2015–2019 OPERATIONS AND MAINTENANCE PLAN

For

TRACT 2013001

Prepared for:
Platte River Recovery Implementation Program
Land Advisory Committee

Completion Date:
XX/XX/15

Table of Contents

I. PROPERTY DESCRIPTION AND BACKGROUND

A. Purpose

The purpose of this plan is to outline the restoration, operations and maintenance activities, as well as species habitat and adaptive management research and monitoring activities that will occur on Tract 2013001 (Evaluation Tract Number 1114) during the period of 2015-2019.

B. Tract Location and Size

Tract 2013001 is approximately 153 acres in size and is located in Section 32, T-9N, R-19W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is located in the Overton to Elm Creek bridge segment. Figure A-2 shows the parcel location within the bridge segment and its proximity to existing leased and owned conservation lands.

C. Land Interest

A fee simple absolute title is held in trust by the Platte River Recovery Implementation Foundation (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.

II. RESPONSIBILITIES

A. Management Responsibilities

1. Planning

Annual Work Plans for this property 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.

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 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, the restoration and management plan will go through a major revision process where the goals, objectives, and activities will be reevaluated. 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 non-complex habitat in accordance with section II.B.2 and *Table 2. Non-Complex Habitat Guidelines* of the Program Land Plan.

1. Non-Complex Habitat Acres

The entirety of this tract, encompassing approximately 153 acres, is considered as non-complex habitat.

2. Excess Acres

This tract does not contain any excess acres.

B. Land Cover

Existing land cover/use on and adjacent to this tract was estimated utilizing United States Department of Agriculture (USDA) Farm Service Agency (FSA) and Program aerial photography. The current land cover/use for this tract is summarized in Table 1. 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 1 – Tract 2013001 2012 Land Cover/Use Summary

Land Cover Classification	Acres	Percent of Total
Ag	150.98	**99.35%**
Rural Developed	0.99	**0.65%**
	151.96	**100.00%**

C. Existing Land Features of Interest

1. Non-Riverine Surface Water

Tract 2013001 contains a frequently flooded wetland. Depths in seasonal open-water areas are estimated at 0-24 inches.

2. River Frontage and Active Channel Widths

Tract 2013001 is non-complex palustrine wetland habitat for whooping cranes. The tract contains no river frontage.

3. Contiguous Sand Substrates

This tract contains no contiguous sand substrate.

4. Island and Channel Bank Height

Not applicable.

5. Groundwater

Tract 2013001 is a frequently flooded wetland. At the time of the site visit, surface water was visible in the lower areas of the wetland. Groundwater is assumed to be above and within 24" of the surface near the wetland area, and up to 6-8 feet at the edges of the tract according to DNR well logs.

6. Flooding in Non-Wetland Areas

There is no evidence of flooding in non-wetland areas of tract 2013001.

7. Power/Transmission Lines

There is an overhead power line on the west boundary along the county road. It is recommended that the line be marked with bird flight diverters.

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

This tract includes approximately 90 NRD certified irrigated acres in Dawson County (Central Platte NRD). Some of these acres were temporarily transferred off of the property, but will be returned in 2016.

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.

1. Adaptive Management Goals and Objectives

- ***Goal 1 – Create and maintain inundated agricultural field.***

    - ***Objective 1a –*** Manage cropland in south cell area to serve as inundated cropland habitat during whooping crane migration.

        - **Strategy** – Choose short season corn varieties or alternative management techniques such that crops are planted after May 15 and harvested prior to October 1 annually. Flood cropland area in excess of 10 acres as described in the Program's Adaptive Management Plan IV.B.2.c.

            - **Methods –** Tenant lease agreements will outline restrictions for harvest and planting timing as well as crop types (Corn only). Areas will be flooded using existing irrigation wells as needed prior to migration.

        - **Area –** Wetland areas are identified in Figure A-9. Flooded cropland will occur in South Cell.

        - **Timeline –** Pumping will occur as needed prior to and during spring (April 1 – May 15) and Fall (October 1 – November 15) migration seasons. Planting will occur after May 15 and harvest will occur prior to October 1 annually.

        - **Cost –** Pumping costs described in objective 2b. Crop income described in objective 5a.

        - **Responsibilities –** Program staff is responsible operation of irrigation wells and for coordination with farm management contractors and tenants. Farming activities will be performed by tenants under rental agreements.

2. Species Habitat

- ***Goal 2 – Improve palustrine wetland habitat for whooping cranes (WC).***

- ***Objective 2a*** **–**Maintain wetland vegetation suitable for whooping crane habitat that approximates *Table 2. Non-Complex Habitat Guideline*s of the Program Land Plan.

    - **Strategy** – Keep vegetation sparse or low during the migration seasons.

        - **Methods –** Emergent vegetation in and around the north cell will be controlled using a combination of herbicide application, mechanical means (disking/shredding/ haying), prescribed fire, and grazing. In the south cell, crops will be harvested prior to fall migration season.

    - **Area –** Wetland areas are identified in Figure A-9.

    - **Timeline –** Mechanical and chemical vegetation management will occur as needed. Grazing will occur in a 5 month season (May-October) each year. Prescribed fire will be implemented every 3-4 years.

    - **Cost –** Annual maintenance costs are estimated at $2,000. Prescribed fire costs are on the order of $4,000 for this site.

    - **Responsibilities –** Program staff is responsible for coordination of maintenance activities. Contractors will perform mechanical and chemical vegetation treatments. The Program's agricultural services contractor will coordinate grazing leases.

- ***Objective 2b*** **–**Maintain water levels for palustrine wetland habitat that approximates *Table 2. Non-Complex Habitat Guideline*s of the Program Land Plan.

    - **Strategy** – Maintain maximum wetted area with water levels up to 18" when possible during the migration seasons.

        - **Methods –** There are 3 active wells and approximately 50 existing certified irrigated acres on the property. Wells will be used as needed to flood both cells for the fall and spring migration seasons.

    - **Area –** The well and wetland area are identified on Figure A-9.

    - **Timeline –** Pumping will occur as needed prior to and during spring (April 1 – May 15) and Fall (October 1 – November 15) migration seasons.

- **Cost –** Annual electrical and maintenance costs are estimated at $2,000.

- **Responsibilities –** Program staff is responsible for water level maintenance and coordinating water transfers.

3. Property Maintenance

- ***Goal 3 – Fulfill basic property ownership obligations and needs.***

  - ***Objective 3a*** – 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 $3,000.

    - **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 4 – Minimize impacts due to invasive vegetation.***

  - ***Objective 4a*** – 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 cattails, phragmites, 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.

    - **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** – Control efforts will be undertaken as necessary.

- **Costs –** Annual costs are expected to be less than $5,000.

- **Responsibilities** – Program staff will be responsible for identifying infestations. Control activities will be carried out by contractors.

4. Agricultural Operations

- ***Goal 5 – Manage cropland responsibly.***

    - ***Objective 5a*** – 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 leased cropland.

        - **Timeline** – Annual.

- **Costs** – Estimated income is $5,000 per year.

- **Responsibilities** – Program staff or a farm management contractor acting on behalf of the Program will be responsible for annual planning and coordination.

- ***Objective 5b*** – Coordinate with renter and farm manager to select crop type and management practices that utilize timing and available resources while still allowing for annual flooded cropland habitat availability.

  - **Strategy** – Any crop variety that is used in the area of the south wetland cell needs to be planted after May 15 and harvested prior to October 1 annually. Potential options are short-season corn varieties, as well as corn that is to be cut early as silage. Wetland area shall be left as short stalks (<12") or disked prior to flooding.

  - **Area –** All cropland areas. Figure A-8 shows leased cropland. Figure A-9 shows south wetland cell where different varieties or harvest methods may be necessary.

  - **Timeline** – Annual.

  - **Costs** – Coordination should incur no additional cost or provide no extra income over objective 4a above.

  - **Responsibilities** – Program staff or a farm management contractor acting on behalf of the Program will be responsible for annual planning and coordination.

V. MONITORING AND RESEARCH

A. Baseline Monitoring

A variety of monitoring activities will be conducted on and around this property as part of the system-wide investigations conducted under the Integrated Monitoring and Research Plan (IMRP). Baseline monitoring efforts include:

1. Land Cover Analysis

- **Objectives –** Document pre-Program land cover conditions. Land cover analysis will be performed again near the end of the First Increment to document changes in land cover.
- **Hypotheses Links** – S1, S1a
- **Timeline –** Pre-Program completed in 2007. Next analysis in 2018.
- **Responsibilities –** ED Office

2. Aerial Photography

- **Purpose –** Document annual channel features and vegetation.
- **Hypotheses Links** - TP 5, Sediment 3, WC3
- **Timeline –** Annual during First Increment per protocol.
- **Responsibilities –** Data collection performed by contractors under supervision ED Office. Analysis by ED Office.

3. Least Tern, Piping Plover and Whooping Crane Monitoring

- **Purpose -** Document WC use.
- **Hypotheses Links** –WC1 & 3
- **Timeline –** Annual during First Increment.
- **Responsibilities –** Monitoring performed by contractors under supervision ED Office.

4. Species of Interest Surveys

- **Purpose -** Document habitat for and use of Program properties by "species of concern" or other species of interest.
- **Hypotheses Links** – S2
- **Timeline –** Following acquisition and later, as appropriate, after restoration.
- **Responsibilities –** Coordination by ED Office. Surveys by contractors or agency personnel.

B. Research

No tract-specific research is planned for this non-complex tract.

ENVIRONMENTAL LAWS, PERMITTING AND COMPLIANCE

C. Section 7 Consultation

1. Measures to Minimize or Eliminate Take of Least Tern and Piping Plover

Habitat improvement activities occurring on river channel or sandpits between April 15 and August 15 will only be conducted in the absence of nesting least terns and piping plovers. Program Staff will insure that a survey for these species is conducted by qualified individuals (e.g. by Program staff, contractor, conservation owner) in the area that will be disturbed within three days prior to the initiation of activities.

If least terns or piping plovers nest on the off-channel nesting complex, appropriate measures will be taken to control predation. At a minimum, any land connection to the nesting area for maintenance will be protected by electrified predator fencing. Other measures may be warranted and Service concurrence will be obtained before implementing additional measures.

2. Measures to Minimize or Eliminate Take of Whooping Crane

Although this habitat is not within 0.25 miles of the Platte River, the following standard measures will be utilized to minimize the potential for whooping crane take.

For habitat restoration and land management activities in or within 0.25 miles of the Platte River channel occurring between March 23 and May 10, or October 1 and November 15, construction shall only take place from one hour following sunrise to two hours prior to sunset unless otherwise approved by the Service's Coordinator of the Whooping Crane Migration Tracking Program. Program staff will notify the Service when Program habitat restoration work will be conducted during the above dates from the Highway #283 and Interstate 80 intersection near Lexington, Nebraska downstream to Chapman, Nebraska.

Construction or other work crews working in or within 0.25 miles of the channel during the above dates will check channel areas for the presence of whooping cranes prior to starting work each day, and report the presence of whooping cranes to Program staff. When whooping cranes are discovered in the Platte River valley, either by the Program monitoring crew or the above required check by construction or work crews, or are known to be in the valley through other sources, including via notification from the Service's Coordinator, Program staff will confer with the Service and will notify construction crews if it is necessary to temporarily halt construction activities.

Construction work should be completed as quickly as possible. Earth moving equipment will be moved from the river channel to an upland site located behind a tree line at the end of each work day if such features are available on the property. In the instance that such features are unavailable, equipment should be moved to a position at least 0.25 miles away from the channel.

3. Measures to Minimize or Eliminate Take of Pallid Sturgeon

Land management activities will not result in incidental take of pallid sturgeon.

D. Fish and Wildlife Coordination Act and Nebraska Non-game and Endangered Species Conservation Act

The Program will work with the USFWS and NGPC to identify potential impacts to state and federal species of concern and address them as part of this document. Program actions to avoid or mitigate potential species impacts not addressed in other portions of Section VI are presented below.

1. Raptors

There are no trees located on this tract. No impacts to raptor nesting are anticipated.

2. Northern River Otter

This wetland tract is not typical for use by otters due to its distance from the river and no impacts are anticipated.

3. Western Prairie Fringed Orchid

Projects that will result in the disturbance of native prairies or wet meadows will be surveyed for the presence of Western Prairie Fringed Orchid during the flowering period of June 15 through July 7th. If this species is present, activities will be modified to prevent destruction of existing plants.

4. Platte River Caddis Fly

Platte River caddisfly are not expected to be found on this tract. If populations are found where management actions may cause negative impacts, the Program will coordinate with USFWS and NGPC to determine appropriate methods of avoidance or mitigation.

5. Vegetation Communities of Conservation Importance

Surveys for Northern Cordgrass Wet Prairie, Northern Sedge Wet Meadow, and Wet Mesic Tallgrass Prairie will be conducted on all Program properties during the soonest recommended period after acquisition. If occurrences are found, the Program will coordinate with the USFWS and NGPC to determine appropriate methods to avoid or mitigate negative impacts from Program management actions. Additionally, the Program will investigate opportunities to re-establish these communities if suitable locations are present.

6. Regal Fritillary

The Program will coordinate with the USFWS and NGPC to investigate opportunities to establish native violet species (*Viola spp.*) in native grasslands or grassland restorations to provide a host species for the regal fritillary and promote its conservation.

E. Migratory Bird Treaty Act

Land management that involves burning, cutting or mechanical removal of vegetation (with the exception of restoration activities on ground that is currently in agricultural crops) will not occur between April 30 and July 15 without first doing surveys to insure that no occupied migratory bird nest will be destroyed.

F. Bald Eagle Act

To avoid disturbing nesting eagles and their young, the following measures will be undertaken. The Program will avoid clear-cutting or removal of overstory trees within 330 feet of both active and alternate nests at any time. Timber harvesting operations, including road construction, chain sawing, and yarding operations will not occur within 660 feet of the nest during nesting season. This distance may be reduced to 330 feet around alternate nests within a particular territory, including nests that were attended during the current nesting season but not used to raise young, after eggs laid in another nest within the territory have hatched. Selected thinning and other silviculture management practices designed to conserve or enhance habitat, including prescribed burning close to the nest tree, should be undertaken outside the nesting season. If burning during the nesting season is necessary, do the following: Conduct burns only when adult eagles and young are absent from the nest tree (i.e. at the beginning or end of the nesting season when the nest is not active); and take precautions such as raking leaves and woody debris from around the nest tree to prevent crown fire or fire climbing the nest tree.

G. United States Army Corps of Engineers Section 404 Permitting and Nebraska Department of Environmental Quality Section 401 Water Quality Certification

Prior to commencement of construction work to be accomplished in wetlands or waters of the United States, including dredging or placement of fill material, the Program will obtain a 404 permit and 401 water quality certification. Work in wetlands or waters of the State that are not jurisdictional under the Federal Clean Water Act will still need to comply with the Nebraska Department of Environmental Quality's Title 117.

H. National Pollutant Discharge Elimination System Construction Stormwater Discharge Permit

All construction work that will disturb an area exceeding 1 acre in size will be required to meet the requirements of the Environmental Protection Agency NPDES Construction General Permit. This permit includes the development of a Stormwater Pollution Prevention Plan. The Program will submit a Notice of Intent a minimum of seven days before commencement of construction activities.

I. County Floodplain Development Permit

All fill placed within the 100-year floodplain will require a floodplain development permit from the county where the work is undertaken. In order to obtain a permit, a project must have No-Rise certification meaning that it will raise the 100-Year Base Flood Elevation (BFE) by less than one foot.

J. State Historic Preservation Office Clearance

The legal description of Tract 20013001 will be provided to the State Historic Preservation Office (SHPO) to facilitate the early identification of potential cultural resources related issues. 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.

K. Good Neighbor Policy

The Program will comply with local, state, and federal laws, and to the extent permitted by such laws will be responsible for its actions to the same extent as a private individual under like circumstances.

VI. PUBLIC ACCESS

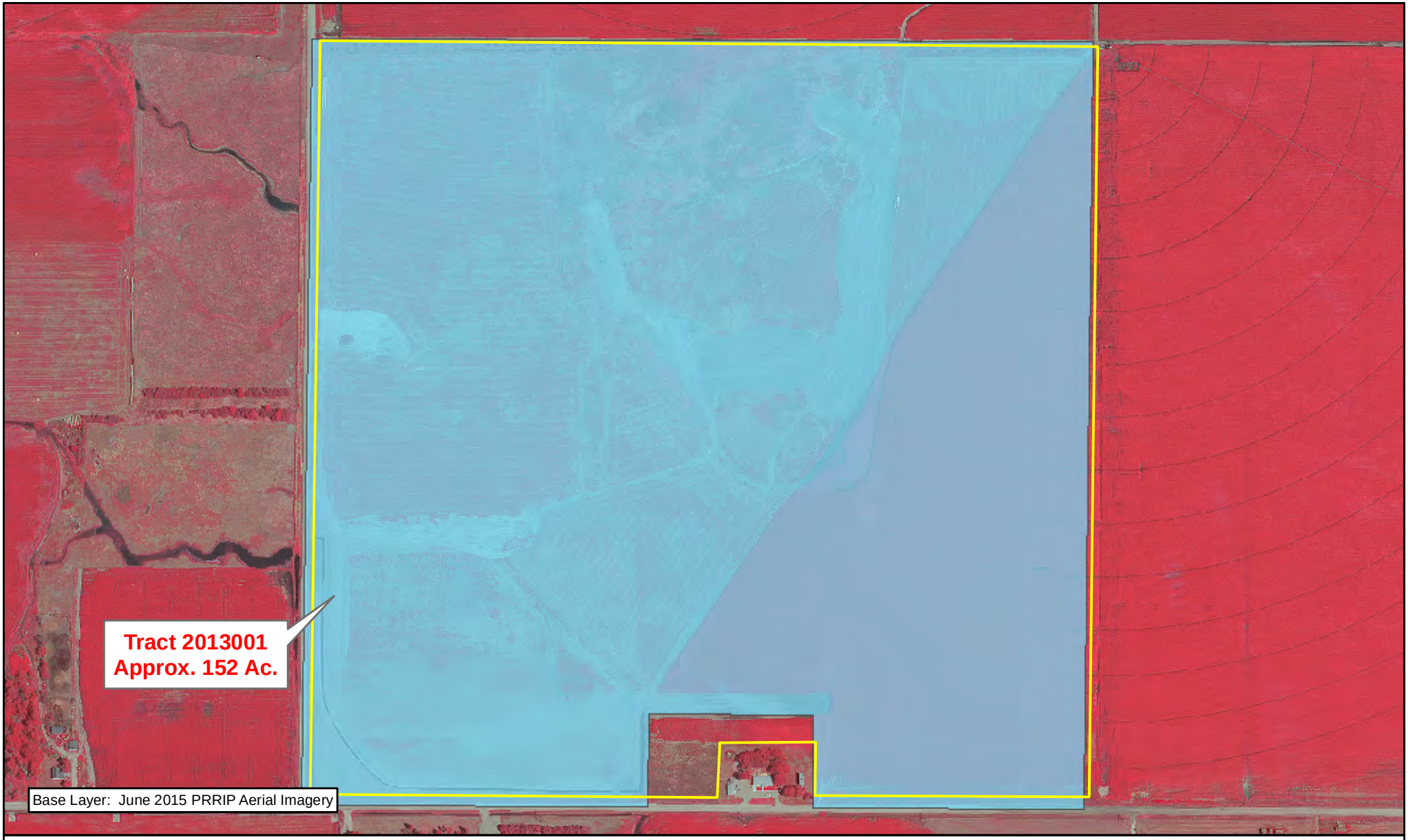
A. Education

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



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Tract 1114
- Audubon
- CNPPID
- NGPC
- NPPD
- PRRIP
- PRWCT
- TNC
- Wyoming

N

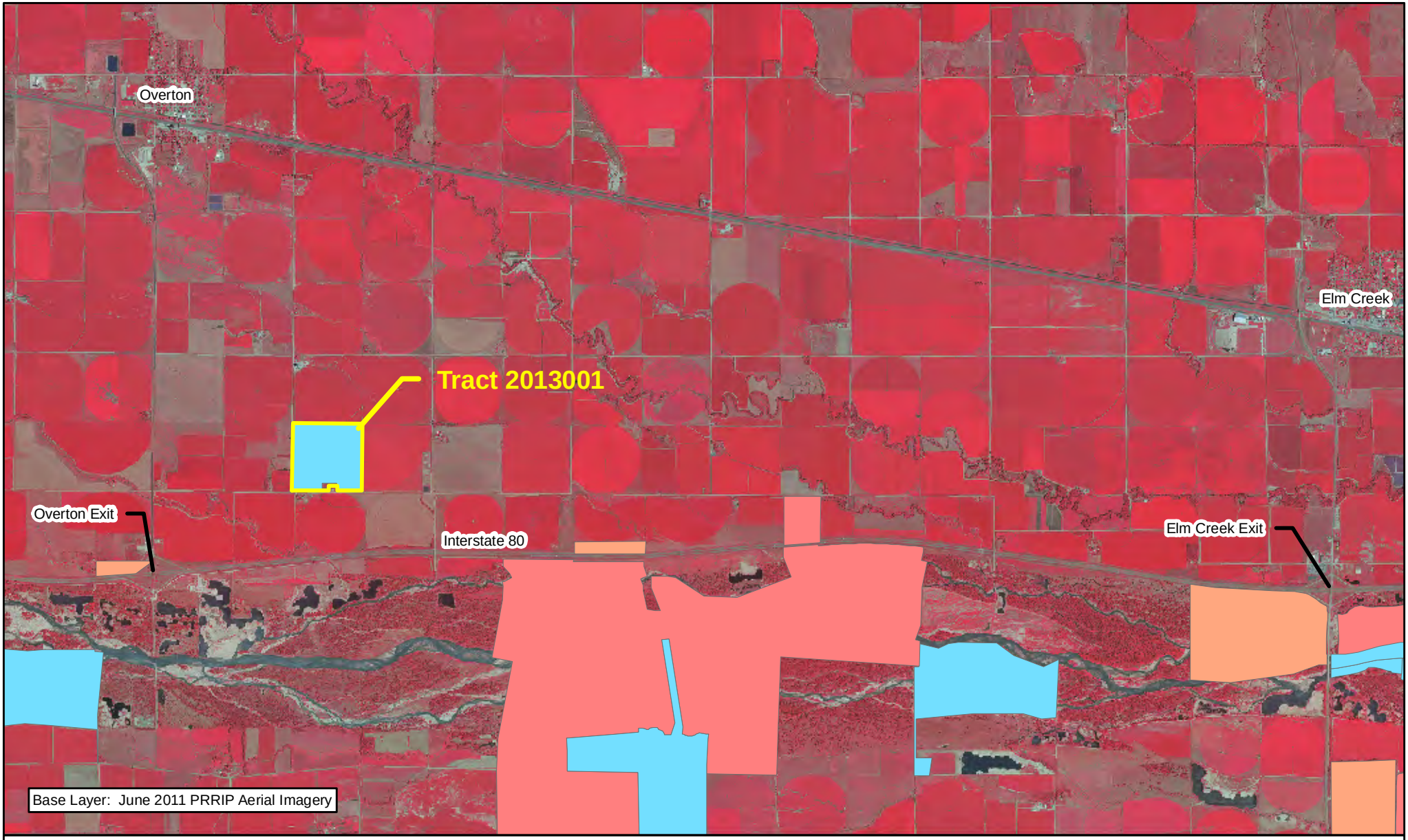
Miles

0.1

TRACT 2013001 BOUNDARY MAP

Date: 11/04/15
By: TRT

Figure A-1



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Tract 1114
- Audubon
- CNPPID
- NGPC
- NPPD
- PRRIP
- PRWCT
- TNC
- Wyoming

N

Miles
1

TRACT 2013001
LOCATION MAP

Date: 11/04/15
By: TRT

Figure A-2

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Tract 1114
- Ag
- Bareground/Sparse Veg
- Canal/Drainage
- Mesic Wet Meadow
- Phragmites
- Riparian Shrubland
- Riparian Woodland
- River Channel
- River Early Successional
- River Shrubland
- Roads
- Rural Developed
- Sand Pit
- Unvegetated Sandbar
- Upland Woodland
- Warmwater Slough
- Xeric Wet Meadow

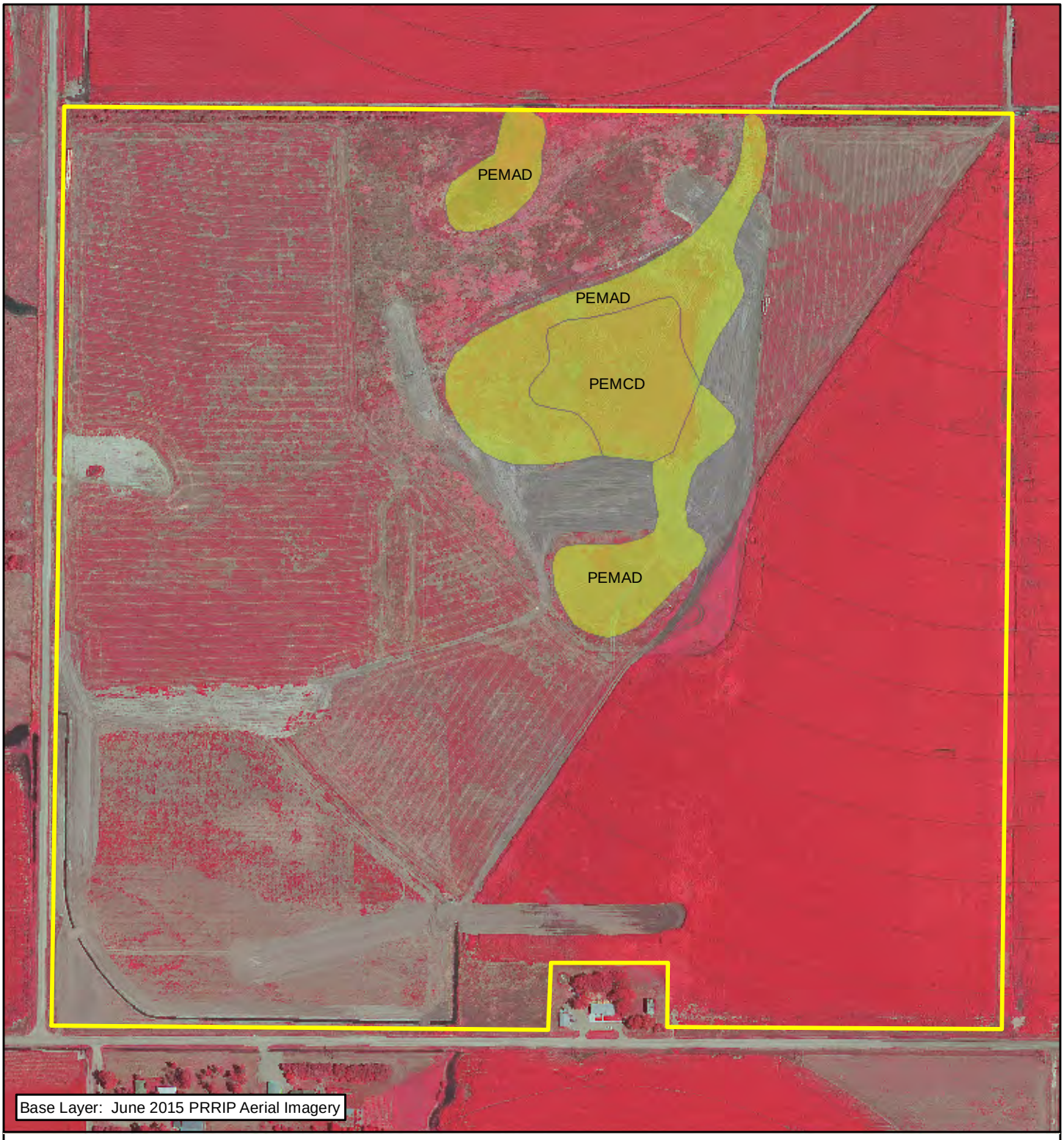
N

0.1 Miles

TRACT 2013001
2005 LAND COVER/USE

Date: 11/04/15
By: TRT

Figure A-3



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Tract 1114
- 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)

N

0.1 Miles

TRACT 2013001
NWI MAP

Date: 11/04/15
By: TRT

Figure A-4

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Tract 1114

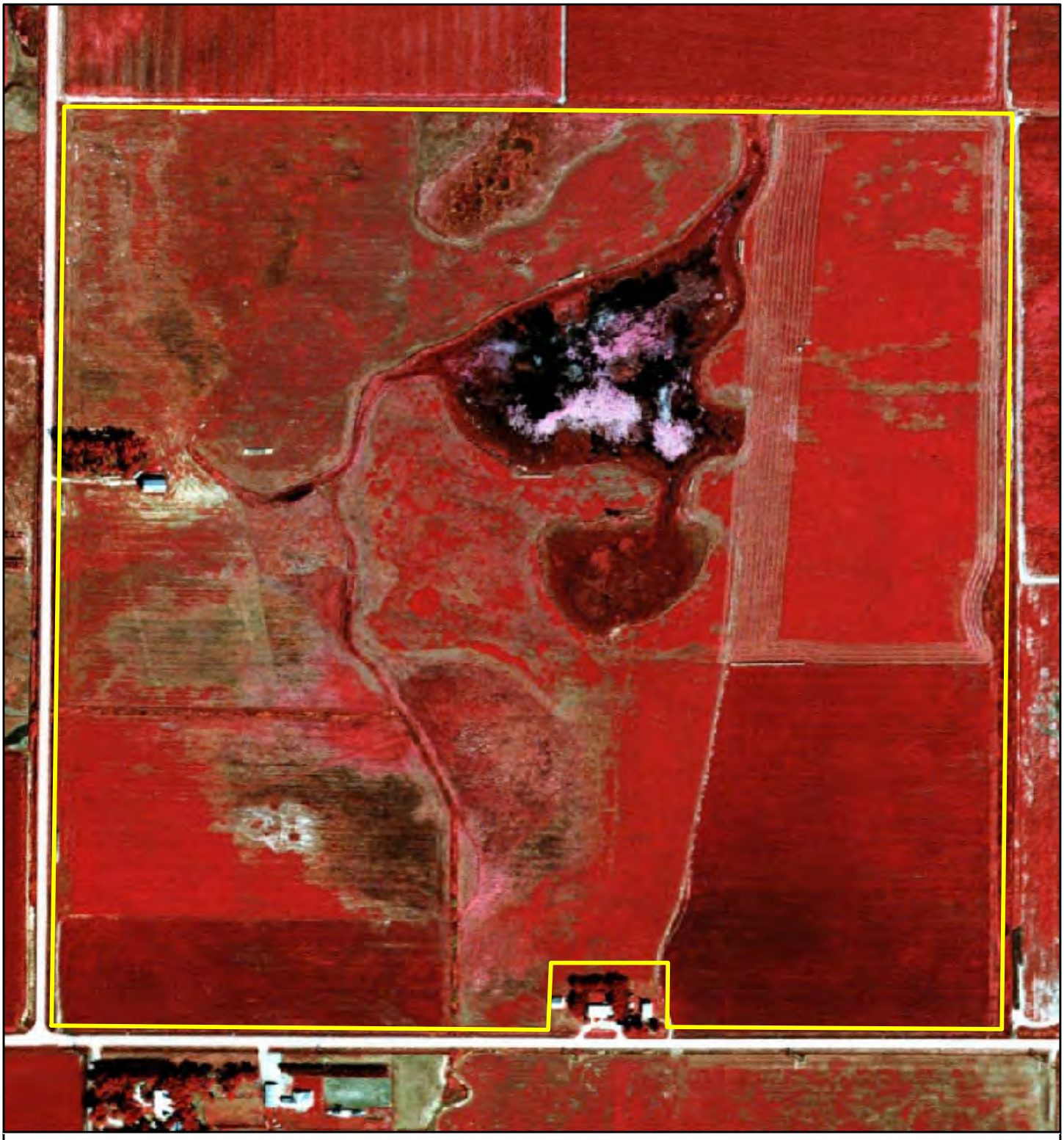
N

TRACT 2013001
1938 IMAGERY

Date: 11/04/15
By: TRT

0.1 Miles

Figure A-5



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Tract 1114

N

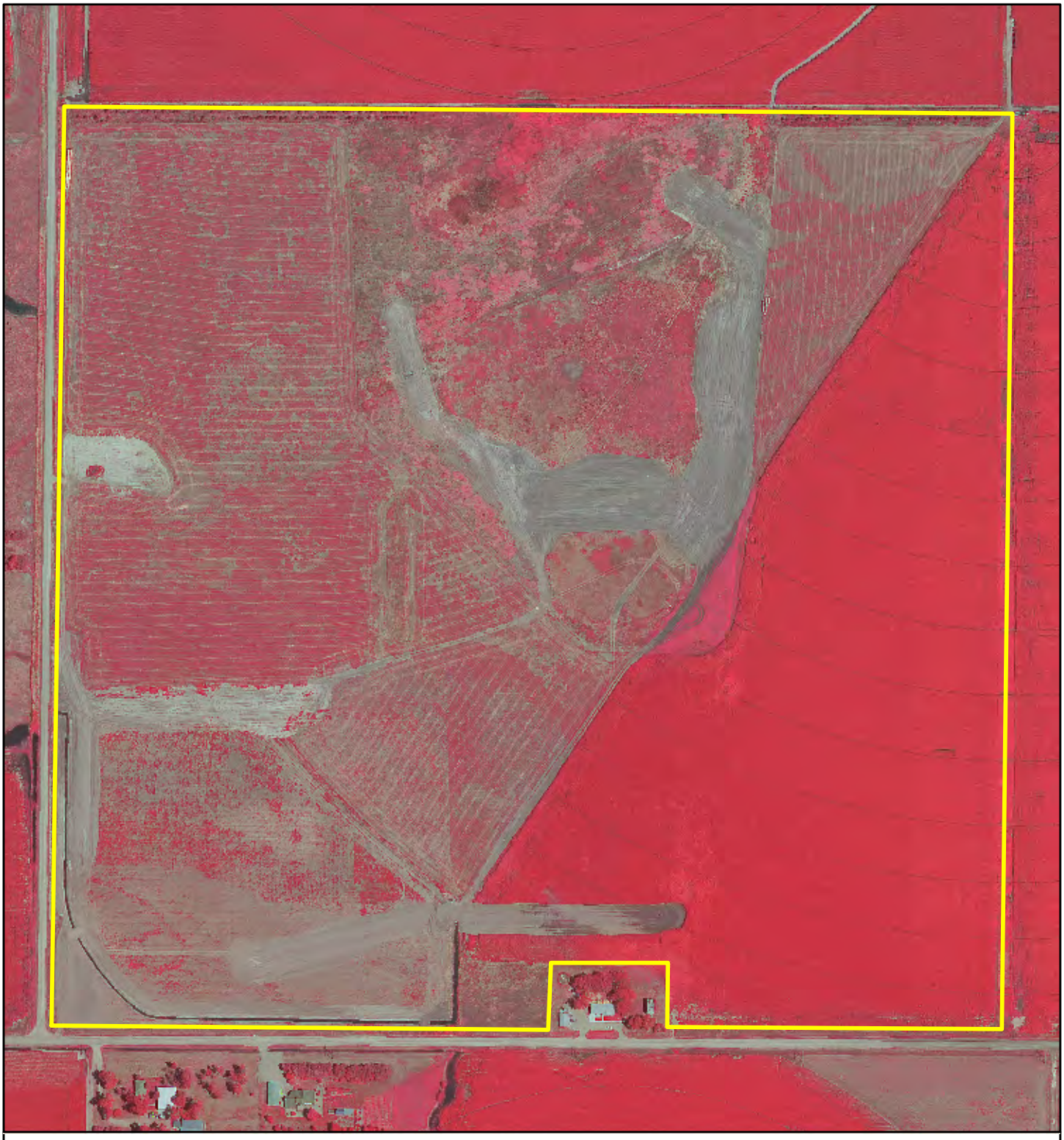
Miles

0.1

TRACT 2013001
1998 CIR IMAGERY

Date:11/04/15
By: TRT

Figure A-6



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Tract 1114

N

0.1 Miles

TRACT 2013001
2015 CIR IMAGERY

Date: 10/28/15
By: JDB

Figure A-7

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- 2013001
- Fence
- Parking Area
- Berm
- Native Seeding
- NE Forage
- NW Forage
- Dryland Crop
- SW Forage
- North Wetland
- East pivot crop
- Wetlands_Sketch

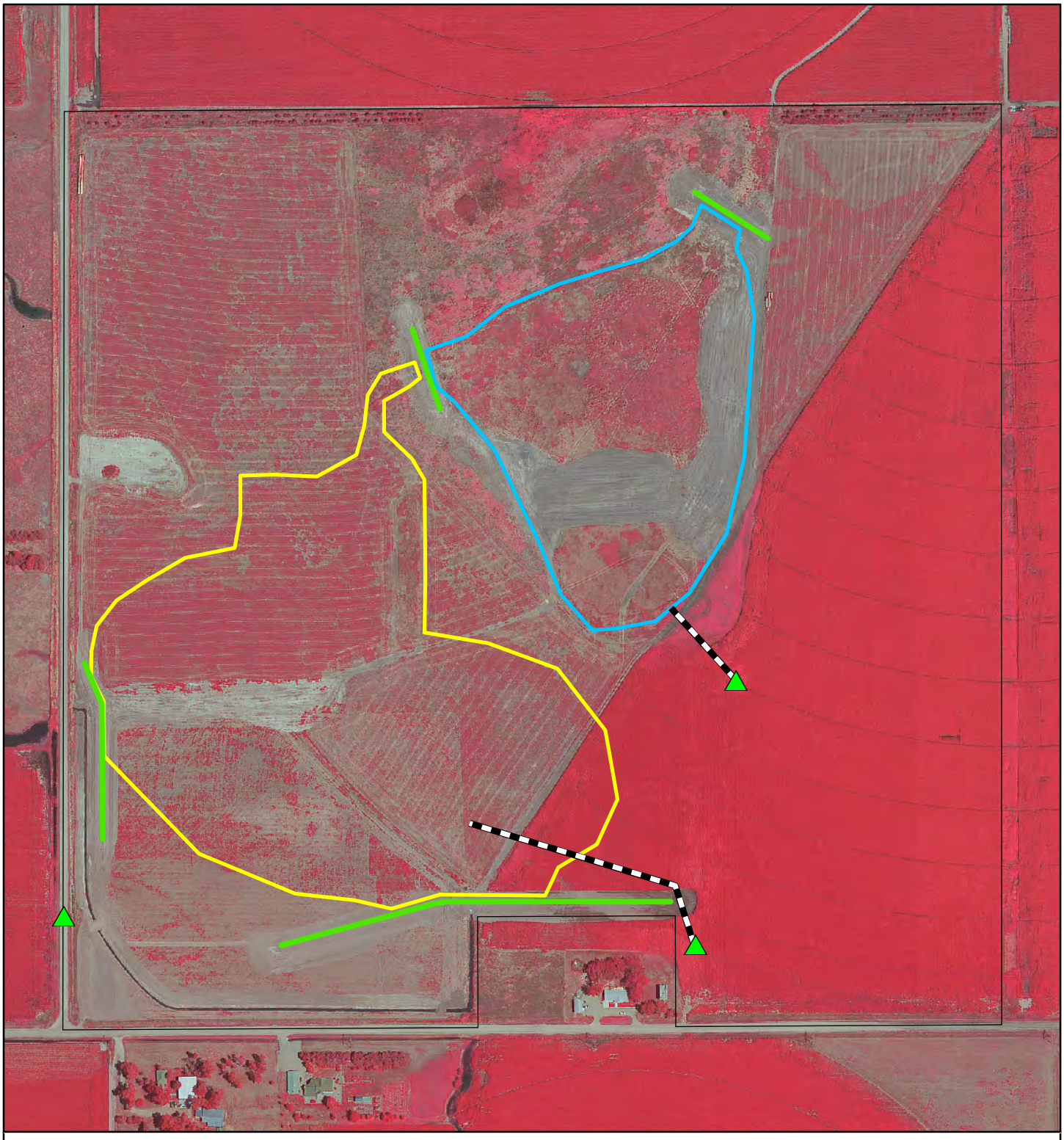
N

0.1 Miles

TRACT 2013001
Management Units

Date:11/05/15
By: TRT

Figure A-8



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Wells
- Underground Pipe
- Berm Alignments
- North Cell (Wetland Veg)
- South Cell (Ag Wetland)
- Property Boundary

N

0.1 Miles

TRACT 2013001
Wetland Layout

Date: 10/28/15
By: JDB

Figure A-9