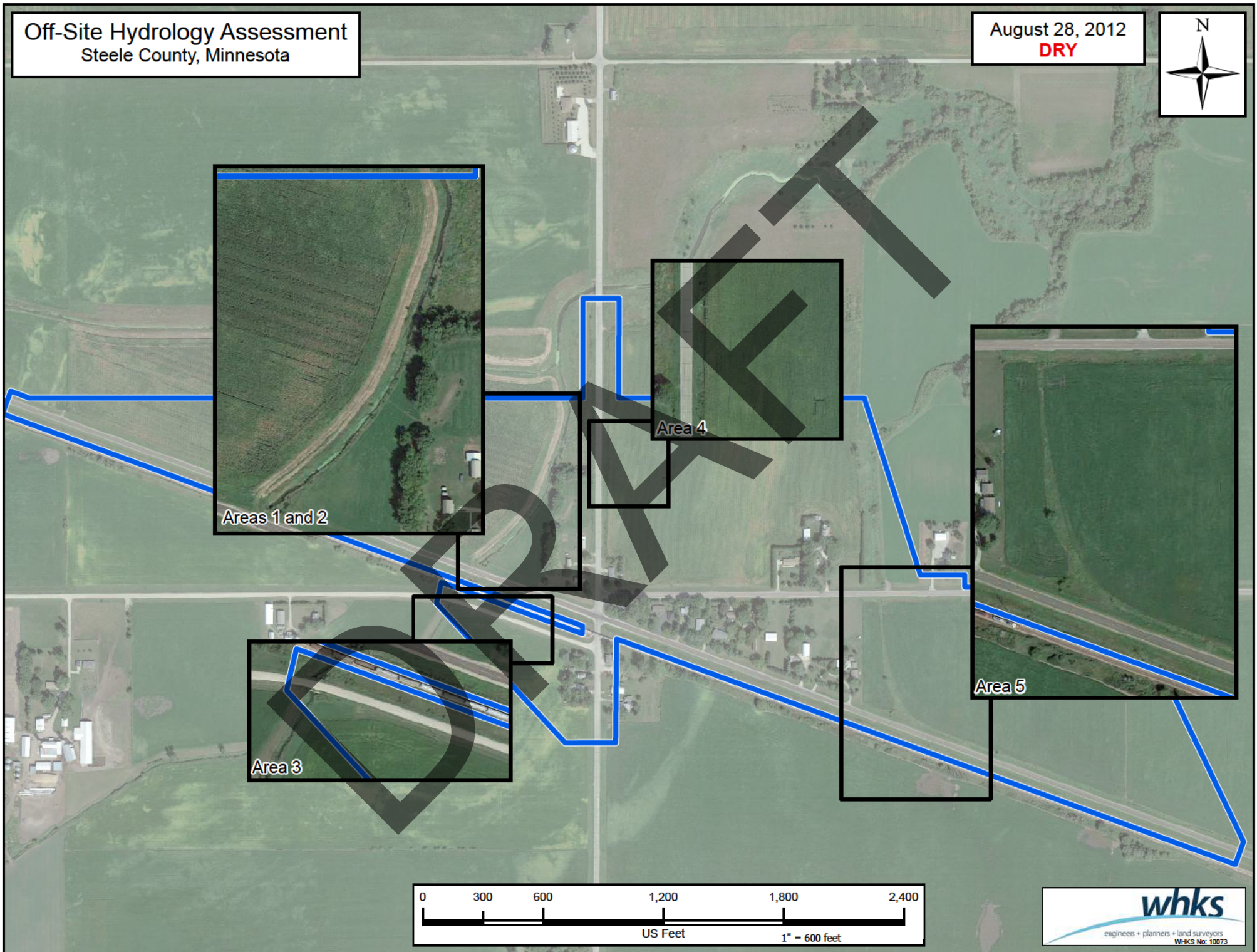
Off-Site Hydrology Assessment
Steele County, Minnesota

June 23, 2010
DRY



Off-Site Hydrology Assessment
Steele County, Minnesota

August 28, 2012
DRY



Off-Site Hydrology Assessment
Steele County, Minnesota

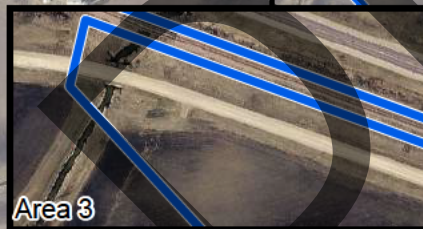
April 29 - May 7, 2013
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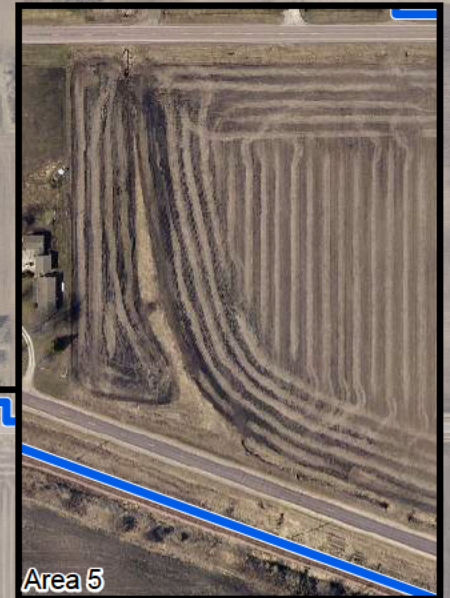
Areas 1 and 2



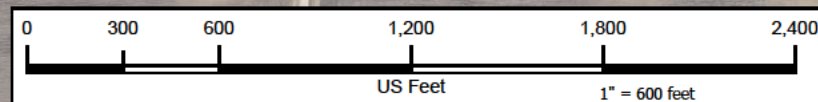
Area 4



Area 3



Area 5



Off-Site Hydrology Assessment
Steele County, Minnesota

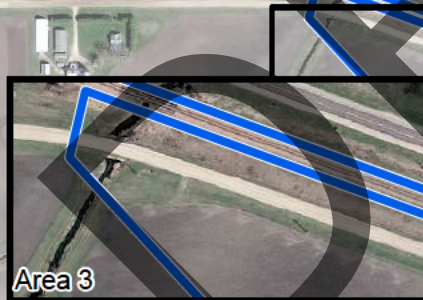
April 22, 2015
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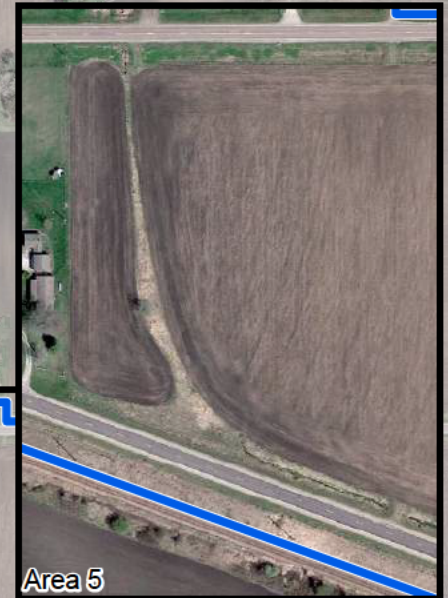
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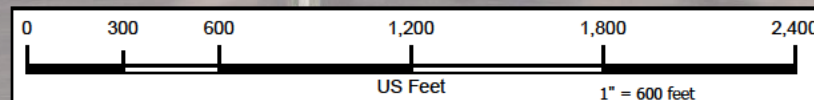
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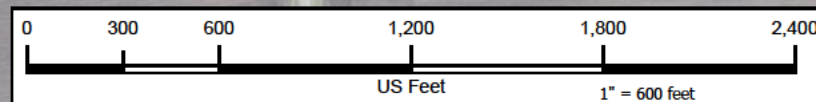
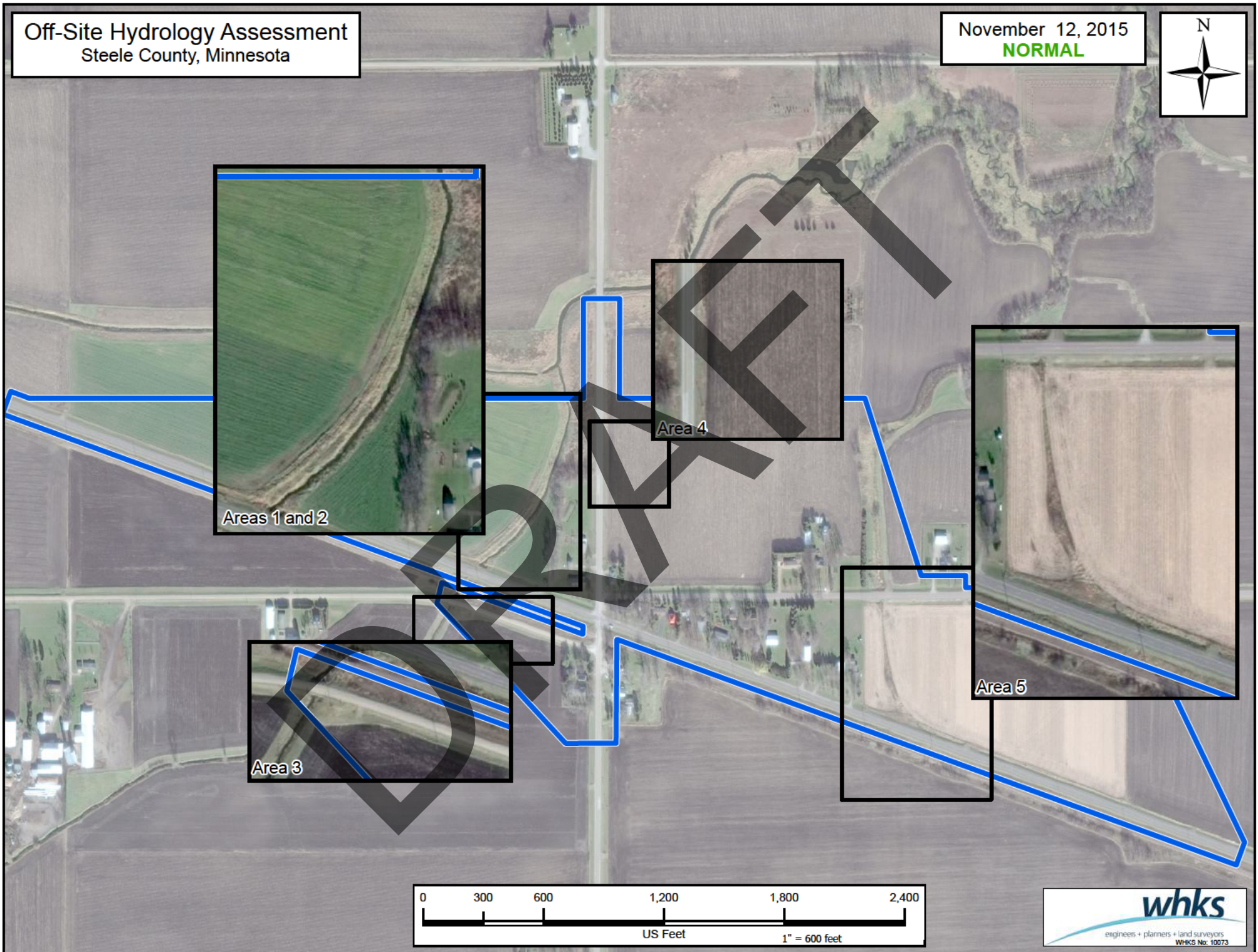


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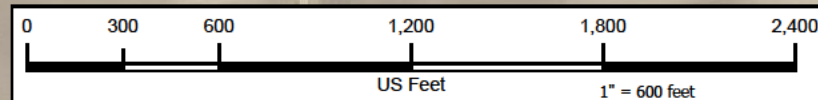
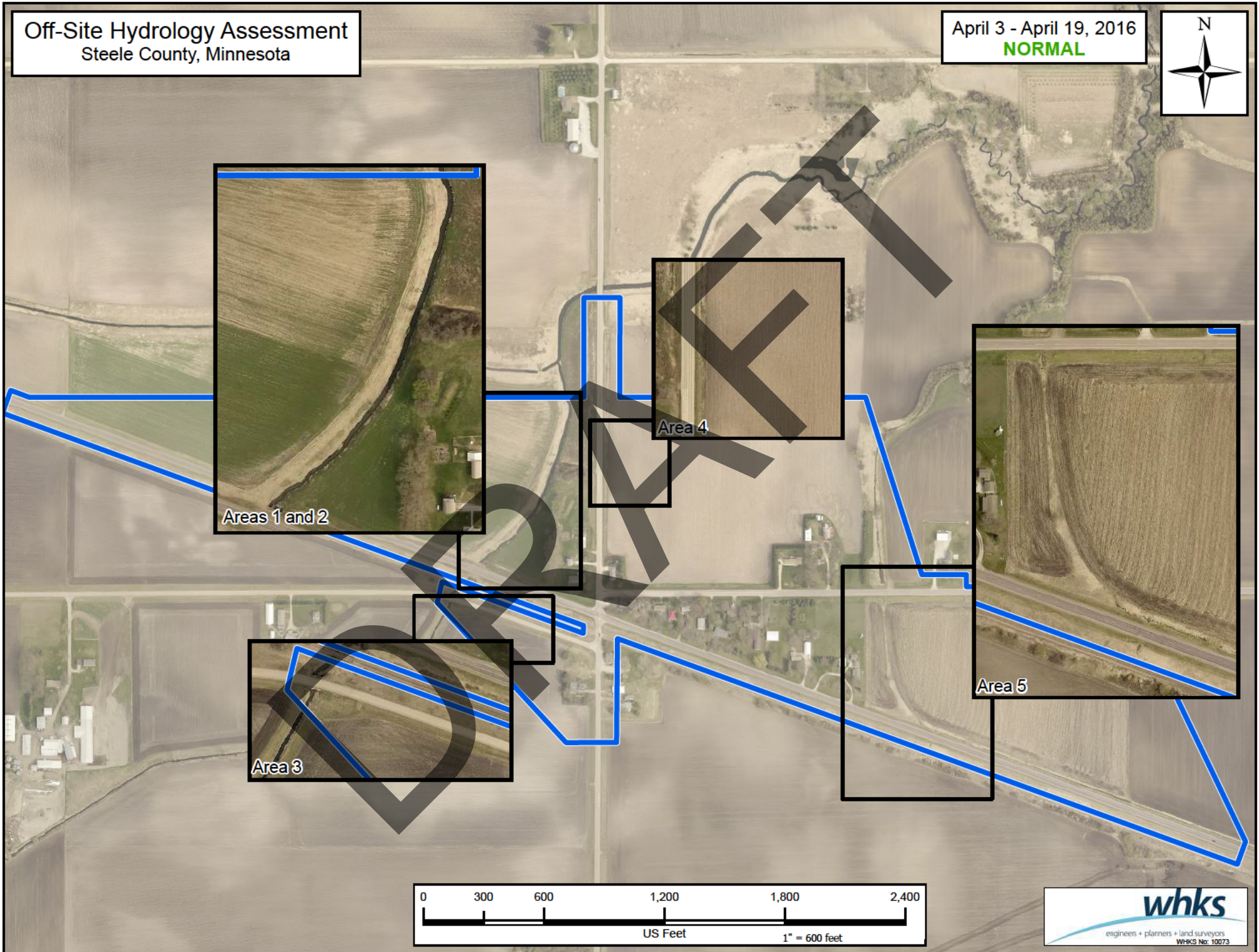
Off-Site Hydrology Assessment
Steele County, Minnesota

November 12, 2015
NORMAL



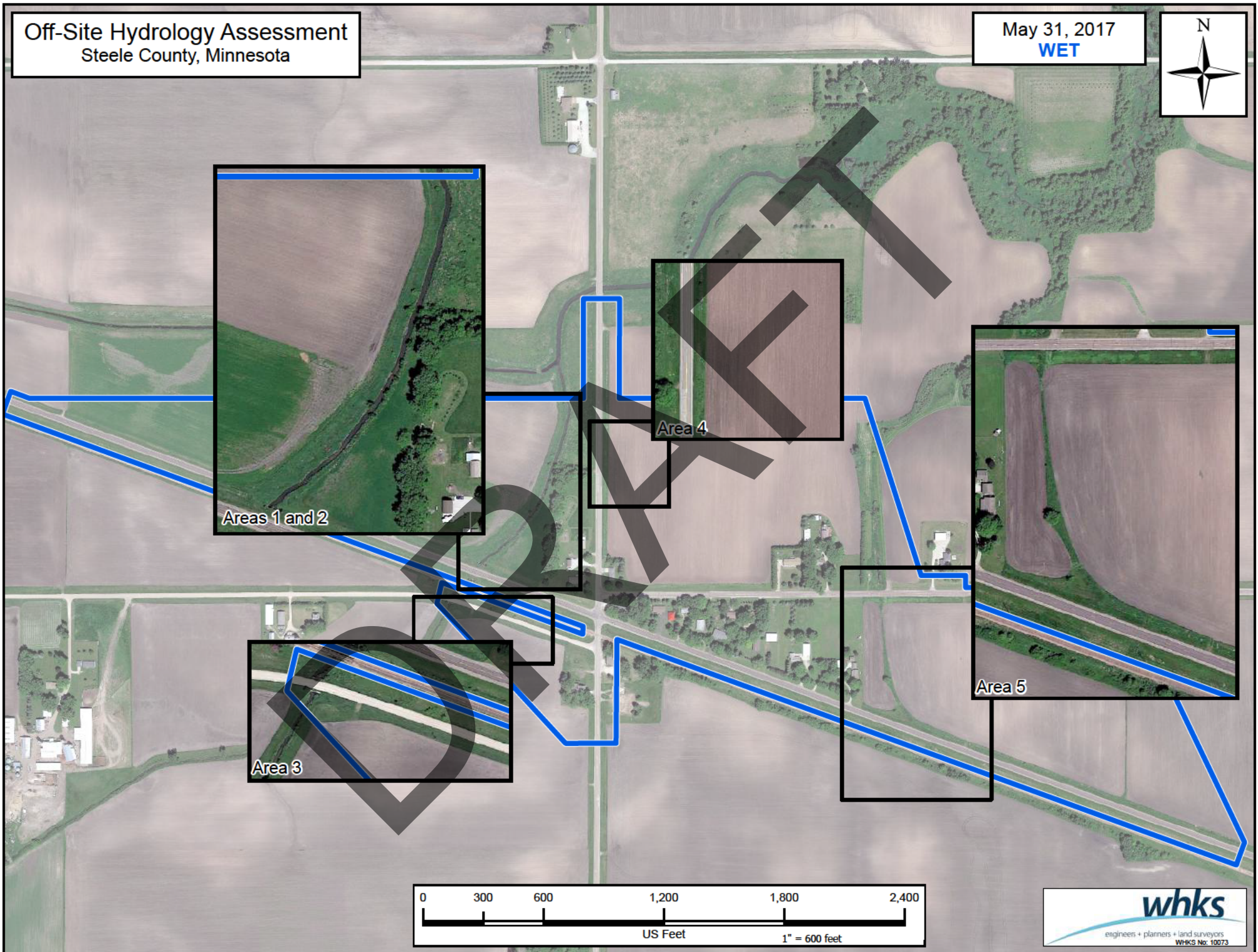
Off-Site Hydrology Assessment
Steele County, Minnesota

April 3 - April 19, 2016
NORMAL



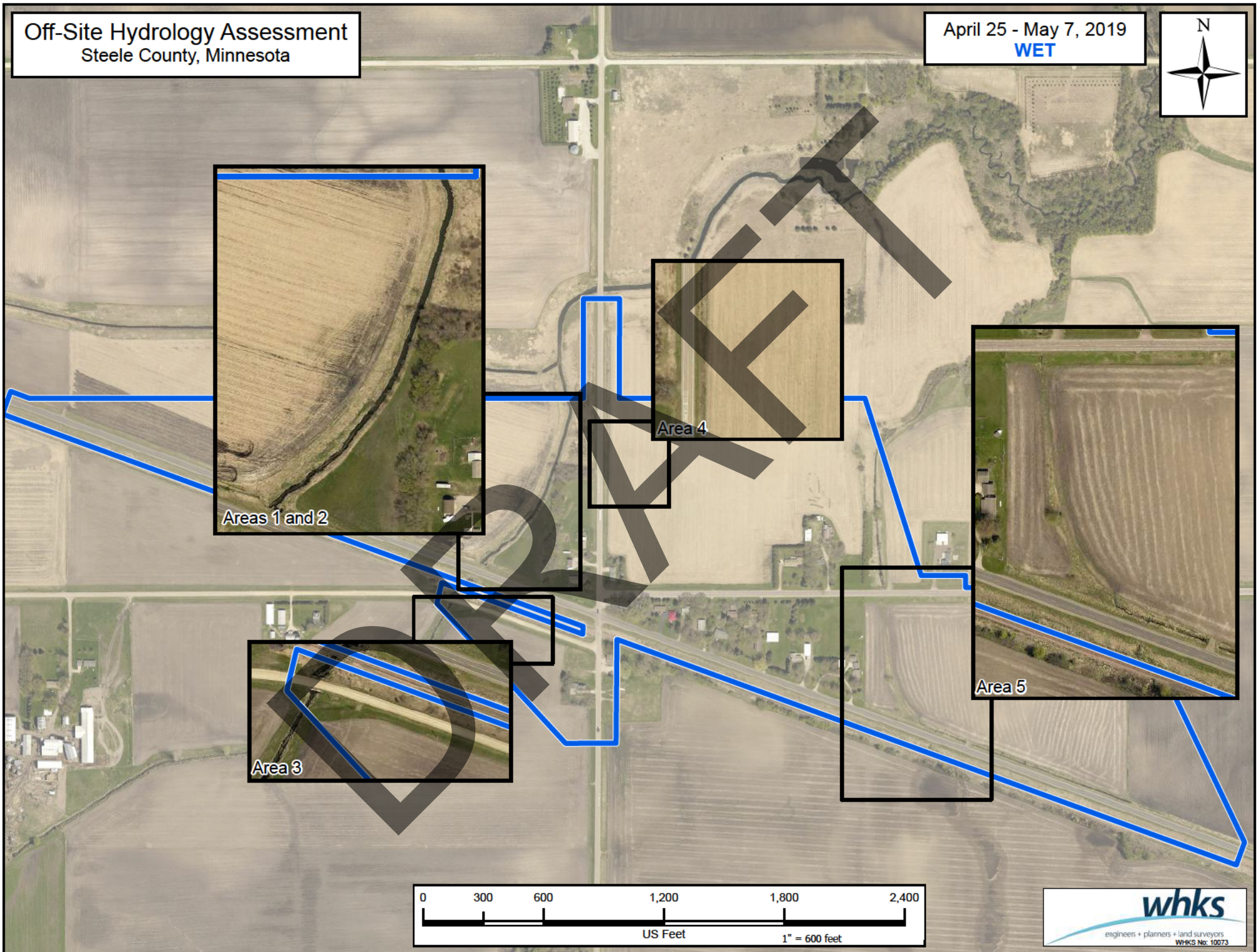
Off-Site Hydrology Assessment
Steele County, Minnesota

May 31, 2017
WET



Off-Site Hydrology Assessment
Steele County, Minnesota

April 25 - May 7, 2019
WET



Off-Site Hydrology Assessment
Steele County, Minnesota

October 12, 2020
NORMAL



Areas 1 and 2



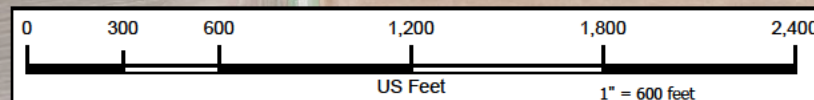
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Area 3

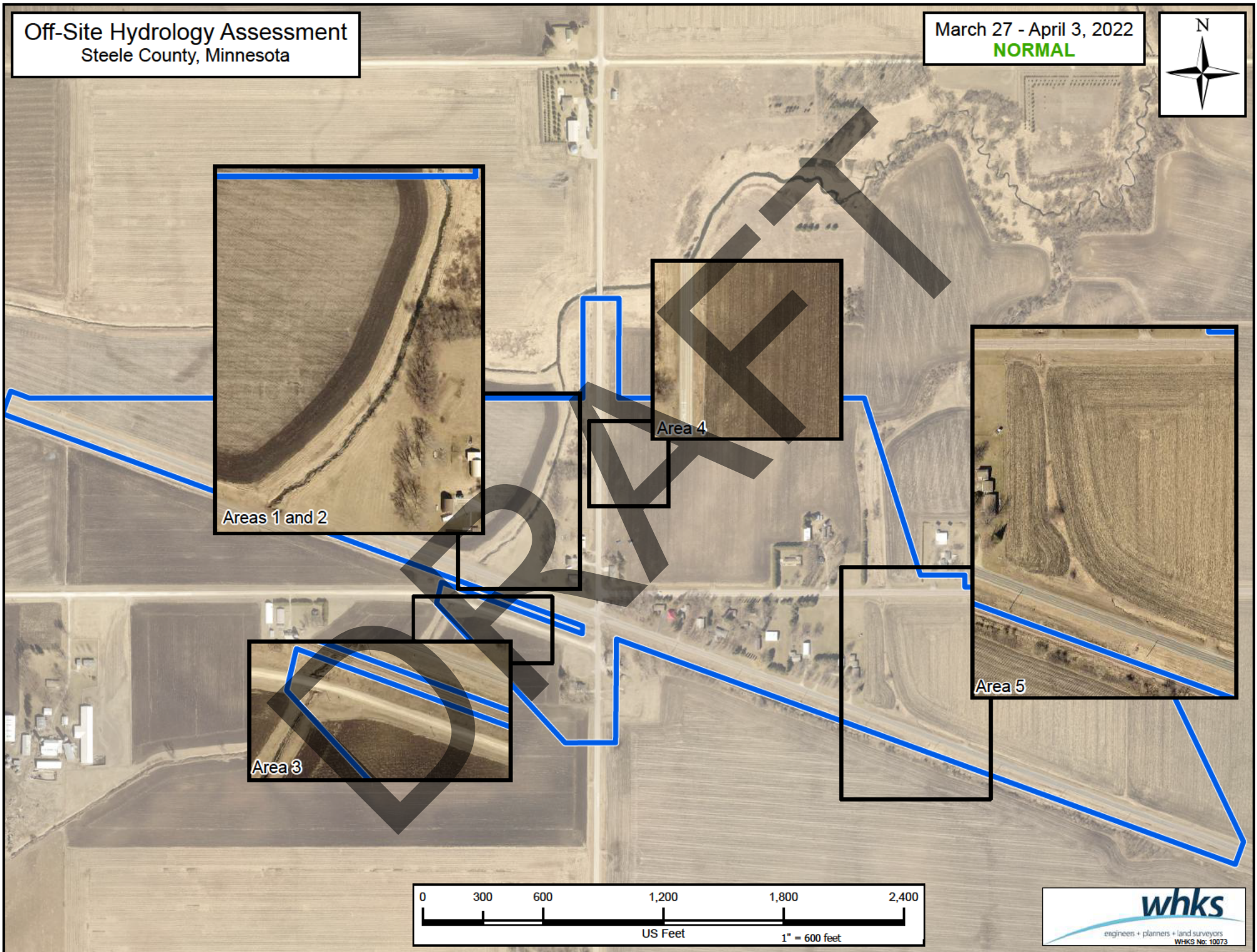


Area 5



Off-Site Hydrology Assessment
Steele County, Minnesota

March 27 - April 3, 2022
NORMAL



Off-Site Hydrology Assessment
Steele County, Minnesota

February 2, 2024
DRY



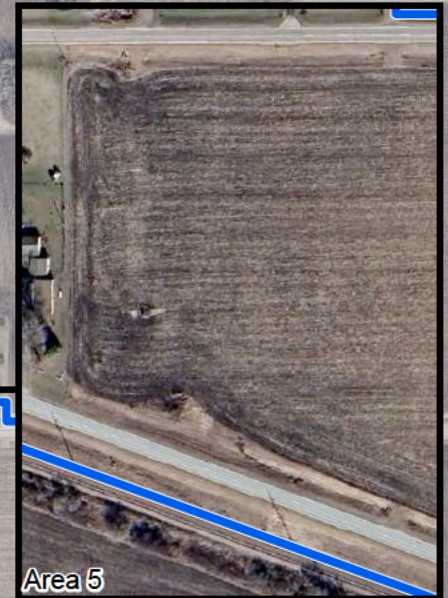
Areas 1 and 2



Area 4



Area 3



Area 5

