

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 12/11/12

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NWO-2011-1406-PIE

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Review area is considered to be one Isolated Wetland and the Big Sioux River (RPW); project involves a utility line crossing in both these waters. Thus, this jurisdictional determination contains information on both non-jurisdictional waters and WUS.

State: South Dakota County/parish/borough: Minnehaha City: Sioux Falls
Center coordinates of site (lat/long in degree decimal format): Lat. 43.50801N; Long. -96.73584W
Universal Transverse Mercator: 14

Name of nearest waterbody: Big Sioux River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Isolated Water: N/A RPW: Lower Big Sioux River
Name of watershed or Hydrologic Unit Code (HUC): 10170203

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/20/12
 Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): ¹

- TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5605 linear feet: 100 width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM.

Elevation of established OHWM (if known): .

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

2. **Non-regulated waters/wetlands (check if applicable):**³

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: [Delineation data suggest that a wetland is present within the review area. The affected seasonal wetland is isolated and shows no hydrologic or topographic connection to waters of the United States. Furthermore the wetland is despressional and lacks a direct or indirect linkage to adjacent waters based on historic aerial imagery in both wet and dry cycles . .](#)

SECTION III: CWA ANALYSIS

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: [2117769 acres](#)
Drainage area: [Pick List](#)
Average annual rainfall: [23.9 inches](#)
Average annual snowfall: [41.0 inches](#)

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

- Tributary flows directly into TNW.
 Tributary flows through [Pick List](#) tributaries before entering TNW.

Project waters are [30 \(or more\)](#) river miles from TNW.

Project waters are [1 \(or less\)](#) river miles from RPW.

Project waters are [30 \(or more\)](#) aerial (straight) miles from TNW.

Project waters are [1 \(or less\)](#) aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: [Portions of the Lower Big Sioux Serves as a boundary between SD and IA.](#)

Identify flow route to TNW⁵: [Lower Big Sioux Flows directly into the Big Sioux \(TNW\) which flows into the Missouri River \(TNW\).](#)

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain: .
 Manipulated (man-altered). Explain: [manipulated and in a urban setting, lower portions flow through an area of high agricultural use .](#)

³ Supporting documentation is presented in Section III.F.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary properties with respect to top of bank (estimate):

Average width: 100 feet
Average depth: 5 feet
Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):

- | | | |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input checked="" type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: . | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Highly eroding banks in agricultural settings, river has a tendency to meandering creating new channels and oxbows during high flow events..**

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: Perennial

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: **Perennial**.

Other information on duration and volume: .

Surface flow is: **Confined**. Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Bed and banks | |
| <input checked="" type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input checked="" type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input checked="" type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input checked="" type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: . | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input checked="" type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: **Water is stained and sediment laden.**

Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- | |
|--|
| <input checked="" type="checkbox"/> Riparian corridor. Characteristics (type, average width): Highly developed Riparian Corridor. |
| <input type="checkbox"/> Wetland fringe. Characteristics: . |
| <input checked="" type="checkbox"/> Habitat for: |
| <input checked="" type="checkbox"/> Federally Listed species. Explain findings: Topeka Shiner. |

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

- Fish/spawn areas. Explain findings: **Many species of fish utilize the perennial flows of the Big Sioux River for numerous life cycle stages.**
- Other environmentally-sensitive species. Explain findings: .
- Aquatic/wildlife diversity. Explain findings: **Many species of Mammals, reptiles, fishes, birds and amphibians utilize the Big Sioux River and its riparian corridor .**

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **Big Sioux River is perennial, its extreme lower sections have documented use in domestic commerce.**
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: **5605** linear feet **100** width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: **0.84** acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Maps and Delineation submitted by consultant.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters’ study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps. **10170203, Lower Big Soix. Iowa, Minnesota, South Dakota.**
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K, SD-SIOUX FALLS EAST.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: **BIG SIOUX.**
- State/Local wetland inventory map(s): .

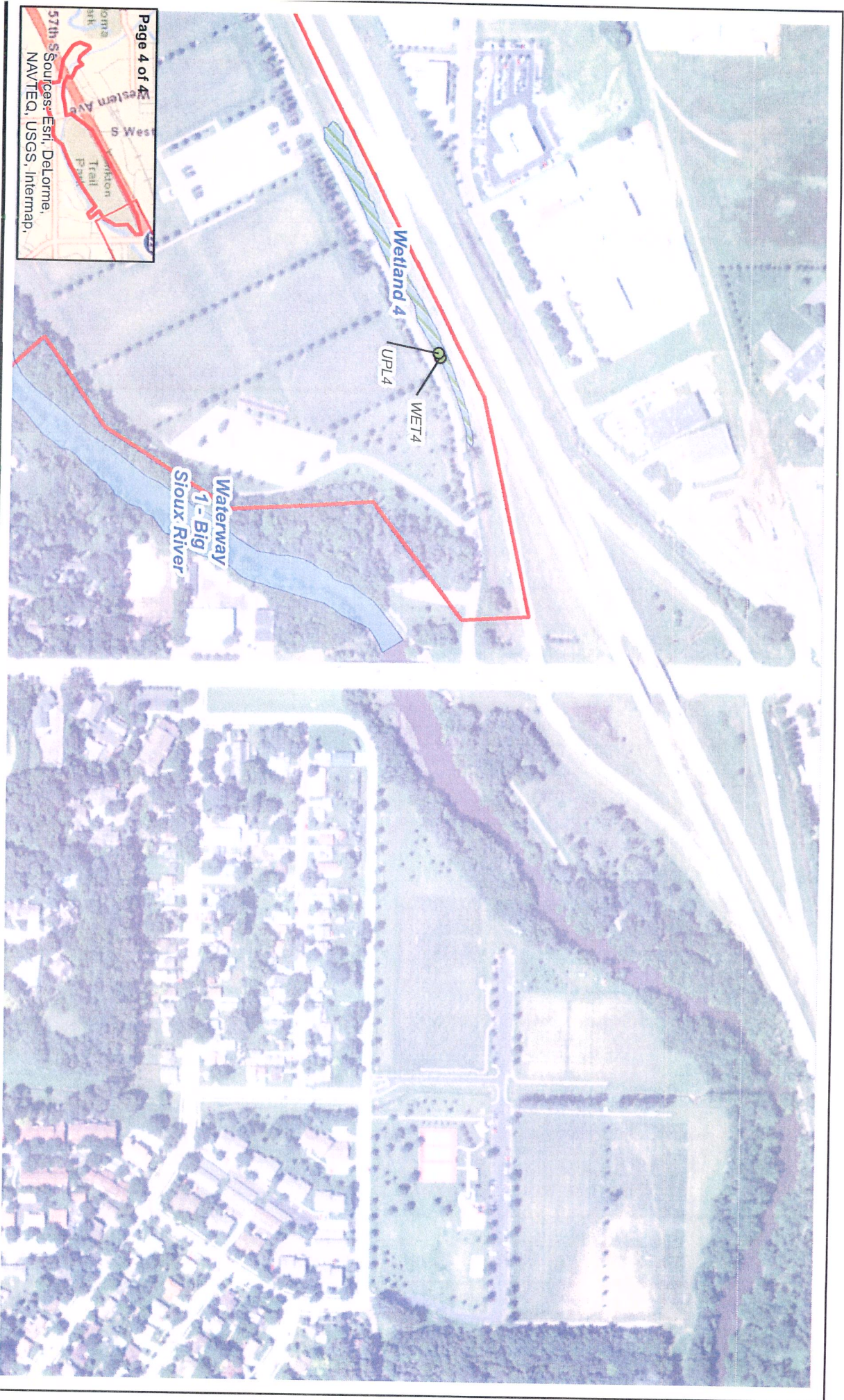
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date):7/14/10, 2/26/05.
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The affected wetland is isolated and shows no hydrologic or topographic connection to waters of the United States. Furthermore the wetland lacks a direct or indirect linkage to adjacent waters based on historic aerial imagery in both wet and dry cycles

It is also determined that the wetland has no documented use by interstate or foreign travelers relating to waterborne commerce activities, does not support fish or shellfish that could be taken and sold in interstate or foreign commerce, and is not used for industrial purposes by industries in interstate commerce

See attached maps of the review area..



Page 4 of 4
 57th St Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,

Sampling Points and Wetland Boundaries
 Sioux River South Interceptor
 Phase 2A and 2B



- Legend**
- Study Area
 - Data Points
 - Waterway
 - Wetland

DATE
 10/8/2012

FIGURE
 Figure 2d

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: SRSI Phase 2 City/County: Sioux Falls Sampling Date: 9/17/2012

Applicant/Owner: City of Sioux Falls State: SD

Investigators: M Swenson Section, Township, Range S 32 T 101 R 49

Landform (hillslope, terrace, etc.): Depression

Local Relief (concave, convex, none): Concave

Slope(%): 0 Lat: 43.508275 Long: -96.735024

NWI Classification: PEMC

Soil Map Unit Name: Davis loam, 0 to 2 percent slopes

Are climatic / hydrologic conditions on the site typical for this time of year? Yes

Are Vegetation / Soil, Hydrology, Hydrology, naturally problematic? Yes

Are Vegetation / Soil, Hydrology, Hydrology, significantly disturbed? Yes

Are "Normal Circumstances" present? Yes

SUMMARY OF FINDINGS - Attach a 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: Wetland 4 is a small depressional area located adjacent to I-229. Severe drought conditions present.

VEGETATION - Use scientific names of plants.

Absolute % Cover
Dominant Species
Indicator Status

| | | | |
|--------------|----|----|-----|
| OBL | 85 | Y | OBL |
| OBL | 5 | N | OBL |
| =Total Cover | | 90 | |

Tree Stratum
Shrub Stratum
Herb Stratum (Plot size: 6 Ft)
Eleocharis palustris
Polygonum amphibium
Vine Stratum

Prevalence Index Worksheet:

| | | | |
|--------------------------|----|-------|------|
| Total % Cover of: | 90 | x 1 = | 90 |
| OBL species | 0 | x 2 = | 0 |
| FACW species | 0 | x 3 = | 0 |
| FAC species | 0 | x 4 = | 0 |
| FACU species | 0 | x 5 = | 0 |
| UPL species | 90 | | 90 |
| Column Totals: | | | |
| Prevalence Index = B/A = | 90 | | 1.00 |

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation
X Dominance Test > 50%
X Prevalence Index ≤ 3.0

Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation (Explain)
Indicators 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.)
Hydrophytic vegetation is dominant.

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

| Depth (inches) | Matrix | Color (moist) % | Color (moist) % | Redox Features | Type ¹ Loc ² | Texture | Remarks |
|----------------|----------|-----------------|-----------------|----------------|------------------------------------|---------|------------|
| 0 to 24 | 10YR 2/2 | 90 | 10YR 5/6 | 10 | RM | M | SANDY LOAM |
| to | / | | | | | | |

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
²Location: PL=Pore Lining, M=Matrix.

Sampling Point: WET4

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)
 - Loamy Mucky Mineral (F1)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Dark Surface (S7)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

HYDROLOGY

Wetland Hydrology 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 Surf. (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imag. (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

| Surface Water Present? | Water Table Present? | Saturation Present? |
|---|---|---|
| Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Depth (inches): n/a | Depth (inches): 20 | Depth (inches): 19 |

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

Remarks:

Saturation is visible on aerial photographs

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

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test > 50%

Prevalence Index ≤ 3.0

Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation (Explain)

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

Hydrophytic Vegetation Present? Yes No

Prevalence Index Worksheet:

Total % Cover of: Multiply by:

| | | | |
|----------------|----|-------|-----|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 40 | x 3 = | 120 |
| FACU species | 45 | x 4 = | 180 |
| UPL species | 10 | x 5 = | 50 |
| Column Totals: | 95 | (A) | 350 |
| | | (B) | |

Prevalence Index = B/A = 3.68

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A) 1

Total Number of Dominant Species Across all Strata: (B) 2

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

VEGETATION - Use scientific names of plants.

| Indicator Status | Dominant Species | % Cover | Absolute |
|------------------|------------------|---------|----------|
| Tree Stratum | | | 45 |
| Shrub Stratum | | | 35 |
| Herb Stratum | | | 10 |
| Vine Stratum | | | 5 |
| Total Cover | | | 95 |

Scientific names listed: *Bromus inermis*, *Andropogon gerardii*, *Tridens flavus*, *Setaria glauca*

Remarks: Severe drought conditions present. Sample point taken on south side of ditch along I-229.

SUMMARY OF FINDINGS - Attach a 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

Project/Site: SRSI Phase 2 City/County: Sioux Falls State: SD Sampling Date: 9/17/2012

Applicant/Owner: City of Sioux Falls Sampling Point: UPL4

Investigators: M Swenson K Vande Kamp Section, Township, Range: S 32 T 101 R 49

Local Relief (concave, convex, none): Concave Hillislope

Slope(%): 3 Lat: 43.508259 Long: -96.735077 Datum: WGS 1984

Soil Map Unit Name: Davis laom, 0 to 2 percent slopes 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, Hydrology, significantly disturbed? Yes No

Are Vegetation, Soil, Hydrology, naturally problematic? Yes No

Are "Normal Circumstances" present? Yes No

Are Vegetation, Soil, Hydrology, naturally problematic? Yes No (If needed, explain any answers in Remarks.)

Sampling Point: UPL4

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

| Depth (inches) | Matrix | Color (moist) | % | Color (moist) | % | Redox Features | Type ¹ | Loc ² | Texture | Remarks |
|----------------|--------|---------------|-----|---------------|---|----------------|-------------------|------------------|------------|---------|
| to 20 | 10YR | 3 / 2 | 100 | | | | | | SILTY CLAY | |

¹Type: C=Concentration, D=Depletion, FM=Reduced Matrix, CS=Covered or Coated 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)
- Depleted Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Coast Prairie Redox (A16)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

Indicators for Problematic Hydric Soils: ³

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Remarks: No indicators of hydric soil were present.

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology 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 Surf. (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:

| | | | |
|------------------------|--------------------|-----------------|-----|
| Surface Water Present? | Yes _____ No _____ | Depth (inches): | n/a |
| Water Table Present? | Yes _____ No _____ | Depth (inches): | n/a |
| Saturation Present? | Yes _____ No _____ | Depth (inches): | n/a |

Wetland Hydrology Present? Yes _____ No X

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

aerial imagery _____

Remarks: No indicators of hydrology were present.

Wetland Hydrology Indicators: (minimum of two required)

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

Secondary Indicators (minimum of two required)





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Google Earth Pro

feet
meters





Google Earth Pro

feet
meters



800



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feet
km



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