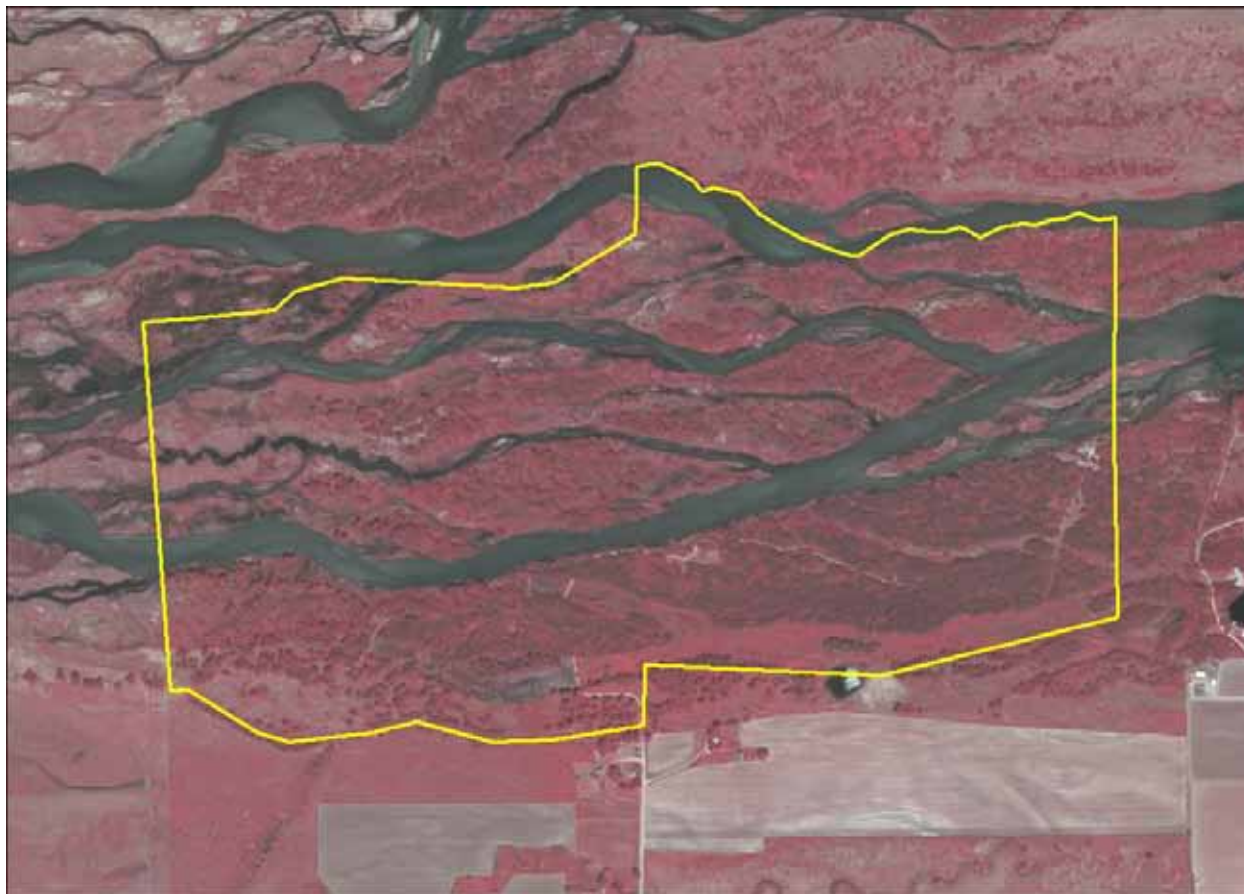




## **2012–2016 OPERATIONS AND MAINTENANCE PLAN**

For

### **TRACT 2010003**



Prepared for:  
**Platte River Recovery Implementation Program**  
**Land Advisory Committee**

Completion Date:  
**06/13/2012**



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## **I. PROPERTY DESCRIPTION AND BACKGROUND**

### **A. Purpose**

The purpose of this Operations and Maintenance Plan (Plan) is to outline the restoration, operations and maintenance activities that will occur on Tract 2010003 (Evaluation Tract Number 0805) during the period of 2012-2016. Species habitat and Adaptive Management research and monitoring actions associated with this tract are addressed in the Restoration and Management Plan for the Fort Kearny Complex because planning and implementation of those activities will primarily occur at a complex scale. Operations and maintenance will primarily occur on a tract scale and as such, this plan addresses those activities within the broader context of complex goals and objectives.

### **B. Tract Location and Size**

Tract 2010003 is approximately 304 acres in size and is located in Sections 16, 17, 20 and 21 T-8N, R-15W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is located in the Kearney to Minden bridge segment. The tract bounds the east property line of Program Tract 2008001 and is southwest of The Nature Conservancy's Speidall tract. Figure A-2 shows the parcel location within the Program land acquisition area, bridge segment and its proximity to existing leased and owned conservation lands and other tracts being evaluated by the Program.

### **C. Land Interest**

A perpetual conservation easement is held in trust by the Platte River Recovery Implementation Foundation (PRRIF) on behalf of the Program. The document was signed by PRRIF on October 21, 2010 and was approved by the Buffalo County, NE Board of Supervisors on November 23, 2010.

### **D. Communication and Coordination**

The Executive Director's Office (ED Office) is responsible for communication and coordination with owners and neighboring landowners. Neighbors will not be asked to provide formal comment on annual Work Plans but will be notified and consulted regarding specific restoration or management activities that could impact their properties.



## **II. RESPONSIBILITIES**

### **A. Management Responsibilities**

#### ***1. Planning***

Annual Work Plans for this property (as part of a complex-level annual work plan) will be written by representatives of the Executive Director's office with oversight and input from the Program's Land Advisory Committee (LAC). Program staff will be responsible for conducting, or retaining contractors to conduct, planning, design, and permitting for specific activities carried out under this plan. Program staff will be responsible for coordination with landowner to communicate planned activities and coordinate access.

#### ***2. Implementation of Management Activities***

Implementation of management activities will be carried out by Program staff or by contractors under the oversight of Program staff.

#### ***3. Enforcement***

Program staff is responsible for enforcing the rights granted by the easement. Program staff will work with the landowner and notify law enforcement agencies and others of issues as appropriate.

### **B. Budget and Invoicing**

Program staff will be responsible for budgeting and invoicing of activities on this property. No later than March 1 of each year during the term, a report showing income and expenditures for the property during the preceding fiscal (same as calendar) year will be completed and presented to the LAC and Governance Committee (GC) for review.

### **C. Plan Authorization and Modifications**

The LAC and TAC will provide comments on this Plan and the LAC will forward a recommendation to the GC. The GC must authorize this Plan before it can be executed. In addition, the LAC and TAC will provide comments on annual Work Plans and the LAC will forward a recommendation on the annual Work Plans to the GC. The GC must approve the annual Work Plans before they can be executed.

It is anticipated that once every five years, complex-level restoration and management plans will go through a major revision process where the goals, objectives, and activities will be reevaluated. This Plan will also be reevaluated at that time and updated. Plan updates will be subject to the same comment and approval process as the original Plan.



### III. EXISTING HABITATS

#### A. Complex and Non-Complex Habitat

The entirety of the tract will be managed as complex habitat. Table 1 provides the total acres of land contributing to a habitat complex. The classifications are based on *Table 1. Target Habitat Complex Guidelines* of the Program's Land Plan. The classification acres in Table 1 are based on existing tract land cover/use. All classifications reflect land cover/use at the time of acquisition and may change based on management and restoration decisions.

**Table 1 – Tract 2010003 Habitat Complex Acres**

Land Classification*	Acres
<b>Riverine</b>	
Channel	71
Island	122
<b>Buffer</b>	
Woodland	111

\* Habitat complex land classification categories are more general than the 2005 land cover/use classification and areas may vary due to changes in land use and vegetation since 2005.

#### B. Land Cover

Existing land cover/use on and adjacent to this tract was evaluated utilizing the updated 2005 land cover overlay developed in cooperation with the Whooping Crane Maintenance Trust Inc. (Crane Trust) and the United States Fish and Wildlife Service (USFWS). The land cover classifications from the overlay were compared to the most recent United States Department of Agriculture (USDA) Farm Service Agency (FSA) and Program aerial photography in order to identify any land use changes that have occurred since the development of that dataset. The 2005 land cover/use for this tract is summarized in Table 2. Several additional land cover/use related maps are located in Appendix A including:

- Figure A-3 – 2005 Land Cover/Use
- Figure A-4 – National Wetland Inventory
- Figure A-5 – 1938 Aerial Photography
- Figure A-6 – 1998 CIR Aerial Photography
- Figure A-7 – 2011 CIR Aerial Photography

**Table 2 – Tract 2010003 2005 Land Cover/Use Summary**

<b>Land Cover Classification</b>	<b>Acres</b>	<b>Percent of Total</b>
<b>Bareground/Sparse Veg</b>	1.28	0.42%
<b>Mesic Wet Meadow</b>	14.22	4.68%
<b>Phragmites</b>	14.15	4.65%
<b>Riparian Shrubland</b>	15.36	5.05%
<b>Riparian Woodland</b>	123.16	40.48%
<b>River Channel</b>	2.31	0.76%
<b>River Early Successional</b>	31.75	10.44%
<b>River Shrubland</b>	73.04	24.01%
<b>Rural Developed</b>	8.55	2.81%
<b>Unvegetated Sandbar</b>	6.26	2.06%
<b>Xeric Wet Meadow</b>	14.17	4.66%
	<b>304.25</b>	<b>100.00%</b>

### **C. Existing Land Features of Interest**

#### ***1. Non-Riverine Surface Water***

There is no non-riverine surface water on the tract.

#### ***2. River Frontage and Active Channel Widths***

The tract contains approximately 5,600 feet of Platte River frontage. The primary channel on the tract is the southernmost channel. There are three major river channels in this section of the river. The south channel runs through the property, the north boundary of the property runs along the middle channel, and there is a north channel that does not run through the property.

Channel width measurement protocols define active channel width as the width of the channel that is unvegetated. Main (southern) channel widths were measured at ¼ mile intervals utilizing color infrared aerial photography flown in June of 2011. Channel width information is presented in Table 3.

**Table 3 – Tract 2010003 Main Channel Widths**

<b>Measurement</b>	<b>Width (ft)</b>
Minimum Channel Width	152
Maximum Channel Width	570
Median Channel Width	236
Mean Channel Width	276



### ***3. Contiguous Sand Substrates***

At the time of the site evaluation, there was no contiguous sand substrate with less than 25% vegetative cover.

### ***4. Island and Channel Bank Height***

Channel bank height is on the order of three to six feet above water under typical summer flow conditions. Island and sandbar height ranged from several inches to several feet above the water surface.

### ***5. Groundwater***

NDNR well logs for wells located within the same section indicate a ground water level of six to eight feet below the surface. Much of the property is between river channels and will fluctuate closely with changes in river level.

### ***6. Flooding in Non-Wetland Areas***

There is no evidence of temporary inundation of non-wetland areas.

### ***7. Power/Transmission Lines***

There are above-ground power lines on the property that serve the existing residences. The power lines are located within the wooded area of the property and cross the easement boundary near the south entrance road. Given their size and location, they do not pose an immediate concern for target species use of the property.

## **D. Incompatible Uses and Environmental Concerns**

There are two residences located on the south side of the main channel on tract 2010003. These residences are located within heavily forested riparian area, but are on the river bank. These residences are not likely to impact species use of the managed areas of the property. No environmental concerns have been identified.

## **E. Certified Irrigated Acres**

Tract 2010003 includes no certified irrigated acres.



## IV. OPERATIONS AND MAINTENANCE

### A. Goals and Objectives

Goals and objectives will function as the benchmark for evaluation of ongoing land-related actions. Implementation of Program actions to address goals and objectives will be accomplished at both complex and tract-level scales. This section addresses tract-level actions. Complex-level actions are presented in the Restoration and Management Plan for the Fort Kearny Complex. Tract-level goals and objectives are a function of property management and operations needs.

#### 1. General

Ø *Goal 1 – Fulfill basic monitoring and easement administration obligations.*

○ *Objective 1a – Baseline Documentation Report.*

§ **Strategy** – Terms of the conservation easement require that a baseline documentation report be completed to document existing conditions and serve as an objective baseline for monitoring compliance with the terms of the easement. This document will provide a comprehensive description of the condition of the property with respect to the rights provided by the easement (ie. Structures, vegetation type/location/condition).

§ **Area** – Entire property.

§ **Timeline** – Baseline Documentation Report will be completed in 2012.

§ **Costs** – Primarily Program staff time. Associated contractor expenses on the order of \$2,000 for vegetation survey.

§ **Responsibilities** – Program staff are responsible for completion of Baseline Documentation Report and for any coordination of contractors as needed.

○ *Objective 1b – Keep landowner informed on management actions and easement implementation activities.*

§ **Strategy** – Program staff will meet with grantor of the conservation easement on an annual basis (or more frequent as needed) to communicate work items for the year and identify any issues relevant to the terms and conditions listed in the conservation easement.

§ **Area** – Entire property.





- § **Timeline** – Annually, or more frequently as needed. Annual coordination will typically occur during the development of yearly Complex work plans.
- § **Costs** – N/A
- § **Responsibilities** – Program staff are responsible for coordination and development of Annual Work Plans.

## 2. Property Maintenance

### Ø *Goal 2 – Minimize impacts due to invasive vegetation.*

- **Objective 2a** – Control future infestations of invasive vegetation not listed as noxious weeds in areas affected by Program management actions. Some of the species with the potential to be invasive in certain situations include eastern red cedar, Russian olive, willow, false indigo, intermediate wheatgrass, and tall wheatgrass.
  - § **Strategy** – An integrated management approach to control vegetation will be used to the extent possible and specific control methods will be updated as new information becomes available. Ongoing management/control needs will be assessed annually and incorporated into Work Plans. This easement does not transfer basic noxious weed control and property maintenance obligations from the landowner to the Program.
    - **Methods** – A combination of herbicide application, prescribed fire, grazing and mechanical removal will be the typical control method. Control of certain species like eastern red cedar will not require herbicide application while other species may not need to be mechanically removed after herbicide application.
  - § **Area** – Invasive vegetation will be assessed on the entire property. In areas specifically affected by Program management actions, control of invasive vegetation will be undertaken by the Program.
  - § **Timeline** – Control efforts will be undertaken as necessary.
  - § **Costs** – To be determined annually.
  - § **Responsibilities** – Program staff will be responsible for identifying infestations. Control activities will be carried out by contractors.



### 3. Species Habitat

Ø **Goal 3 – Improve sand and water (riverine) habitat for interior least terns (LETE), piping plovers (PIPL) and whooping cranes (WC).**

- **Objective 3a** – Create and maintain riverine sand and water habitat for target bird species that approximates *Table 1. Target Habitat Complex Guidelines* of the Program Land Plan, to the extent possible, and approximates at least the Program’s minimum habitat guidelines.

§ **Strategy** – Clear all woody vegetation as allowed under easement between the middle and south channel. Clear and lower islands within this area and develop LETE and PIPL habitat in conjunction with Program property 2008001.

- **Methods** – Methods to be determined during project design. Typically clearing is accomplished using heavy equipment. Cleared material will be burned and buried on site. Cleared areas will be seeded with native grass and forb species and managed with grazing and prescribed burns. The immediate river bank may be left unseeded to allow lateral erosion and associated channel widening. Clearing in Forest Management Area identified on Figure A-8 requires a plan mutually agreed upon by landowner and Program per the terms of the easement.

§ **Area** – Approximate area for tree clearing and island creation is the north and west side of the island and the west side of the south bank identified on Figure A-9 – approx. 115 acres (approx. 61 acres island building area, 54 acres tree clearing area). Figure A-8 identifies the Forest Management Area where a mutually agreed upon plan between the Program and the landowner is required.

§ **Timeline** – Project planning will take place in 2013. Clearing, island construction/leveling, and any necessary seeding will take place in late 2013/early 2014.

§ **Costs** – The clearing/seeding is expected to cost on the order of \$125,000. Island building costs will be developed during project planning in 2013. Subject to flows and access to island, methods and schedule may be adjusted.

§ **Responsibilities** – Program staff are responsible for design and permitting. Construction and maintenance activities will be bid.



- **Objective 3b** – Utilize livestock grazing and prescribed fire as tools to manage vegetation.
  - § **Strategy** – Work with prescribed burn contractor and grazing tenant to implement Season Long (SL) or Intensive Early Stocking (IES) grazing strategy.
    - **Methods** – Grazing in combination with prescribed fire will be used to manage existing grasslands. SL grazing will typically be for a 5 month grazing period (May-October) of each year at a moderate rate or IES grazing will be for a 2.5 month grazing period (May-July) at twice the recommended stocking rate. Prescribed fire will be planned to suppress cool season, invasive vegetation under appropriate environmental conditions and fuel loading during March 1 to mid-April. Prescribed fire will be implemented every 3-4 years. Any necessary fencing for grazing will be temporary and installed by the tenant.
  - § **Area** – Island areas located between the Middle and South Channel.
  - § **Timeline** – Grazing will occur annually as flow conditions allow (getting cattle to islands). Prescribed fire to be implemented every 3-4 years.
  - § **Costs** – Prescribed fire cost is \$10-15/ acre and estimated income from grazing is \$7,500 for 50 pair grazing for 5 months at a cost of \$150/pair.
  - § **Responsibilities** – Program staff in coordination with the appropriate Program committees will be responsible for planning, design and permitting. Contractors, hired by the Program, will perform the prescribed burn. Opportunities to work with local NRD burn teams will also be pursued when available.



## **V. TRACT-LEVEL SURVEYS, MONITORING AND RESEARCH**

### **A. Baseline Surveys and Monitoring**

#### ***1. Bald Eagle***

No bald eagle nests have been identified on this property. Eagle nest surveys will be conducted annually between March and August and prior to any tree clearing activities.

#### ***2. Platte River Caddisfly***

Platte River caddisfly cases were noted during a March 2010 survey. Further surveys to document Platte River caddisfly density and distribution on the property will be conducted during spring, 2012.

#### ***3. Northern River Otter***

No otters have been observed on this tract but they have been known to use the general area. Surveys will be conducted prior to commencement of activities that may negatively impact natal dens when undertaken during the period when otters utilize dens (15 February – 15 June).

#### ***4. Cultural Resources***

The legal description of Tract 2010003 was provided to the State Historic Preservation Office (SHPO) to facilitate the early identification of potential cultural resources related issues. SHPO did not identify any potential cultural resources concerns on the property. If Program actions uncover potential artifacts or human remains, work will cease until such time that the Program can consult with SHPO to determine the appropriate course of action.

### **B. Research**

No tract-level research activities have been identified at this time.



## **VI. PUBLIC ACCESS**

### **A. Education**

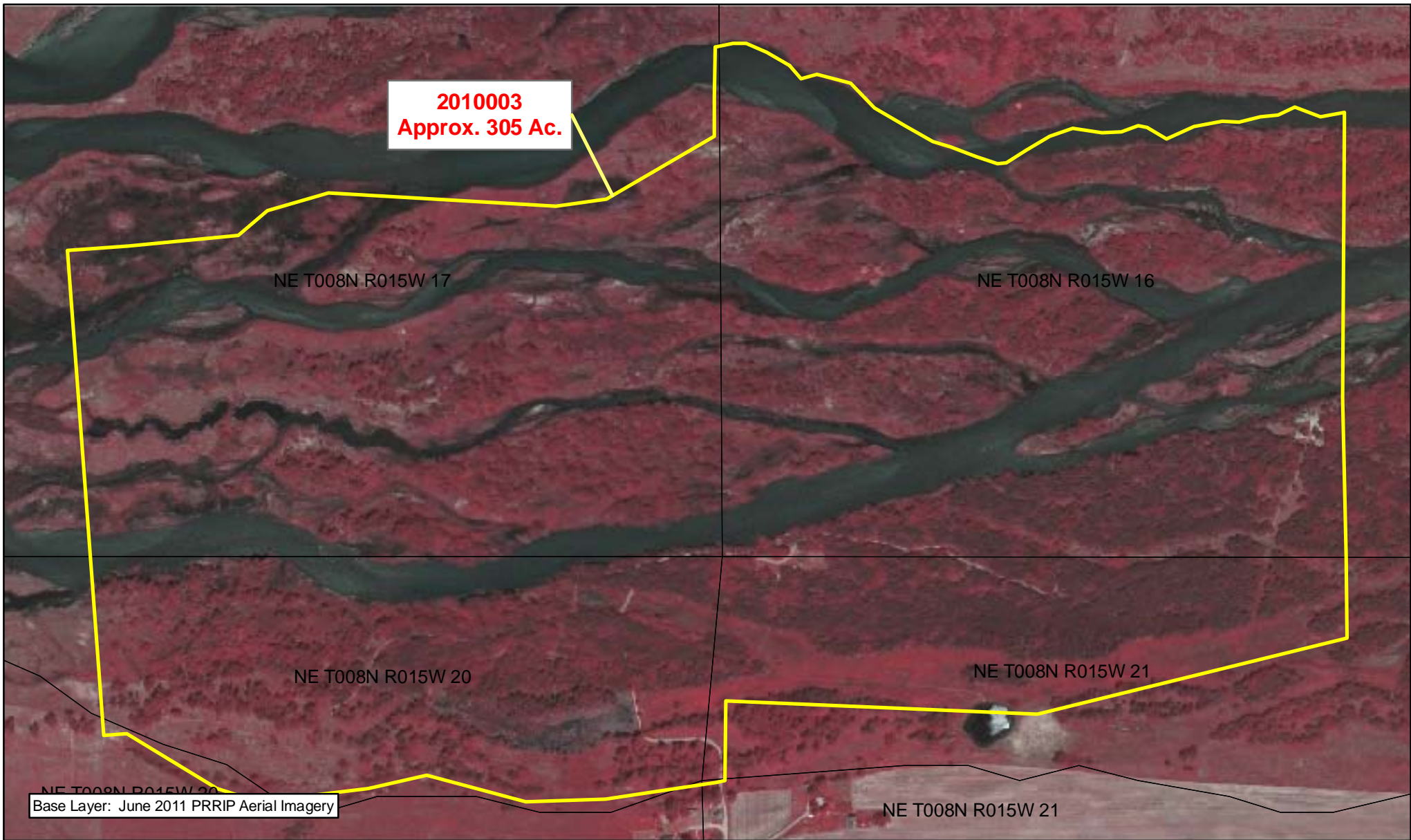
Public access for education is not allowed under the current easement with the landowner.

### **B. Recreation**


Public access for recreation is not allowed under the current easement with the landowner.




**APPENDIX A – MAPS**



### Legend

-  2010003
-  Section



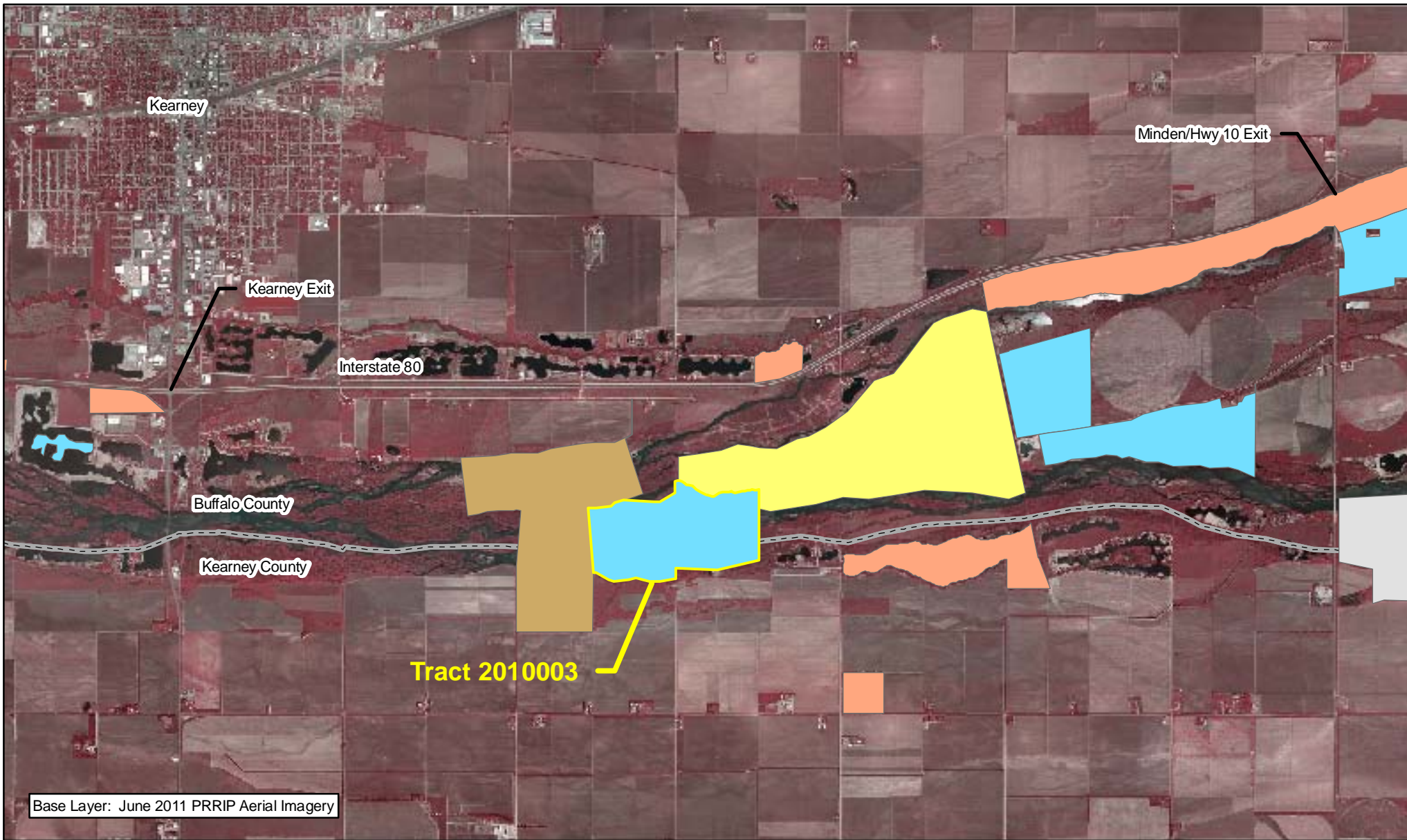
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### TRACT 2010003 BOUNDARY MAP











Date: 01/04/12  
By: JDB

Figure A-1

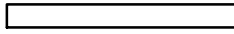




### Legend

	2010003		Audubon		PRRIP
	County		CNPPID		PRWCT
			NGPC		TNC
			NPPD		Wyoming



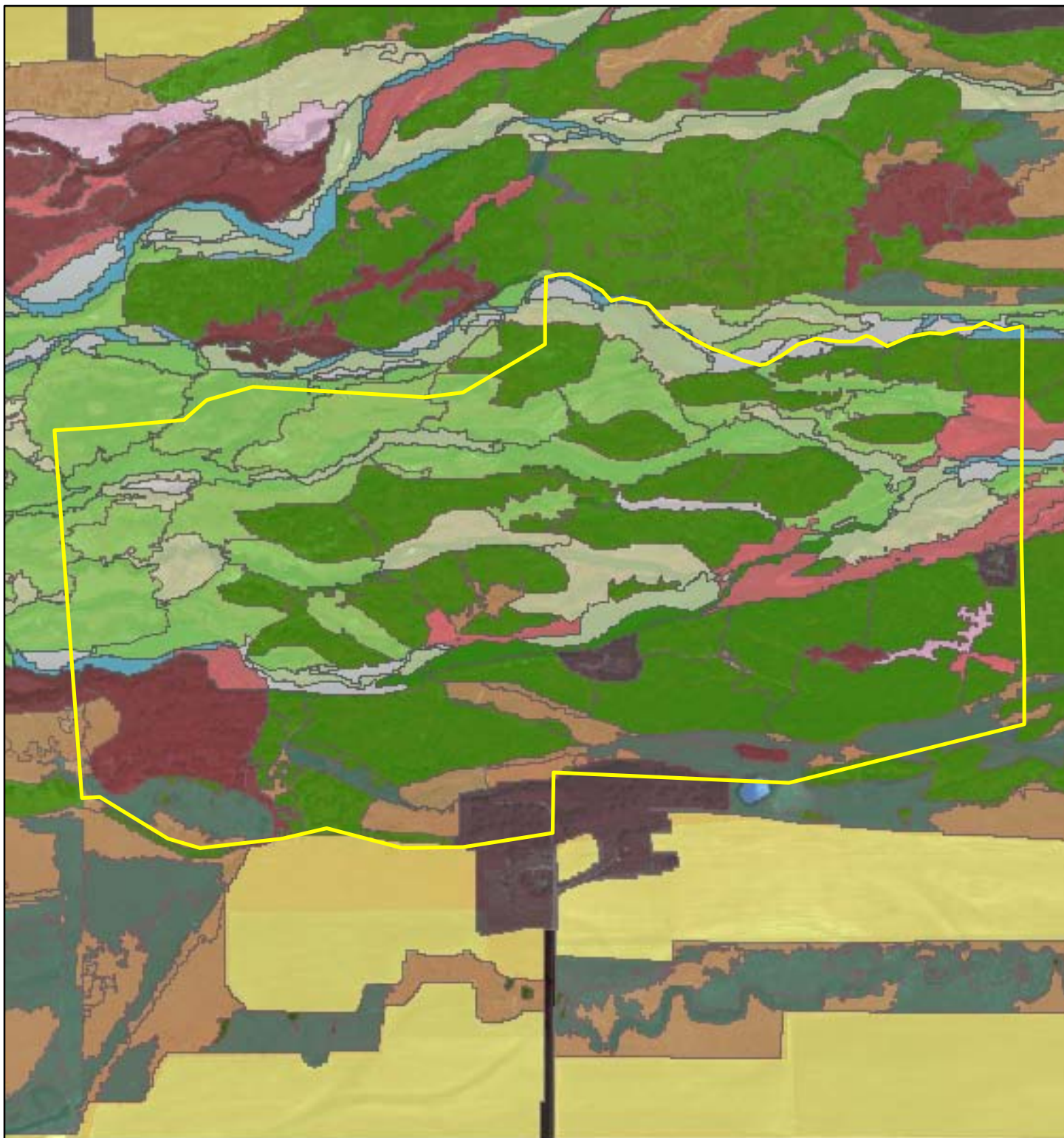
 Miles  
1

### TRACT 2010003 LOCATION MAP

Date: 01/04/12  
By: JDB

Figure A-2





PLATTE RIVER  
RECOVERY IMPLEMENTATION PROGRAM

Legend

- |                       |                          |
|-----------------------|--------------------------|
| 2010003               | River Early Successional |
| Ag                    | River Shrubland          |
| Bareground/Sparse Veg | Roads                    |
| Canal/Drainage        | Rural Developed          |
| Mesic Wet Meadow      | Sand Pit                 |
| Phragmites            | Unvegetated Sandbar      |
| Riparian Shrubland    | Upland Woodland          |
| Riparian Woodland     | Warmwater Slough         |
| River Channel         | Xeric Wet Meadow         |



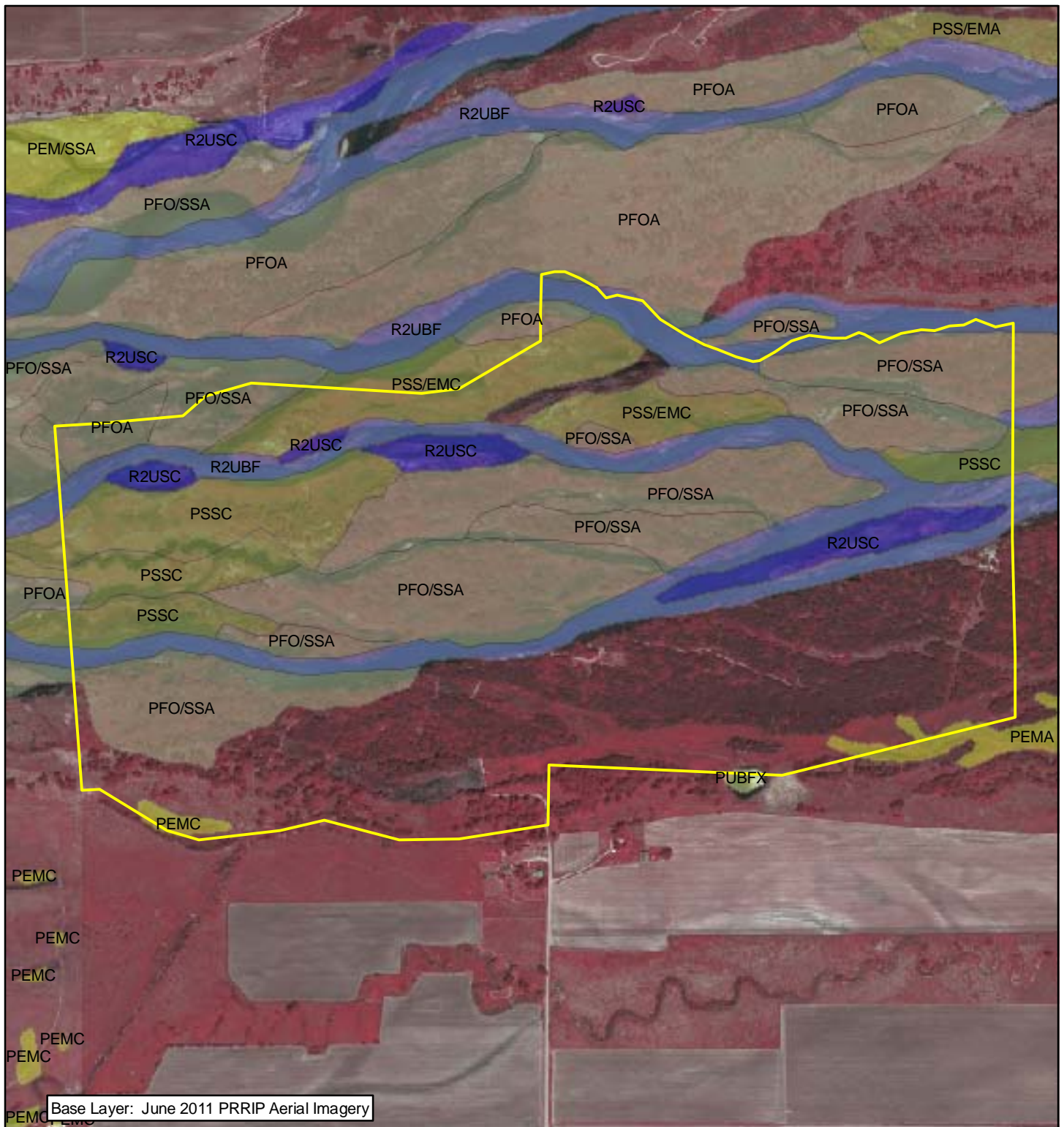
0.2 Miles

TRACT 2010003  
2005 LAND COVER/USE

Date: 01/04/12  
By: JDB

Figure A-3





#### Legend

- 2010003
- Lacustrine Unconsolidated Bottom (LUB)
- Palustrine Aquatic Bed (PAB)
- Palustrine Emergent (PE)
- Palustrine Forested (PF)
- Palustrine Scrub-Shrub (PSS)
- Palustrine Unconsolidated Bottom Excavated (PUBx)
- Riverine Unconsolidated Bottom (RUB)
- Riverine Unconsolidated Shore (RUS)
- Riverine Streambed (RS)

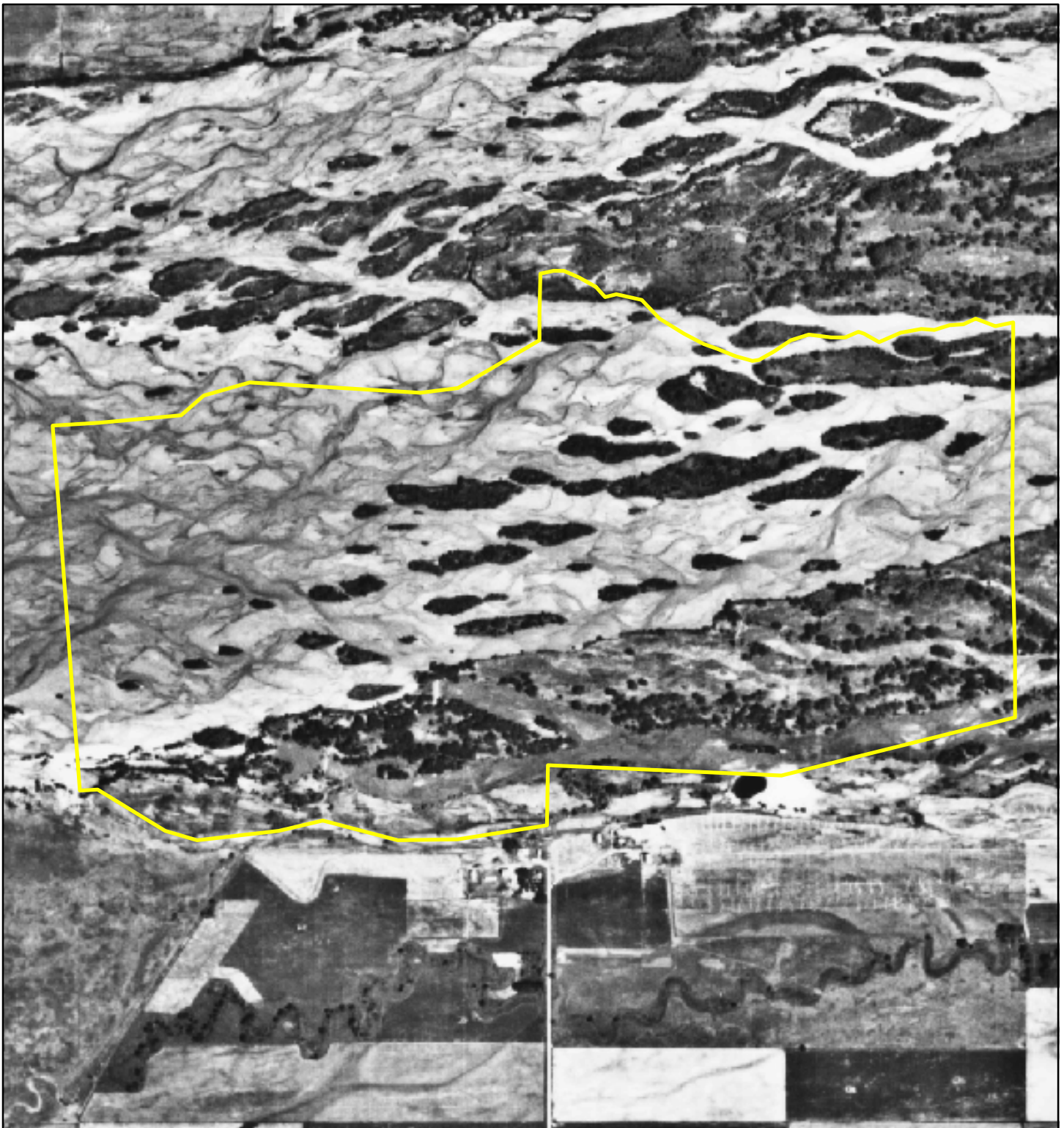


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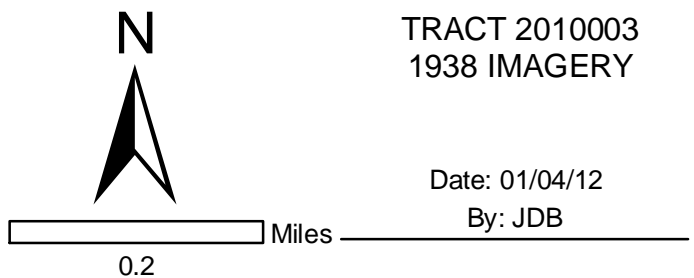
TRACT 2010003  
NWI MAP

Date: 01/04/12  
By: JDB

Figure A-4



Legend  
2010003

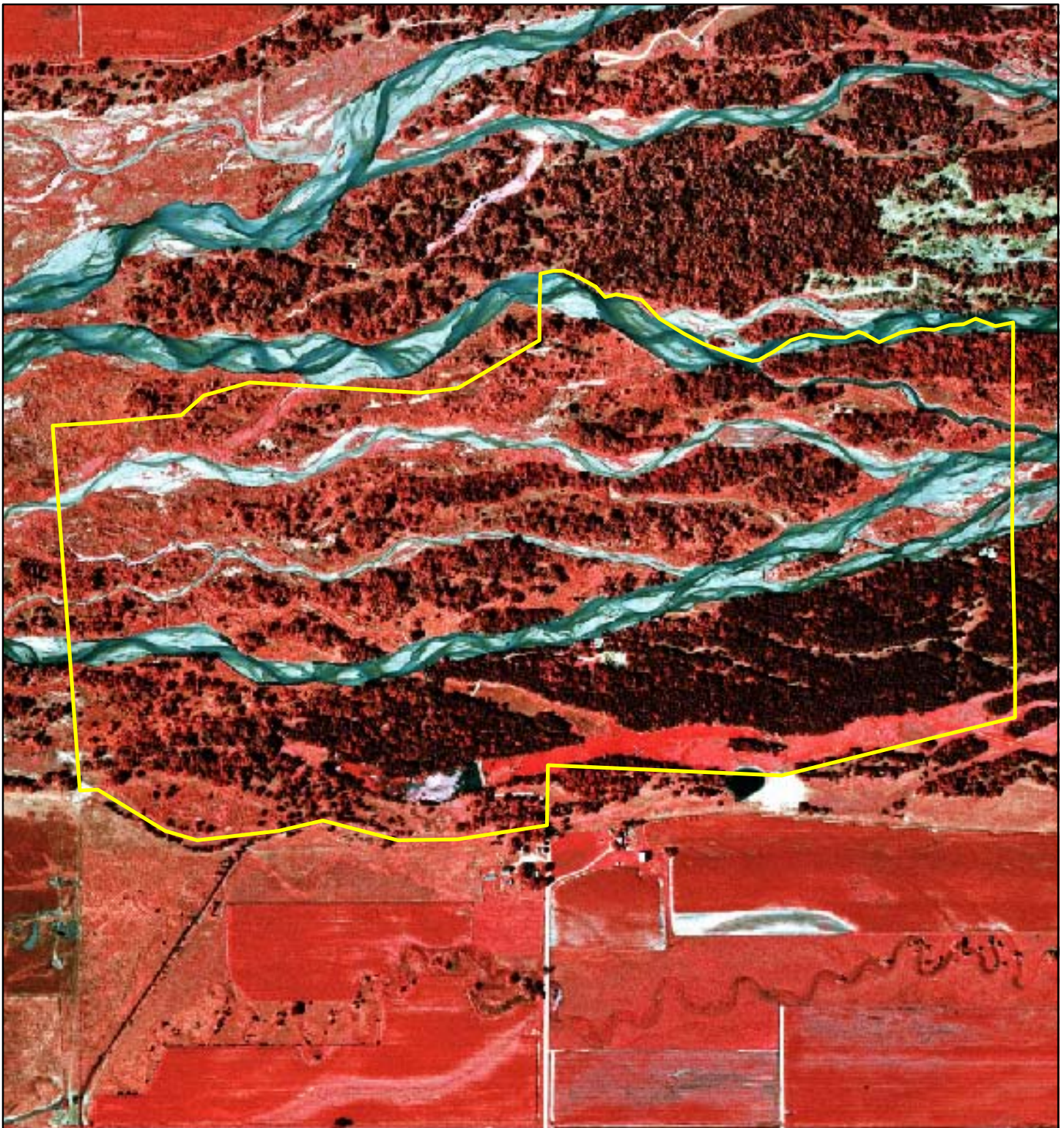


TRACT 2010003  
1938 IMAGERY

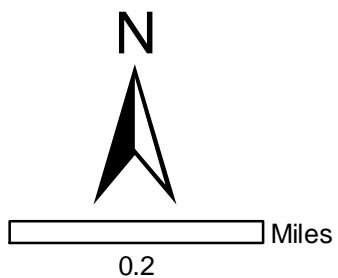
Date: 01/04/12  
By: JDB

Figure A-5





Legend  
2010003

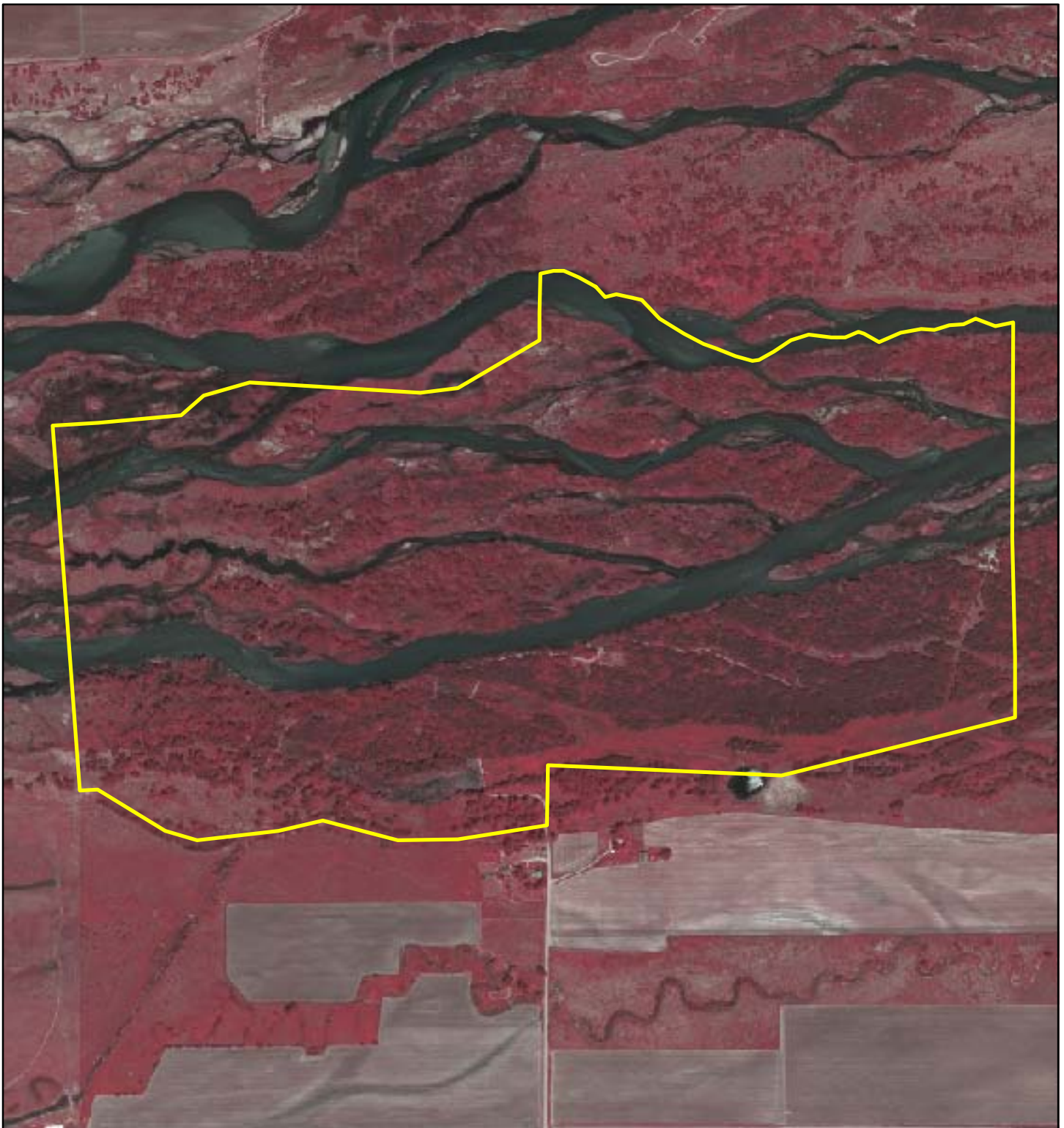


TRACT 2010003  
1998 CIR IMAGERY

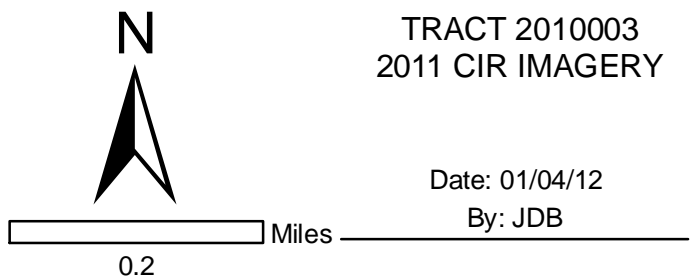
Date: 01/04/12  
By: JDB

Figure A-6





Legend  
2010003

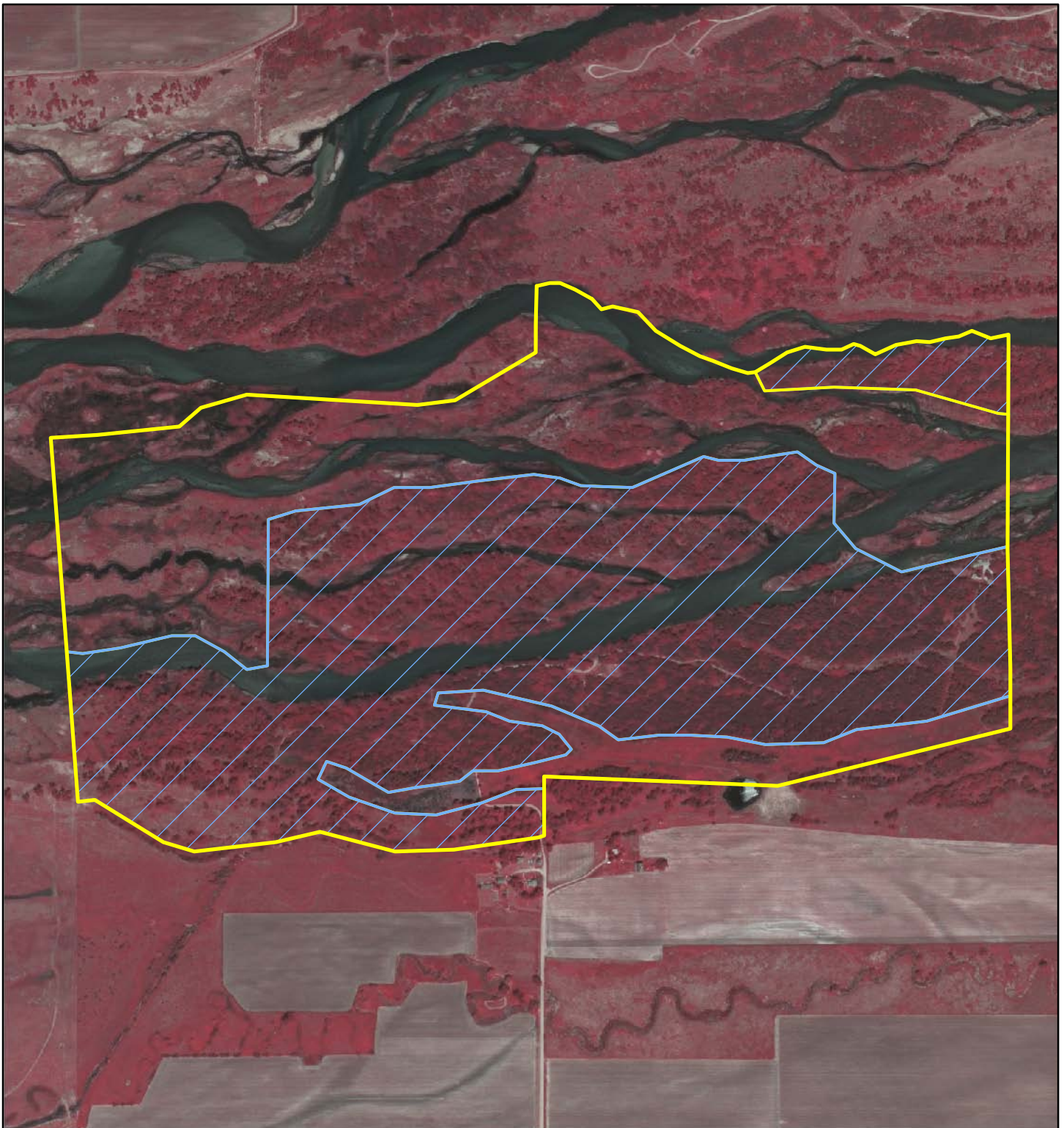


TRACT 2010003  
2011 CIR IMAGERY



Date: 01/04/12  
By: JDB

Figure A-7

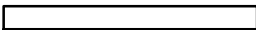




**Legend**

-  Property Boundary
-  Forest Mgmt Plan Required



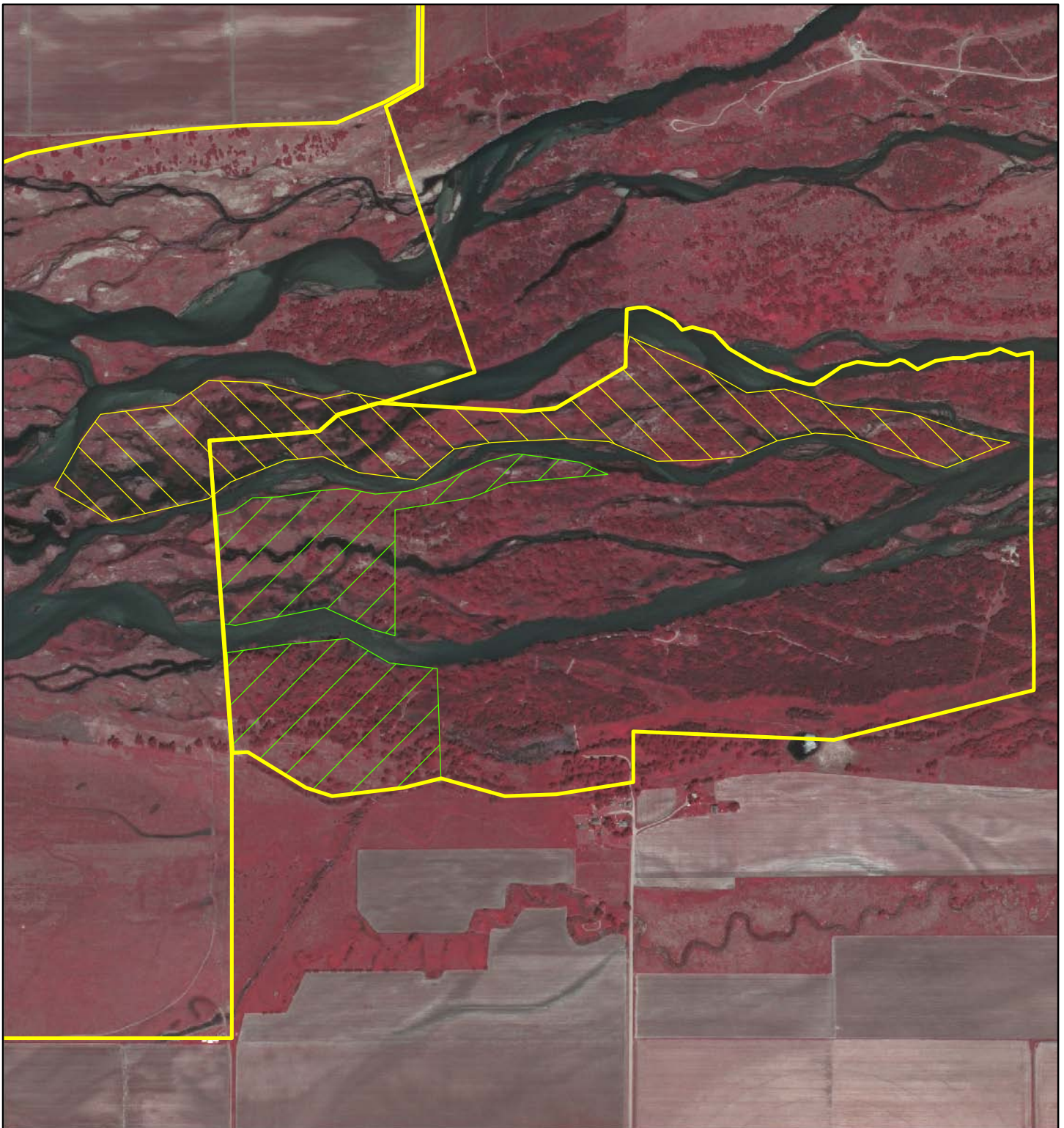
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**TRACT 2010003  
FOREST MANAGEMENT  
PLAN AREA**

Date: 02/15/12  
By: JDB

**Figure A-8**





### Legend

- PRRIP lands
- Management**
- Tree Clearing Area
- Tree Clearing/Island Building Area



Miles  
0.2

### TRACT 2010003 MANAGEMENT ACTIONS

Date: 02/15/12  
By: JDB

Figure A-9