



## **2015–2019 OPERATIONS AND MAINTENANCE PLAN**

For

### **TRACT 2012003**

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

Completion Date:

**XX/XX/15**



## Table of Contents

I. PROPERTY DESCRIPTION AND BACKGROUND .....	1
A. Purpose .....	1
B. Tract Location and Size .....	<a href="#">1</a>
C. Land Interest .....	1
D. Communication and Coordination .....	1
II. RESPONSIBILITIES .....	2
A. Management Responsibilities .....	2
1. Planning .....	2
2. Implementation of Management Activities .....	2
3. Enforcement .....	2
B. Budget and Invoicing .....	2
C. Plan Authorization and Modifications .....	2
III. EXISTING HABITATS .....	3
A. Complex and Non-Complex Habitat .....	3
B. Land Cover .....	3
C. Existing Land Features of Interest .....	4
1. Non-Riverine Surface Water .....	4
2. River Frontage and Active Channel Widths .....	4
3. Contiguous Sand Substrates .....	4
4. Island and Channel Bank Height .....	4
5. Groundwater .....	4
6. Flooding in Non-Wetland Areas .....	4
7. Power/Transmission Lines .....	4
D. Incompatible Uses and Environmental Concerns .....	5
E. Certified Irrigated Acres .....	5
IV. OPERATIONS AND MAINTENANCE .....	6
A. Goals and Objectives .....	6
1. Property Maintenance .....	6
2. Agricultural Operations .....	6
3. Improve Target Species Habitat .....	10
V. TRACT-LEVEL SURVEYS, MONITORING AND RESEARCH .....	11
A. Baseline Surveys and Monitoring .....	11
1. Bald Eagle .....	11
2. Platte River Caddisfly .....	11
3. Northern River Otter .....	11
4. Cultural Resources .....	11
B. Research .....	11
VI. PUBLIC ACCESS .....	11
A. Education .....	12
B. Recreation .....	12
APPENDIX A – MAPS .....	13



## **IV. 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 2012003 (Evaluation Tract Number 0837) during the period of 2015-2019. 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 2012003 is approximately 197 acres in size and is located in Section 17, and 18, 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 north property line of Tract 2008001 (Wyoming 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. In 2015, 117 acres were sold to the Board of Educational Lands and Funds and are protected by a no-build conservation easement in favor of Platte River Recovery Implementation Foundation (PRRIF).

### **C. Land Interest**

A conservation “no-build” easement over 117 acres is held in trust by the Platte River Recovery Implementation Foundation (PRRIF) on behalf of the Program. The remaining 80 acres have a fee simple absolute interest in trust by the PRRIF on behalf of the Program.

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

The Executive Director’s Office (ED Office) is responsible for communication and coordination with 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.



## **V. RESPONSIBILITIES**

### **A. Management Responsibilities**

#### ***3. Planning***

Annual Work Plans for this property (as part of a complex-level annual work plan) will be written by representatives of the ED 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.

#### ***4. Implementation of Management Activities***

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

#### ***5. Enforcement***

Program staff is responsible for establishing controlled access to the property and will 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.



## VI. EXISTING HABITATS

### A. Complex and Non-Complex Habitat

The entirety of the Property 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 2 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 2012003 Habitat Complex Acres**

Land Classification*	Acres
<b>Buffer</b>	
Grassland	70
Cropland	127

\* 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.

#### 1. Associated Complex Habitat

The nearby Wyoming tract (2008001), Sherrerd Easement (2010003), Speidell tract (2015001), Fox tract (2009001) and Hostetler tract (2009004) can function as associated complex habitats for the purpose of adaptive management paired design experiments.

#### 2. Excess Acres

There are no excess acres identified on tract 2012003.

### 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 – 2015 CIR Aerial Photography



**Table 2 – Tract 2012003 2005 Land Cover/Use Summary**

<b>Land Cover Classification</b>	<b>Acres</b>	<b>Percent of Tract</b>
Agricultural	110.60	56.2%
Mesic Wet Meadow	1.50	0.70%
Riparian Woodland	0.40	0.20%
Rural Developed	22.90	11.60%
Xeric Wet Meadow	61.40	31.20%
<b>Total</b>	<b>196.7</b>	<b>100.0%</b>

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

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

The only non-riverine surface water on the property is a small dugout located south of the southwest corner of the cropland. The pond is intermittently filled by precipitation. This surface water feature does not provide species habitat.

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

This tract does not have river frontage.

#### ***5. Contiguous Sand Substrates***

This tract does not contain un-vegetated sand habitat.

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

This tract does not have river frontage.

#### ***7. Groundwater***

Depth to groundwater on this tract was estimated from NDNR well logs for the three existing wells on the property. The well logs indicate that the static groundwater elevation is 5 to 8 feet below ground surface.

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

There is no evidence of temporary inundation of non-wetland areas. However, variations on vegetation density on both the cropland and grassland portions of the tract indicate that seasonal flooding and ponding of water in swales and depressions do occur.

#### ***9. Power/Transmission Lines***

There is an above-ground three phase power line present on the property that services the existing irrigation wells.



**D. Incompatible Uses and Environmental Concerns**

This tract does not currently have land uses that are incompatible with target species habitat. No environmental concerns have been identified.

**E. Certified Irrigated Acres**

Tract 2012003 contains 10 certified irrigated acres under fee title. The remainder of the cropland is under a no-build conservation easement and the irrigated acres are not controlled by PRRIF.



## VII. 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. *Property Maintenance*

##### ➤ *Goal 1 – Fulfill basic property ownership obligations and needs.*

- **Objective 1a** – Maintain property boundary fencing and signage.
  - **Strategy** – The existing fences along the south, west, and north boundaries have been repaired and replaced in 2014 and are in good condition. The east boundary is a high tensile temporary fence that was installed and is maintained by the grazing tenant. Currently there are no plans for permanent fence on the east boundary. Fence maintenance strategy will be a combination of minimizing maintenance needs (such as clearing woody vegetation) and scheduled maintenance.
    - **Methods** – Where necessary, trees will be cleared using heavy equipment. They will be stacked into piles and burned and buried. Any new boundary fencing will be four wire livestock fencing and will be constructed per Natural Resources Conservation Service (NRCS) design criteria. The fence will include Program ownership and contact signage at regular intervals. Maintenance methods may include mowing or spraying of woody species in the cleared area as well as routine fence upkeep.
  - **Area** – South, west, and north property boundary.
  - **Timeline** – Fence maintenance will occur as needed.
  - **Costs** – Annual maintenance costs are expected to be on the order of \$1,000.
  - **Responsibilities** – Program staff are responsible for design and permitting. Construction and maintenance activities will be bid.
- **Objective 1b** – Maintain livestock watering infrastructure.





- **Strategy** – In 2014 a new well with a solar powered submersible pump was installed along with a tank in the central portion of the grassland. Livestock watering infrastructure maintenance strategy will be to schedule inspections annually and perform maintenance as needed.
    - **Methods** –N/A
  - **Area** – Livestock watering infrastructures are displayed on Figure A-8.
  - **Timeline** – As needed.
  - **Costs** – Costs for maintenance of the existing solar pump and well are expected to be less than \$1,000 per year.
  - **Responsibilities** – Program staff are responsible for scheduling inspections and maintenance as needed. Work will be performed by contractors.
- **Objective 1c** – Control noxious weeds on property.
- **Strategy** – Infestations of noxious weeds will be eliminated (to the extent possible) annually. An integrated management approach to control noxious weeds 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.
    - **Methods** – Herbicide application will be the primary method for control of noxious weeds. Biological controls will be considered but only used if deemed effective enough to result in effective control within three growing seasons.
  - **Area** – Noxious weeds will be controlled on the entire property.
  - **Timeline** – Control efforts will be undertaken annually.
  - **Costs** – Annual costs are expected to be less than \$2,000.
  - **Responsibilities** – Program Staff are responsible for identifying infestations and planning/ coordinating control efforts. Control activities will be carried out by contractors. The contractor will typically be the county weed authority.



➤ **Goal 2 – Minimize impacts due to invasive vegetation.**

- **Objective 2a** – Eliminate existing and control future infestations of invasive vegetation not listed as noxious weeds. Some of the species with the potential to be invasive in certain situations include eastern red cedar, salt 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. In 2013 and 2014, large areas of invasive eastern red cedar and Russian olive were cleared from the grassland portion of the tract.
    - **Methods** – Elimination of existing infestations will be accomplished through a combination of herbicide application and mechanical removal. 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. Management of future infestations will be accomplished through a variety of integrated management methods including: herbicide application, prescribed fire, mechanical disturbance/removal and grazing.
  - **Area** – Invasive vegetation will be controlled on the entire property.
  - **Timeline** – Impacts from invasive vegetation will be assessed annually and controlled as needed.
  - **Costs** – Invasive vegetation control activities are expected to cost on the order of \$1,000 per year.
  - **Responsibilities** – Program staff will be responsible for identifying infestations. Control activities will be carried out by contractors.

**2. Agricultural Operations**

➤ **Goal 3 – Manage cropland responsibly.**

- **Objective 3a** – On the portion of the cropland retained in fee title by PRRIP, coordinate with renter to ensure that crop rotation, tillage practices and



nutrient/pest management are being conducted in accordance with current agricultural best management practices (BMPs).

- **Strategy** – The Program will make entry into a rental agreement subject to agreement to coordination and approval of the above-mentioned items. The Program will employ standard crop management BMPs like annual soil nutrient testing to ensure that objectives are being met.
  - **Methods** – Methods will be determined annually by Program staff and/or farm management contractors in association with the renter.
- **Area** – All cropland areas. Figure A-8 shows irrigated cropland.
- **Timeline** – Annual.
- **Costs** – Estimated rental income is \$2,000 per year.
- **Responsibilities** – Program staff or a farm management contractor acting on behalf of the Program will be responsible for annual planning and coordination.

### 3. Land Asset Management

#### ➤ **Goal 4 – Inspect easement area annually.**

- **Objective 4a** – The cropland portion of tract 2012003 was sold in 2015, but a conservation “no-build” easement was retained by PRRIF. This easement should be inspected annually to ensure the terms of the easement are being met.
  - **Strategy** – No structures may be constructed on the cropland portion of the tract. PRRIF will inspect the area annually to ensure compliance with the easement terms.
  - **Area** – The easement area of tract 2012003 is identified on Figure A-9.
  - **Timeline** – Easement will be inspected annually.
  - **Costs** – No cost, other than Program staff time, is expected to be incurred for the inspections.
  - **Responsibilities** – Program staff be responsible easement inspection.



#### 4. *Species Habitat*

➤ ***Goal 5–Improve wet meadow/grassland habitat for WC and other species of concern.***

- ***Objective 5a*** – Manage existing grasslands in varying degrees of vegetative stature as of March 1 in any given year to provide habitat for whooping cranes and species of concern (sandhill cranes and grassland nesting birds). Refer to Objective 6a in the Fort Kearny Plan for more information on this goal.
- ***Strategy*** – Use a combination of livestock grazing and prescribed fire to provide a diverse mixture of vegetative structure and species composition as of March 1 in all years. Livestock will be rotated every two weeks between Tract 2012003 and the northern portion of Tract 2008001 during the grazing season.
  - ***Methods*** – Grazing in combination with prescribed fire will be used to manage existing grasslands. Grazing will typically be for a 3.5 month grazing period (May 1- August 15) each year at a light stocking rate. Typical stocking rate will be 1 animal unit (one cow/calf pair or its equivalent in yearling cattle) per 8-10 acres. Each management unit will be evaluated annually and adjustments in stocking rate and timing will be made accordingly. Prescribed fire will be planned to suppress cool season, invasive vegetation under appropriate environmental conditions and fuel loading and conducted during late-March to mid-May. Prescribed fire will be implemented on each management unit on a 4 year return interval.
- ***Area*** – Grazing areas are presented on Figure A-8.
- ***Timeline*** – Annually.
- ***Costs*** – Prescribed fire costs are \$50-60/ acre. Grazing and haying income is estimated to be \$3,200 for 3.5 month grazing season (May 1-August 15).
- ***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 construction and maintenance work. Contractors, hired by the Program, will perform the prescribed burn.



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

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

#### ***3. Bald Eagle***

No bald eagle nests have been identified on this property.

#### ***4. Platte River Caddisfly***

Platte River caddisfly surveys have not been conducted on this tract as no aquatic habitat deemed suitable for Platte River Caddisfly is present on the site.

#### ***5. 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 are utilizing dens.

#### ***6. Cultural Resources***

The legal description of Tract 2012003 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.



## **IX. PUBLIC ACCESS**

### **A. Education**

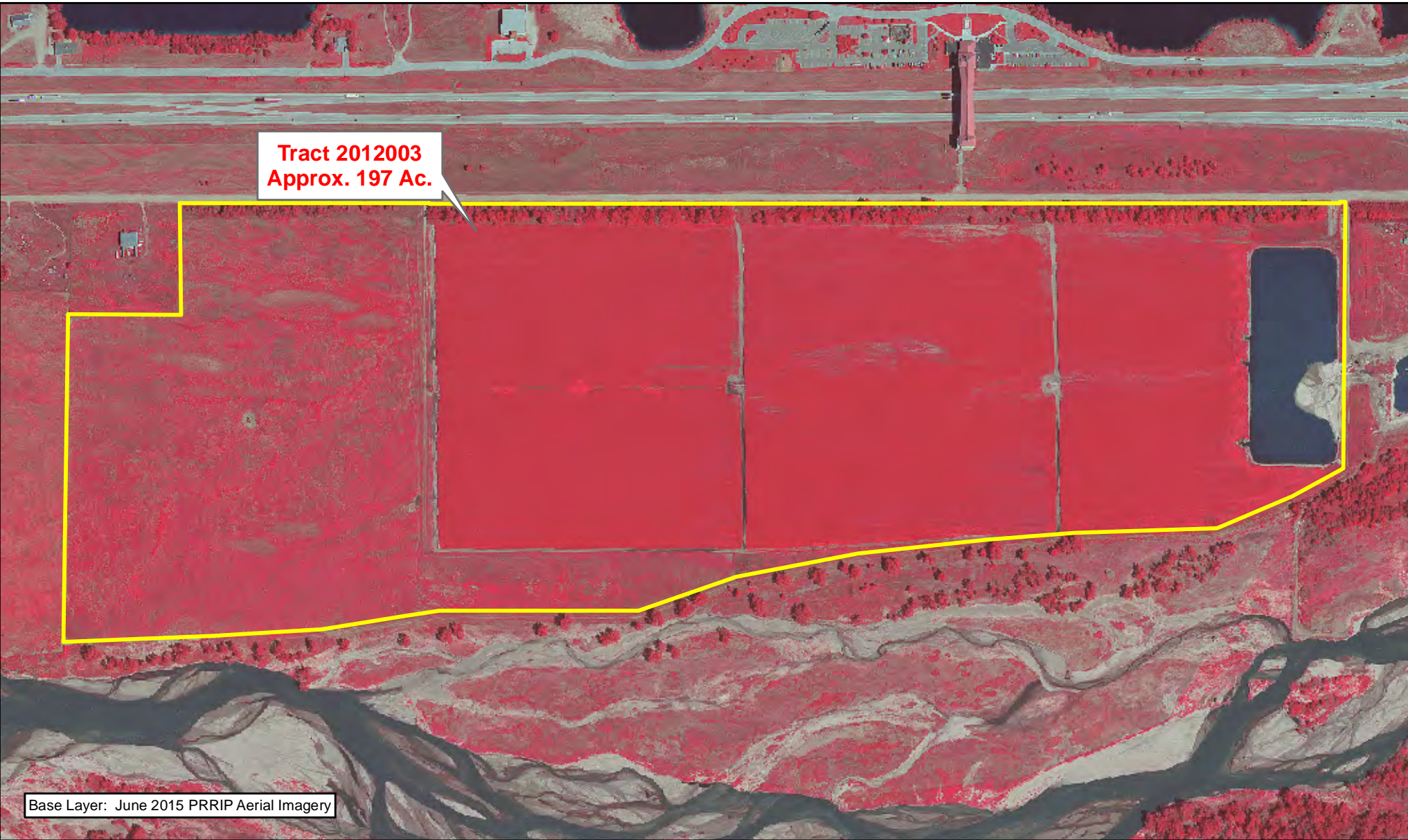
Access for education, including non-Program research, will be allowed on a case-by-case basis as long as it is compatible with target species usage and does not negatively impact species habitat. Program staff will be responsible for evaluating requests and granting access permission.

### **B. Recreation**

This tract has been entered into the Program's public access policy. Public access may be revisited as needed if there are any issues that need to be addressed.



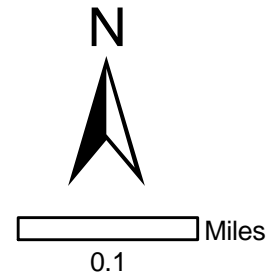
**APPENDIX A – MAPS**



Base Layer: June 2015 PRRIP Aerial Imagery

### Legend

 Tract 0837

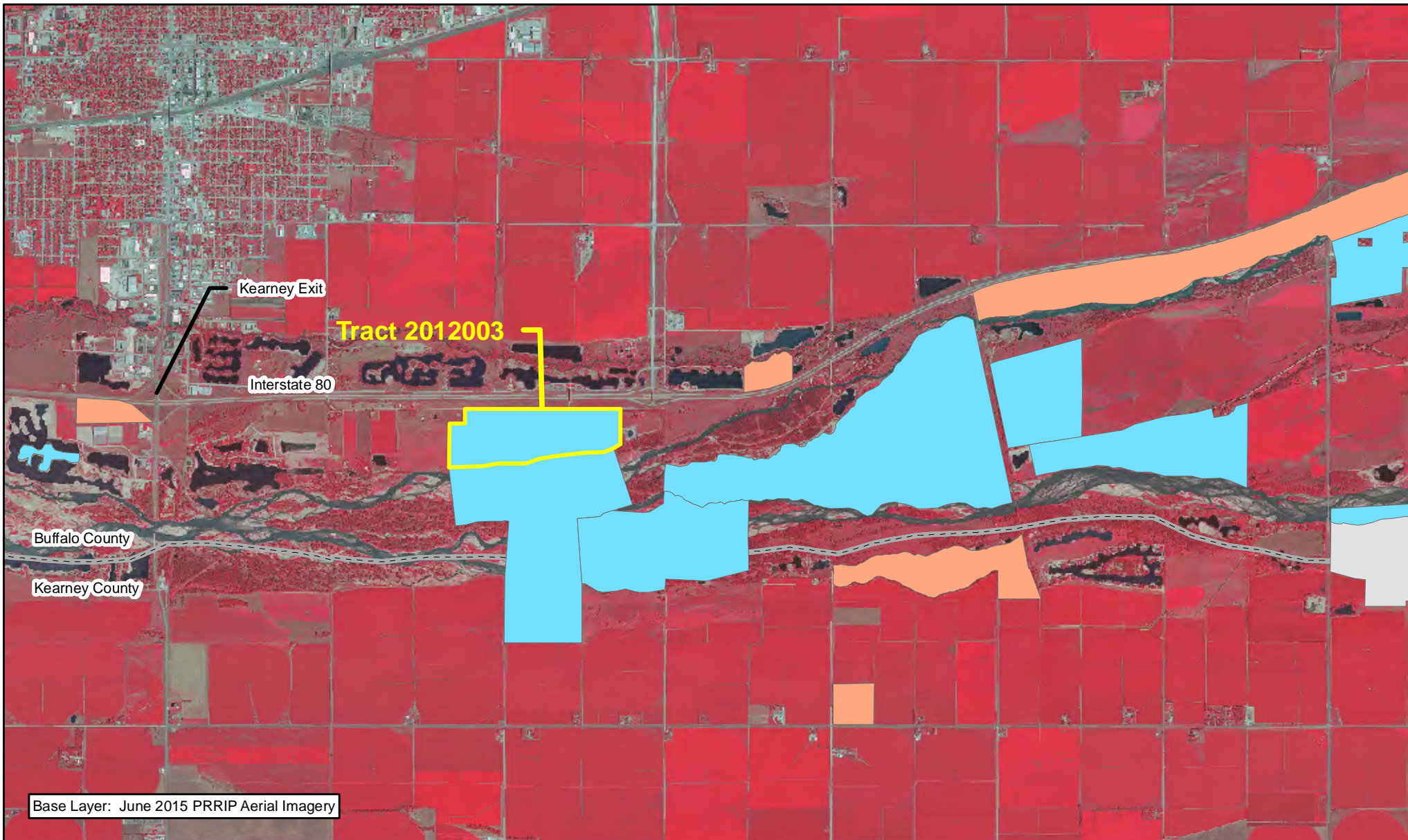


### TRACT 2012003 BOUNDARY MAP

Date: 11/04/15  
By: TRT

Figure A-1





### Legend

Tract 0837	Audubon	PRRIP
County	CNPPID	PRWCT
	NGPC	TNC
	NPPD	Wyoming



Miles

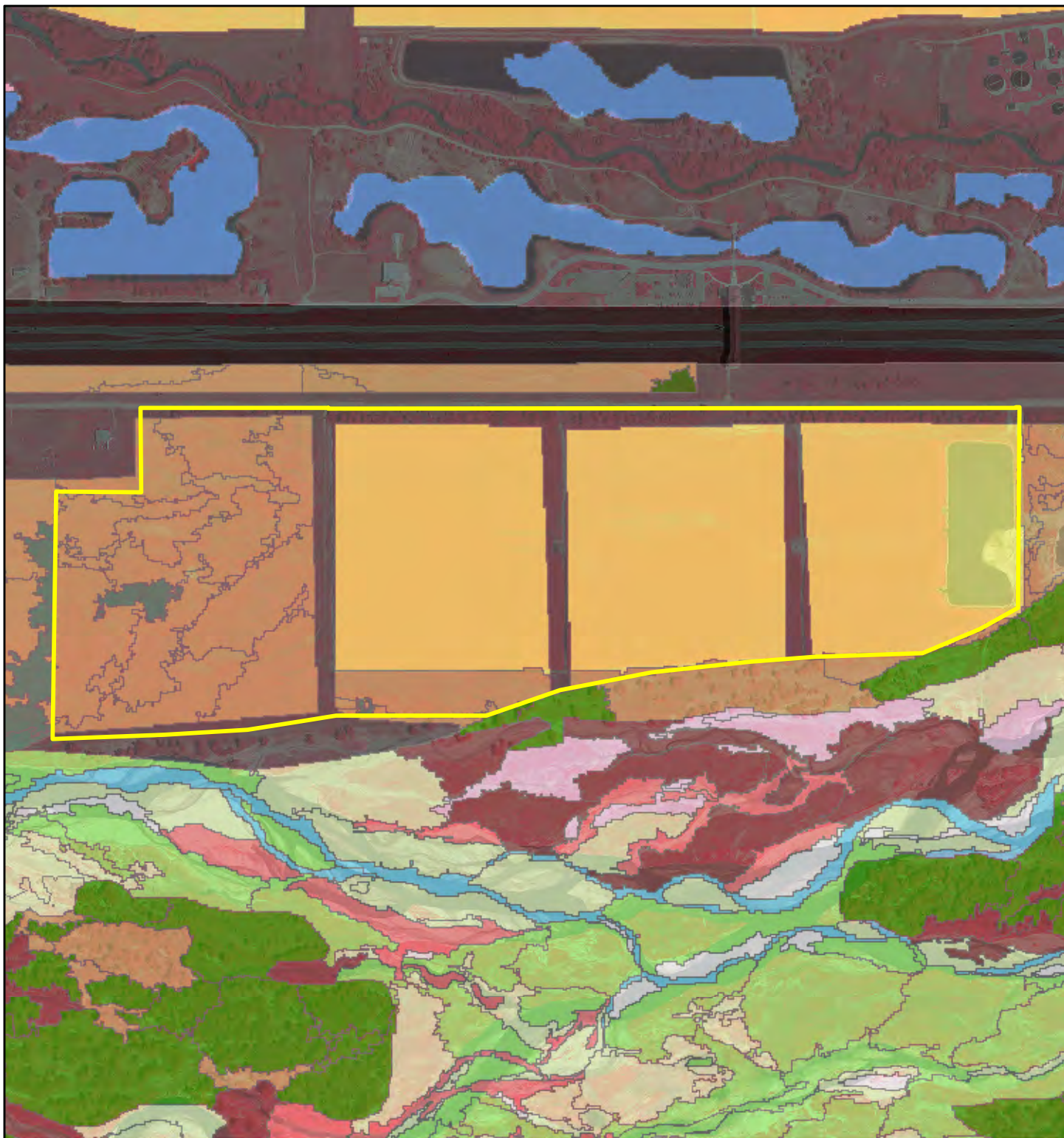
1

### TRACT 2012003 LOCATION MAP

Date: 11/04/15  
By: TRT

Figure A-2





PLATTE RIVER  
RECOVERY IMPLEMENTATION PROGRAM

#### Legend

- |                       |                          |
|-----------------------|--------------------------|
| 2012003               | 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         |



0.25 Miles

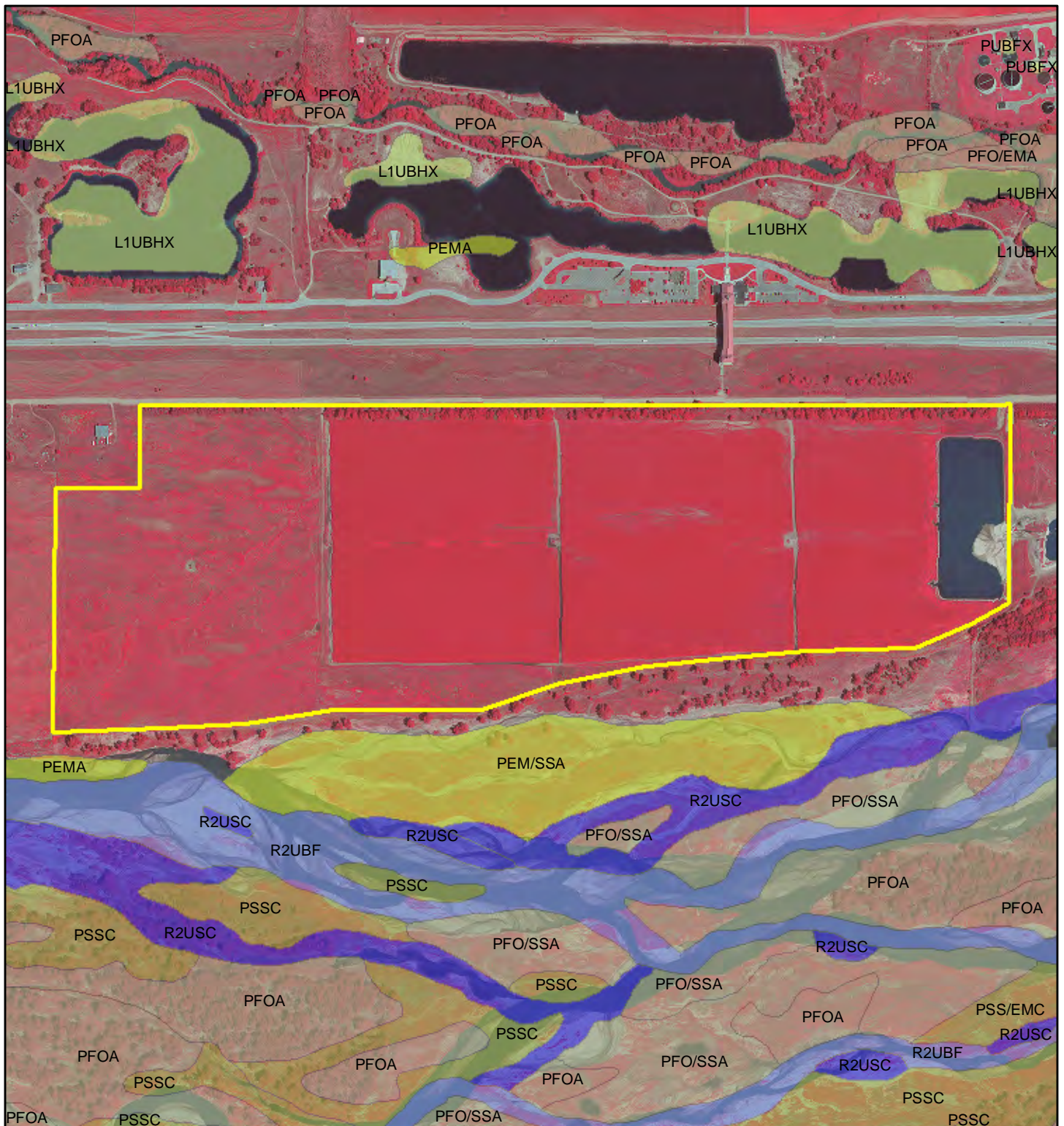
TRACT 2012003  
2005 LANDCOVER/USE

Date: 11/04/15

By: TRT

Figure A-3





#### Legend

- 2012003
- Lacustrine Unconsolidated Bottom (LUB)
- Palustrine Aquatic Bed (PAB)
- Palustrine Emergent (PE)
- Palustrine Forested (PF)
- Palustrine Scrub-Shrub (PSS)
- Palustrine Unconsolidated Bottom Excavated (PUBx)
- Palustrine Unconsolidated Shore
- Riverine Unconsolidated Bottom (RUB)
- Riverine Unconsolidated Shore (RUS)
- Riverine Streambed (RS)



0.25 Miles

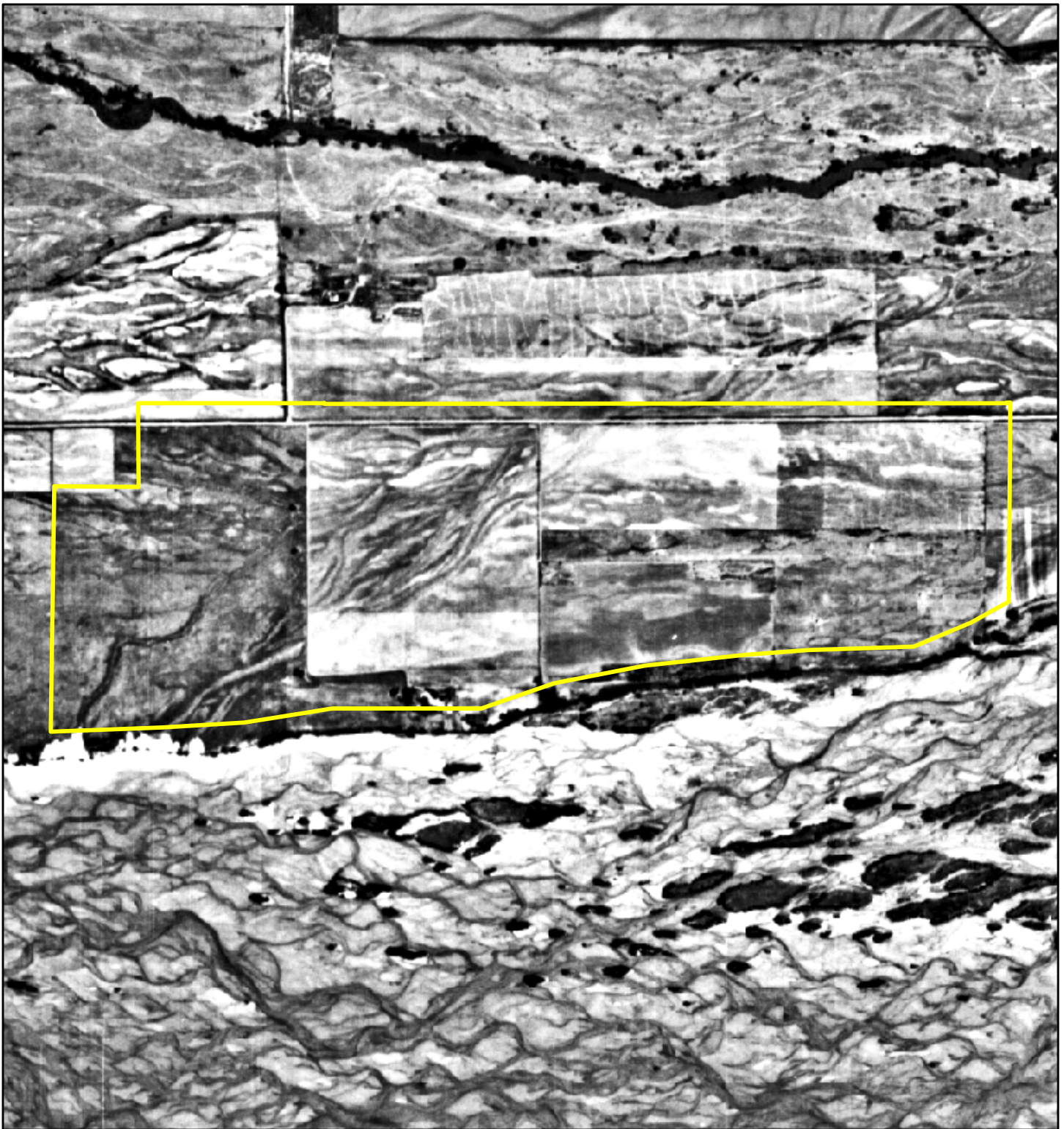
#### TRACT 2012003 NWI MAP


Date: 11/04/15

By: TRT


Figure A-4





**Legend**  
 2012003



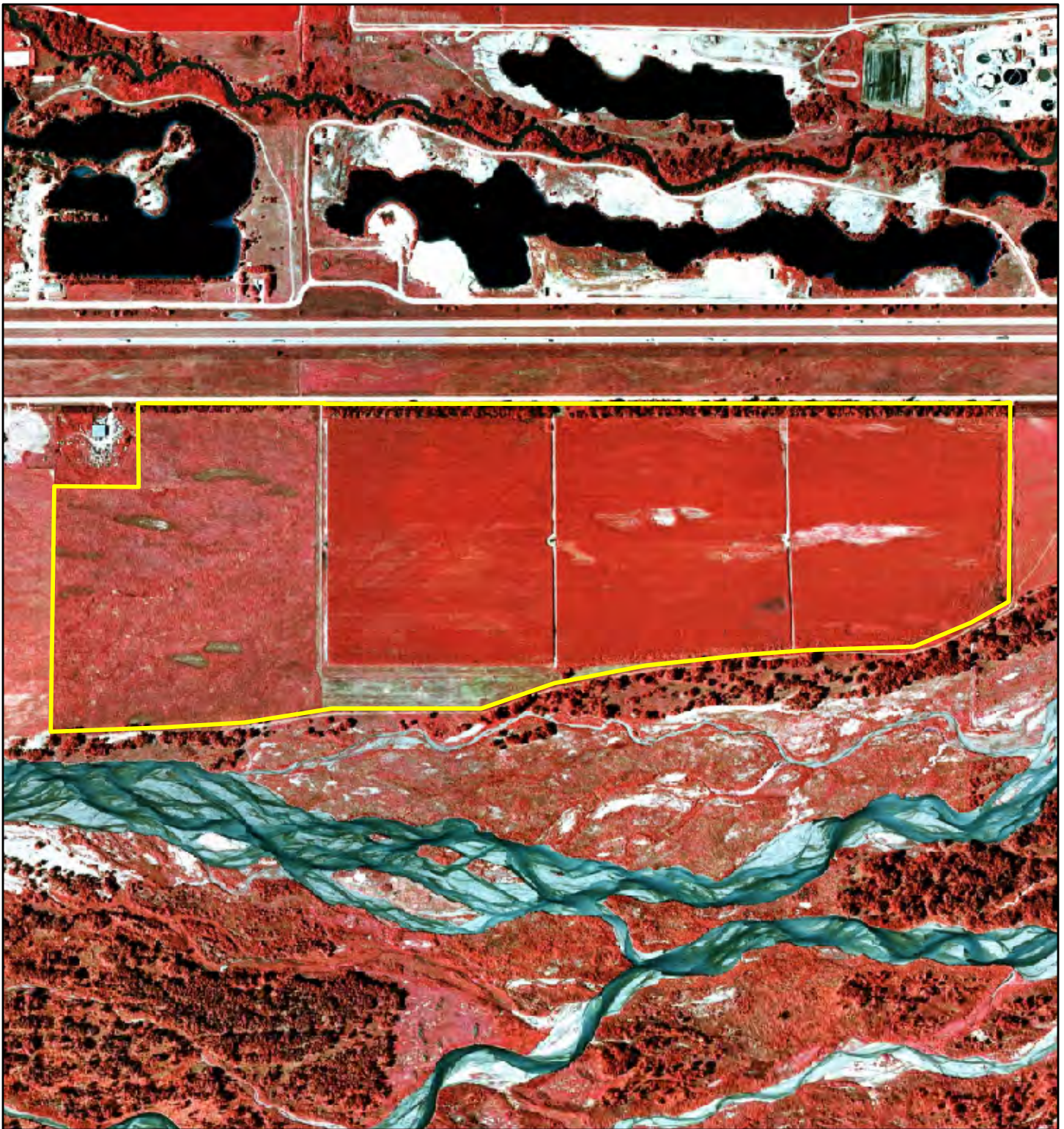
 Miles  
0.25


TRACT 2012003  
1938 IMAGERY

Date: 11/04/15  
By: TRT


Figure A-5





Legend  
 2012003



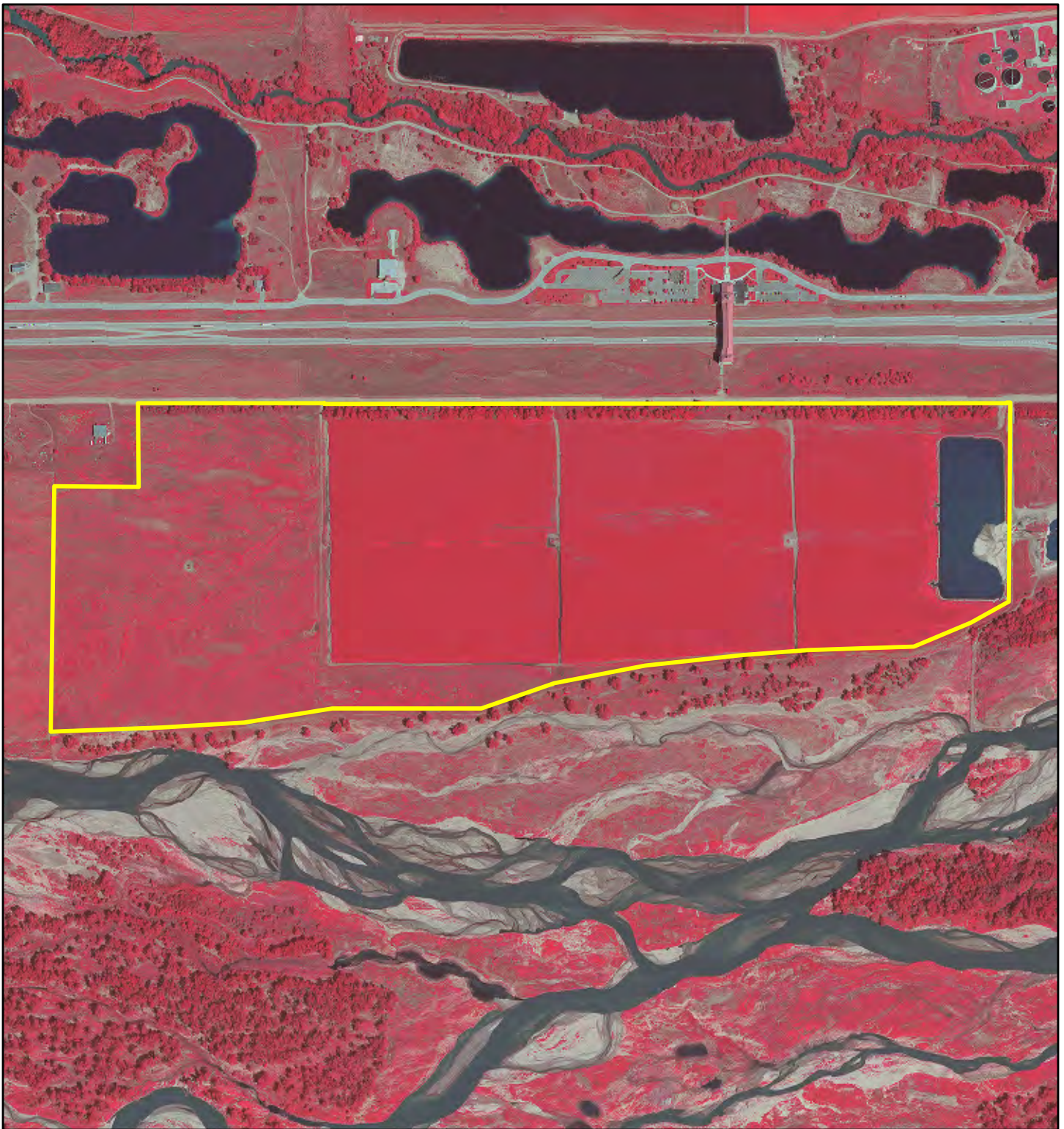
 Miles  
0.25

TRACT 2012003  
1998 CIR IMAGERY

Date: 11/04/15  
By: TRT


Figure A-6





**Legend**  
 2012003



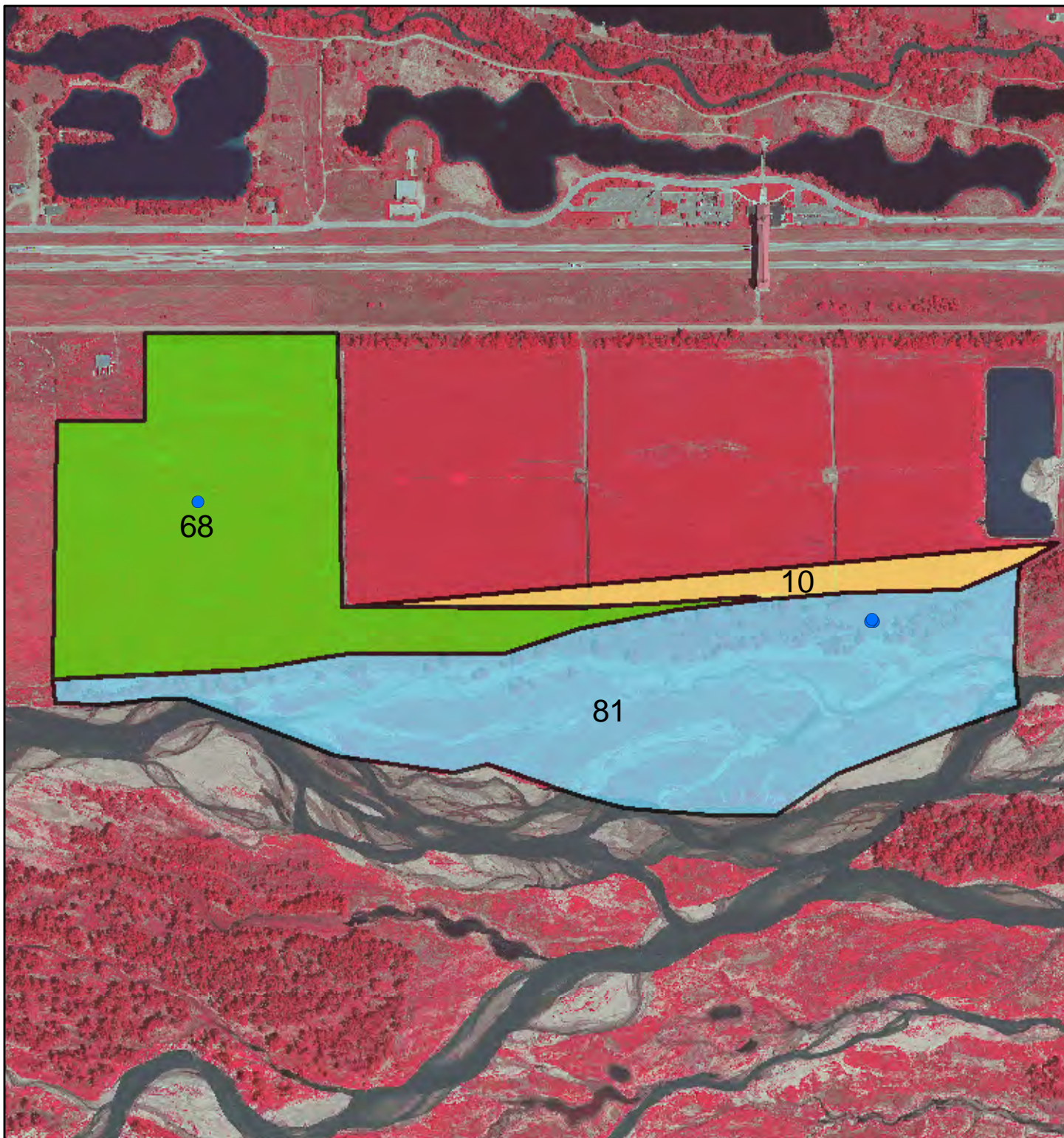
 Miles  
0.25

TRACT 2012003  
2015 CIR IMAGERY

Date: 11/04/15  
By: TRT

Figure A-7





PLATTE RIVER  
RECOVERY IMPLEMENTATION PROGRAM

**Legend**

- Blessing cropland
- Blessing grass
- WY-N
- Livestock Solar Water



0.25 Mile

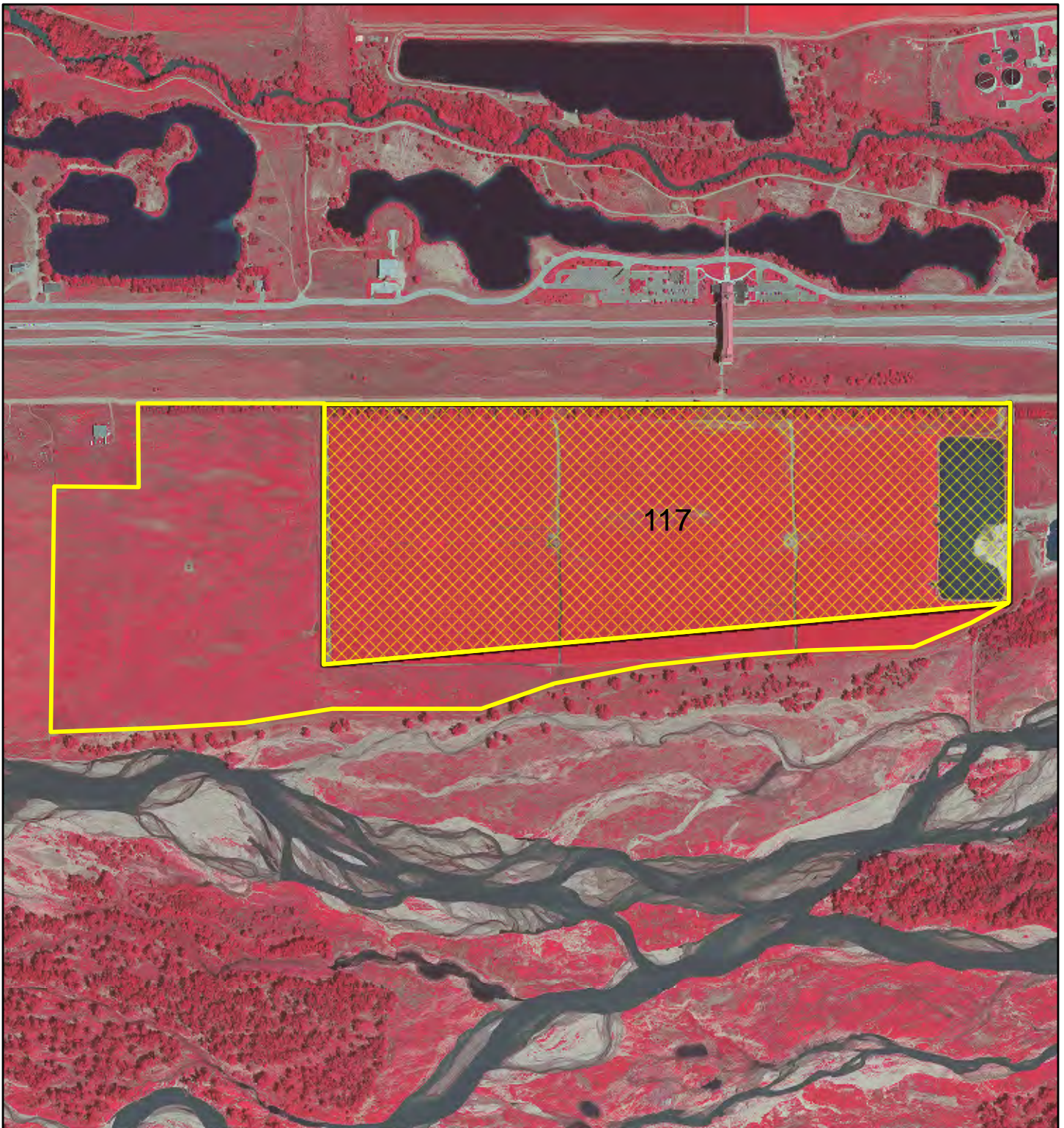
TRACT 2015001  
Management Units

Date: 10/27/15

By: TRT

Figure A-8





Legend  
[Red cross-hatch symbol] BELF Crop No Build Easement-



0.25 Mile

TRACT 2015001  
Conservation Easement

Date: 11/04/15

By: TRT

Figure A-9