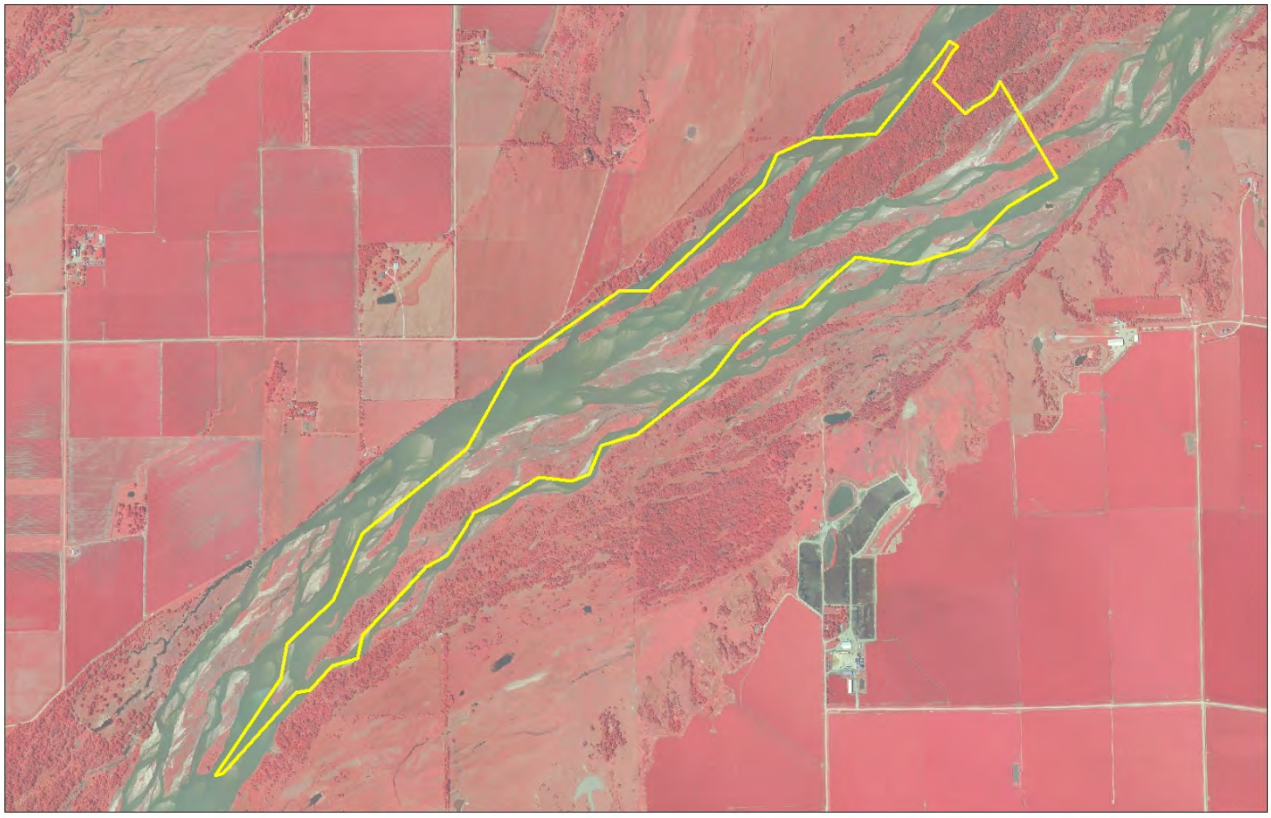
2020-2032 RESTORATION AND MAINTENANCE PLAN

For

TRACT 2020001 (1906)



Prepared for:
Platte River Recovery Implementation Program Land Advisory Committee

Completion Date:
11/16/2020

GC Approved Date:
12/2/2020

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 2020001 (Evaluation Tract Number 1906) during the period of 2020-2032. Species habitat and Adaptive Management research and monitoring actions associated with this tract are addressed in the "Restoration and Management Framework for PRRIP Habitat Complexes - September 2018" 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 2020001 is approximately 413 acres in size and is in portions of Sections1,2,10,11, and15, T-11N, R-008W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is in the Highway 34 to Chapman bridge segment also referred to as the Chapman Complex. Figure A-2 shows the parcel location within the Program land acquisition area and bridge segments. It should be noted that there are no other existing leased or owned conservation lands within this area other than Program owned land. Tract 2020001 will be counted towards the 1,500 acre Plus-up goal for the Extension period of 2020-2032 as agreed to by the Governance Committee on December 5, 2017.

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 are to 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.

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.

The Restoration and Maintenance Plan will go through a major revision process where the goals, objectives, and activities will be reevaluated, as necessary. 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 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 2020001 Complex Habitat Acres Land

Land Classification*	Acres
Grassland	1
Channel	188
Riparian Woodland	125
Riparian Shrubland	99
Total	413

* 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 Tract 2019001managed habitats can function as associated complex habitats.

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 1. Several additional land cover/use related maps are in Appendix A including:

- Figure A-3 – 2005 Land Cover/Use
- Figure A-4 – National Wetland Inventory
- Figure A-5 – 1998 CIR Aerial Photography
- Figure A-6 – 2019 CIR Aerial Photography
- Figure A-7 – Complex Habitat Acres
- Figure A-8 – Riverine Activities

Table 2 – Tract 2020001 2005 Land Cover/Use Summary

Land Cover Classification	Acres	Percent of Total
Bare ground/Sparse Veg	0.76	0.18%
Phragmites	71.02	17.20%
Riparian Shrubland	9.46	2.29%
Riparian Woodland	125.26	30.32%
River Channel	1.56	0.38%
River Early Successional	27.66	6.70%
River Shrubland	89.47	21.66%
Unvegetated Sandbar	86.58	20.97%
Xeric Wet Meadow	1.27	0.31%
	413.05	**100.00%**

C. Existing Land Features of Interest

1. Non-Riverine Surface Water

There is no significant area of non-riverine surface water on the property.

2. River Frontage and Active Channel Widths

The tract contains approximately 14,645 feet of Platte River frontage on the main channel. Channel width measurement protocols define active channel width as the width of the channel that is unvegetated. Channel widths were measured at ¼ mile intervals utilizing color infrared aerial photography flown in June 2019 under high flow conditions. Measured main channel widths are presented in Table 3.

Table 3– Tract 2020001 Channel Widths

Measurement	Width (ft)
Minimum Channel Width	248
Maximum Channel Width	863
Median Channel Width	498
Mean Channel Width	478

3. Contiguous Sand Substrates

At the time of the review, and as evidenced by current aerial photography, Tract 2020001 contains no substantial areas of contiguous sand substrate.

4. Island and Channel Bank Height

Channel bank height estimated from 2017 LiDAR is on the order of three to six feet above water. Under typical summer flow conditions, this is likely one to four feet above water.

5. Groundwater

The tract is between two river channels and assumed to be tied very closely to the river level.

6. Flooding in Non-Wetland Areas

There is evidence of temporary inundation of non-wetland areas.

7. Power/Transmission Lines

There are no power lines on the property. There is a large transmission line to the north of this tract and running parallel to the river, but according to NPPD this line has already been marked with bird flight diverters- Figure A-8.

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 2020001 includes no NRD certified irrigated acres.

IV. RESTORATION 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. Species Habitat

- ***Goal 1 – Improve sand and water (riverine) habitat for interior least terns (LETE), piping plovers (PIPL), and whooping cranes (WC).***

  - ***Objective 1*** – Create and maintain riverine sand and water habitat for target bird species as specified in the "Restoration & Management Framework for PRRIP Habitat Complexes."

    - **Strategy** – Clear all woody vegetation on islands and create habitat through the Moving Complexes Approach (MCA) on a 6-acre island (Figure A-8). MCA involves creating on-channel bare sand habitat in a reach for potential tern/plover nesting by either de-vegetating existing islands or maintaining newly formed islands vegetation-

free, allowing the habitat to erode, and then moving on to create new habitat in a different reach. Maintain area with herbicide control and disking.

- **Methods** –The area will be cleared using heavy equipment. Cleared material will be burned and buried on site if possible. Conditions may require other removal methods including chipping and hauling off-site. Pre-emergent herbicide will be ground applied to water's edge annually during late March - early April to prevent germination of vegetation and glyphosate herbicide will be ground applied to water's edge applied annually in late August - early September to control any vegetation that established during the growing season. In-channel disking in late summer, early fall will be done when river conditions allow. Subject to flows and access to island, methods and schedule may be adjusted. Further details will be determined during project design.

- **Area –** Approximate area for tree clearing, in-channel disking, and MCA Habitat Manipulation is identified on Figure A-8 – (149 acres in-channel disking, 80 acres island tree clearing, and 6 acres of MCA Habitat Manipulation).

- **Timeline** – Project planning will take place in 2020. Tree clearing, island construction/leveling/disking will take place in late 2020 - early 2021.

- **Costs** – Tree clearing, grubbing, burning, burying and tree stump relocation, in-channel disking, and 6 acres of MCA island reshaping is expected to cost on the order of $220,000. Annual in-channel disking when flow allows is expected to cost $300/ hour or $200/ acre. Annual herbicide treatments are expected to cost $2,000.

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

- ***Goal 2 – Provide benefits to other species of concern without compromising ability to accomplish target species goals and objectives***

  - ***Objective 2 –*** Evaluate habitat protection for other species of concern as need or opportunity is brought forward by USFWS or NGPC.

    - **Strategy –** The USFWS and NGPC may provide guidance on species of concern that could be present and benefit from management measures. Upon request by the USFWS and NGPC, the Program will survey specified tracts to determine presence of those species. The Program will then consult with the USFWS and NGPC to determine appropriate measures for protecting, preserving, and enhancing populations of those species while accomplishing Program goals.

    - **Responsibilities –** USFWS and NGPC are responsible for bringing forward species of concern that need to be addressed in the planning process. Program staff will be responsible for habitat protection planning, with technical assistance from these agencies.

2. Property Maintenance

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

  - ***Objective 3*** – Control noxious weeds on property.

    - **Strategy** – Infestations of noxious weeds will be eliminated (to the extent possible) annually as specified in the "Restoration & Management Framework for PRRIP Habitat Complexes." 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 according to a timeline that avoids potential interaction with target species and other species of concern.

    - **Costs** – Annual costs are expected to be less than $10,000.

    - **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 habitat impacts due to invasive vegetation.***

  - ***Objective 4*** – Eliminate existing and control future infestations of invasive vegetation not listed as noxious weeds as specified in the "Restoration & Management Framework for PRRIP Habitat Complexes.".

    - **Strategy** – Existing stands of invasive vegetation will be eliminated (to the extent possible) in phases. An integrated management approach to control 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 while other species may 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 done as needed according to a timeline that avoids potential interaction with target species and other species of concern.

- **Costs** – Annual costs will be identified in the annual Work Plans as needed and 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.

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.

2. Platte River Caddisfly

Surveys for Platte River caddisfly may be conducted on this tract to identify potential habitat areas and populations. If populations are present where management actions may cause negative impacts, the Program will coordinate with USFWS and NGPC to determine appropriate methods of avoidance or mitigation.

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 are utilizing dens (February 15 – June 15).

4. Northern Long-eared Bat

No long-eared bats have been observed on this tract, but they have been known to use the general area. The Program will not remove trees between 1 June and 31 July to avoid impacts to northern long-eared bats during the summer and will coordinate with USFWS and NGPC if the species is found on Program properties.

5. Cultural Resources

The legal description of Tract 2020001 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.

B. Research

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

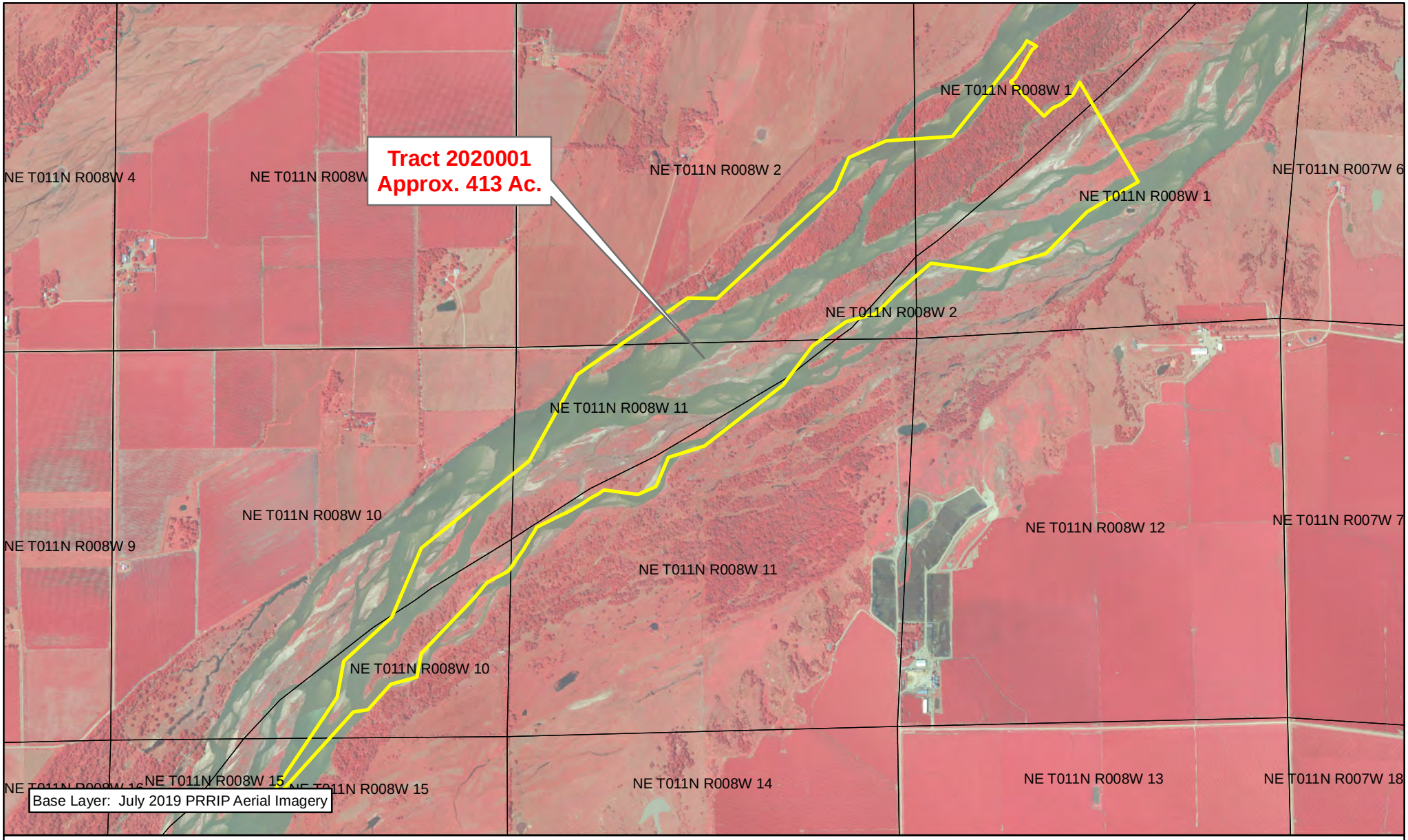
VI. PUBLIC ACCESS

A. Education

Access for education, including non-Program research, will be allowed on a case-by-case basis if 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

Public access for recreation is currently not allowed due to an existing hunting agreement. Recreation and hunting will not apply to this property until the existing agreement is terminated.



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum 2020001

Sections

N

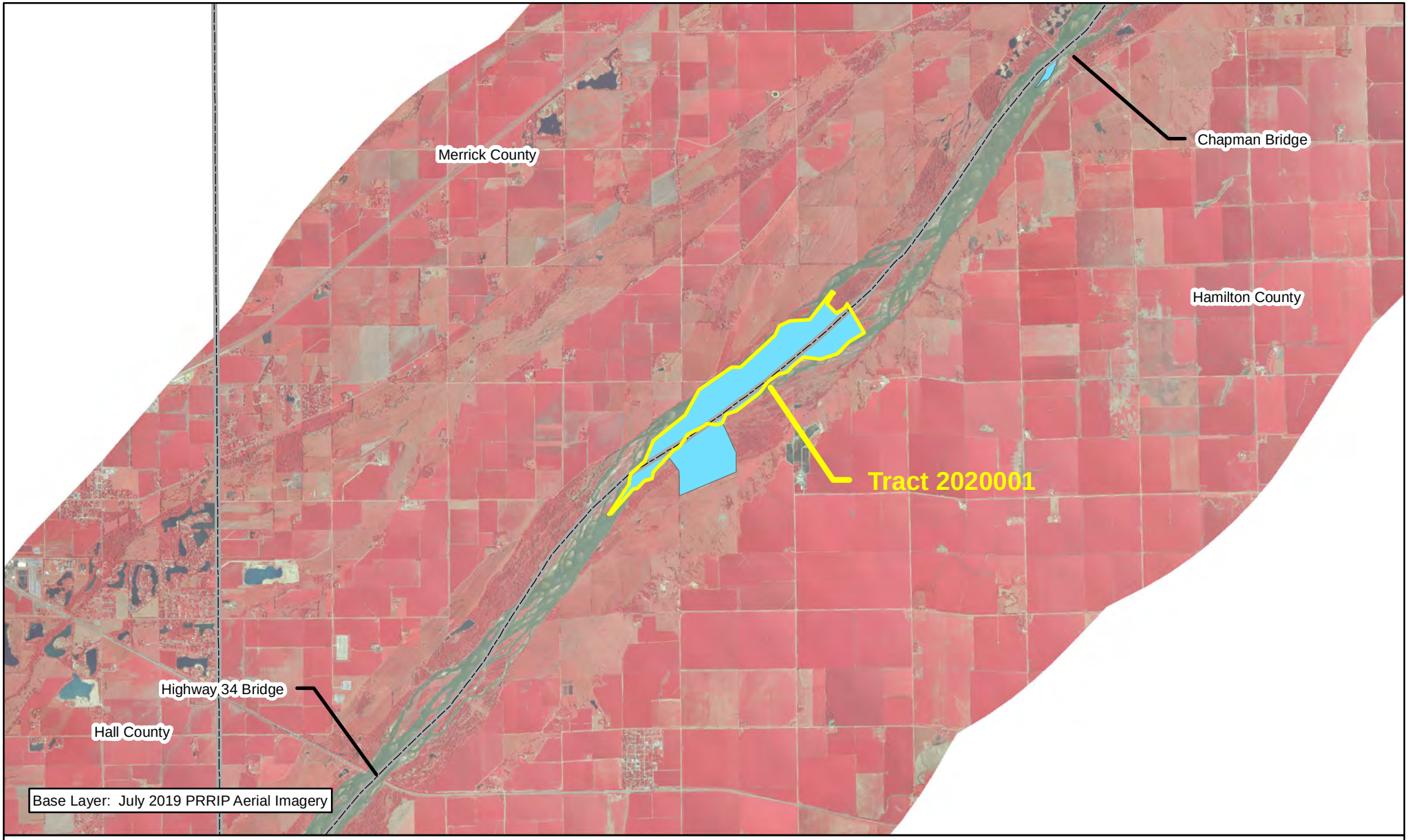
Miles

1

TRACT 2020001
BOUNDARY MAP

Date: 4/16/20
By: TRT

Figure A-1



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum	Audubon	PRRIP
2020001	CNPPID	PRWCT
County	NGPC	TNC
	NPPD	Wyoming

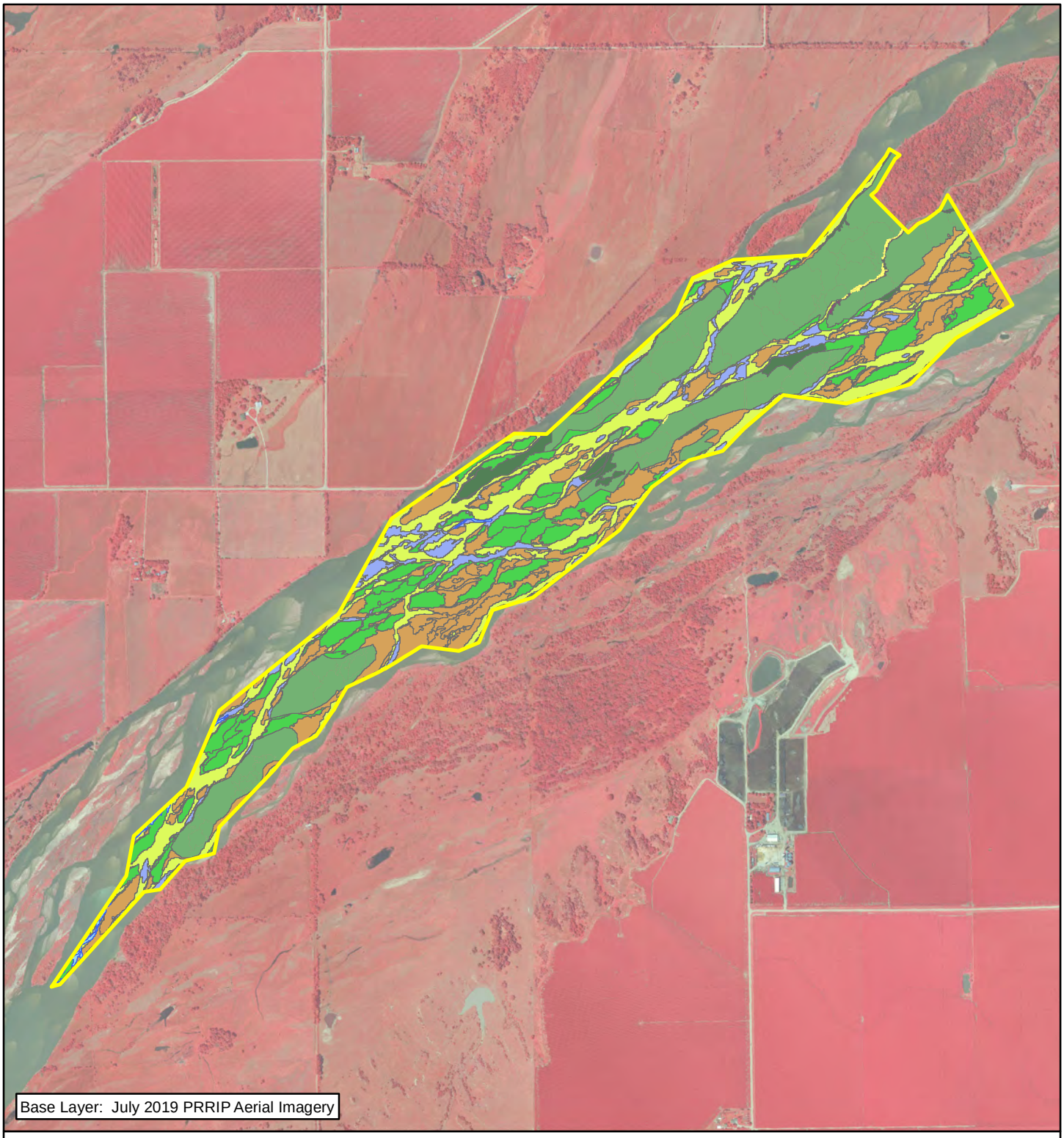
N

1 Miles

TRACT 2020001 LOCATION MAP

Date: 4/16/20
By: TRT

Figure A-2



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum
- 2020001
- Bareground/Sparse Veg
- Phragmites
- Riparian Shrubland
- Riparian Woodland
- River Channel
- River Early Successional
- River Shrubland
- Unvegetated Sandbar
- Xeric Wet Meadow

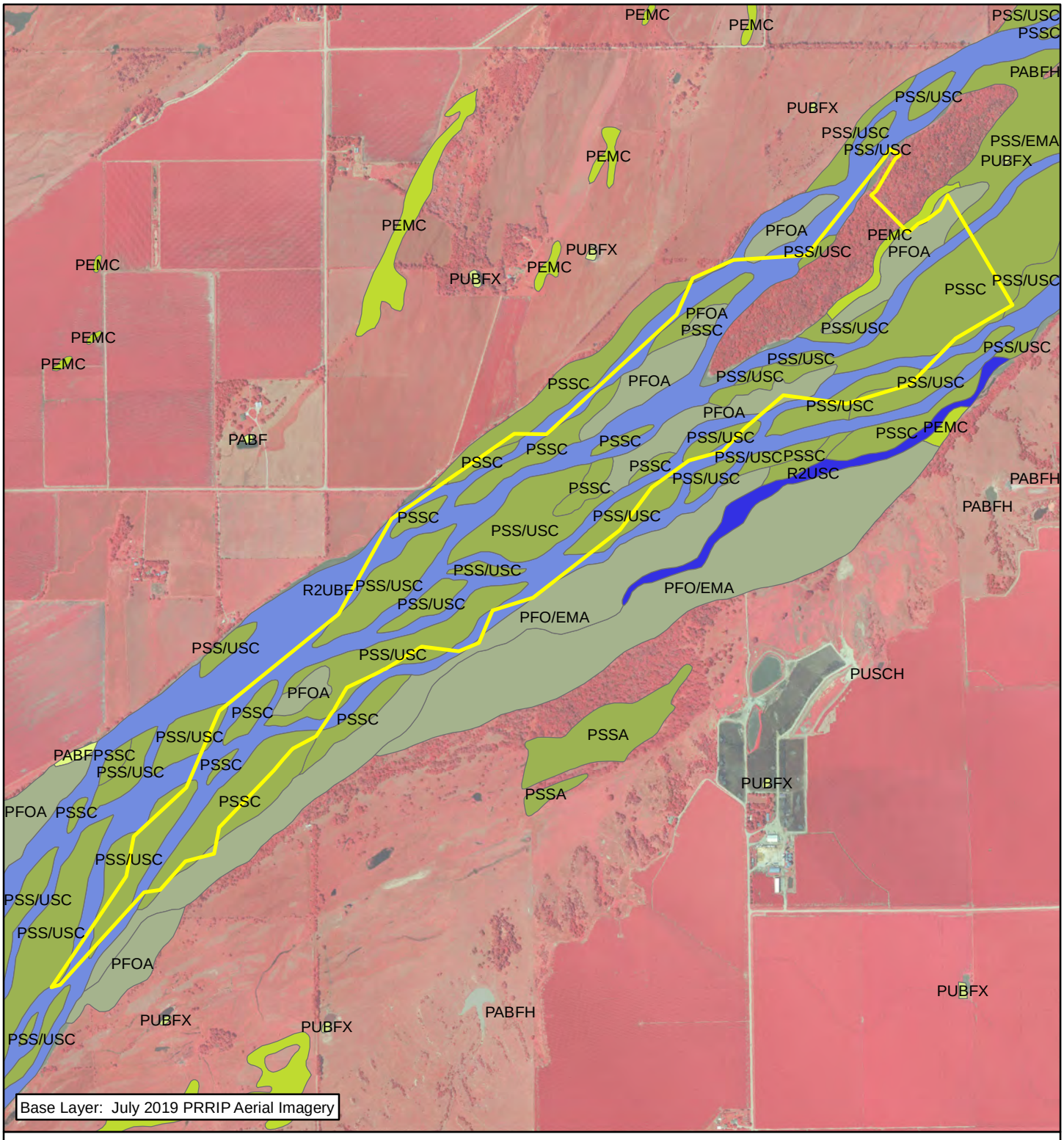
N

0.5 Miles

TRACT 2020001
2005 LAND COVER/USE

Date: 6/8/20
By: TRT

Figure A-3



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum

- 2020001
- 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)

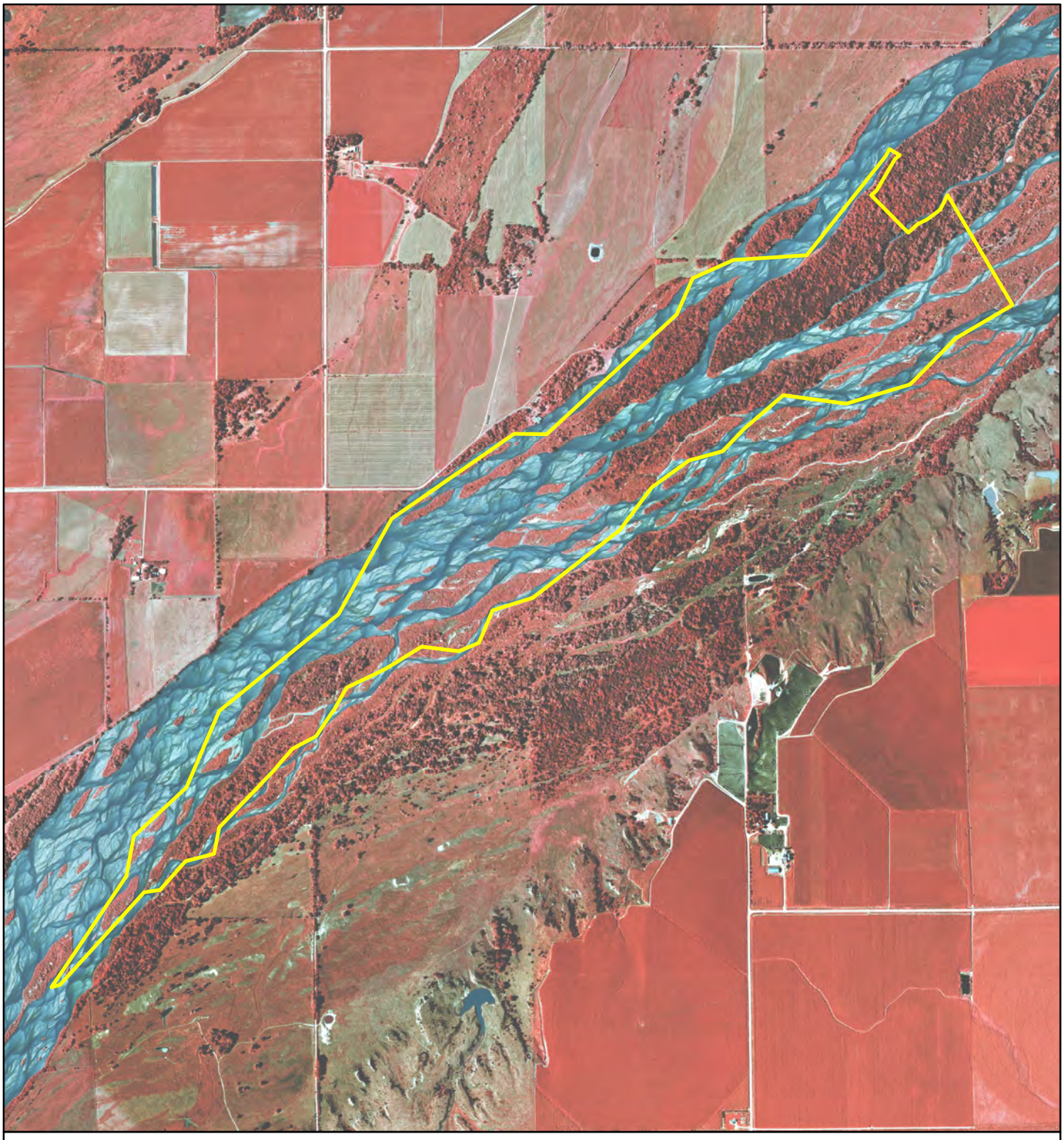
N

0.25 Miles

TRACT 2020001
NWI MAP

Date: 4/16/20
By: TRT

Figure A-4



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum

2020001

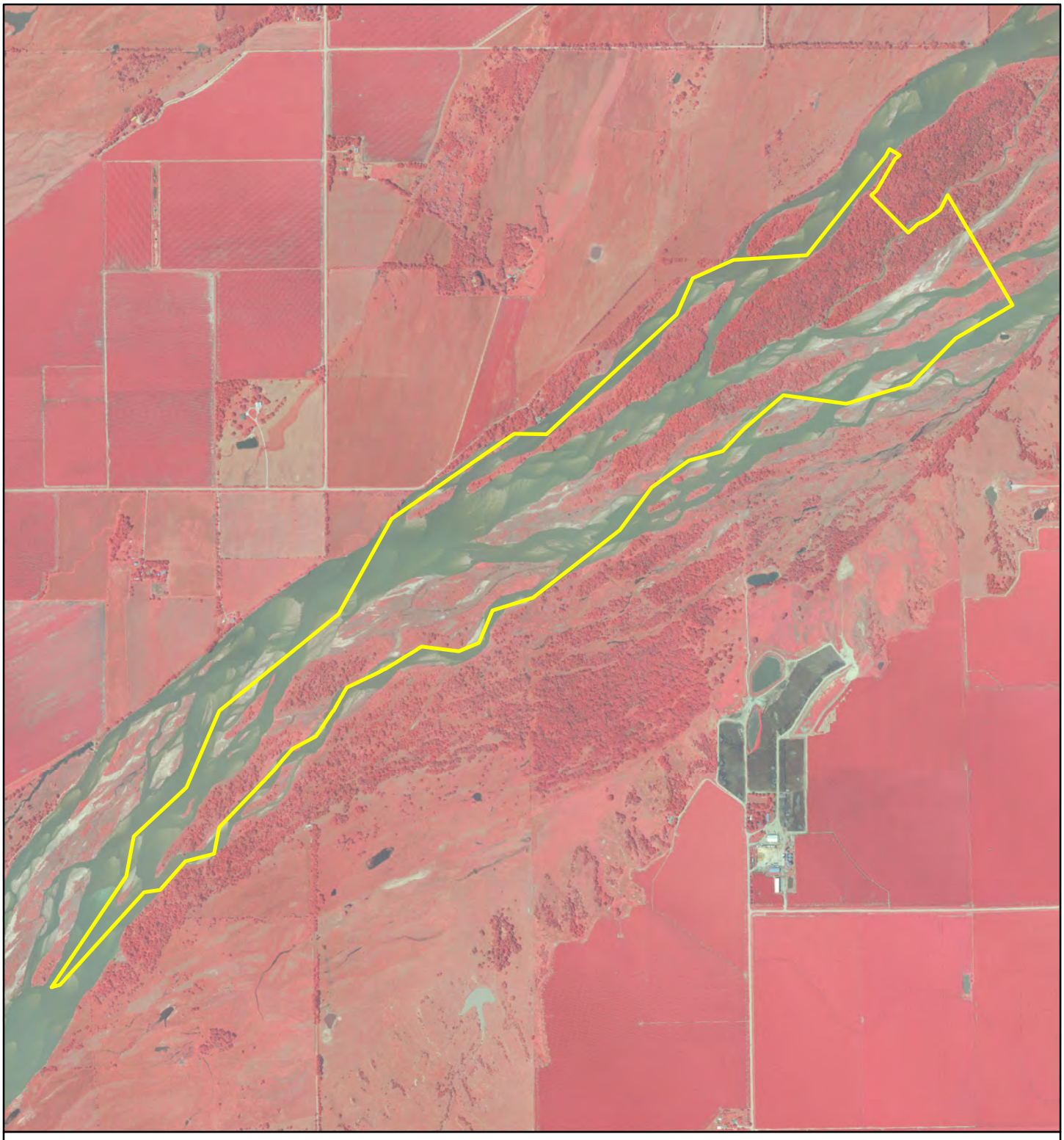
N

0.5 Miles

TRACT 2020001
1998 CIR IMAGERY

Date: 4/16/20
By: TRT

Figure A-5



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum

2020001

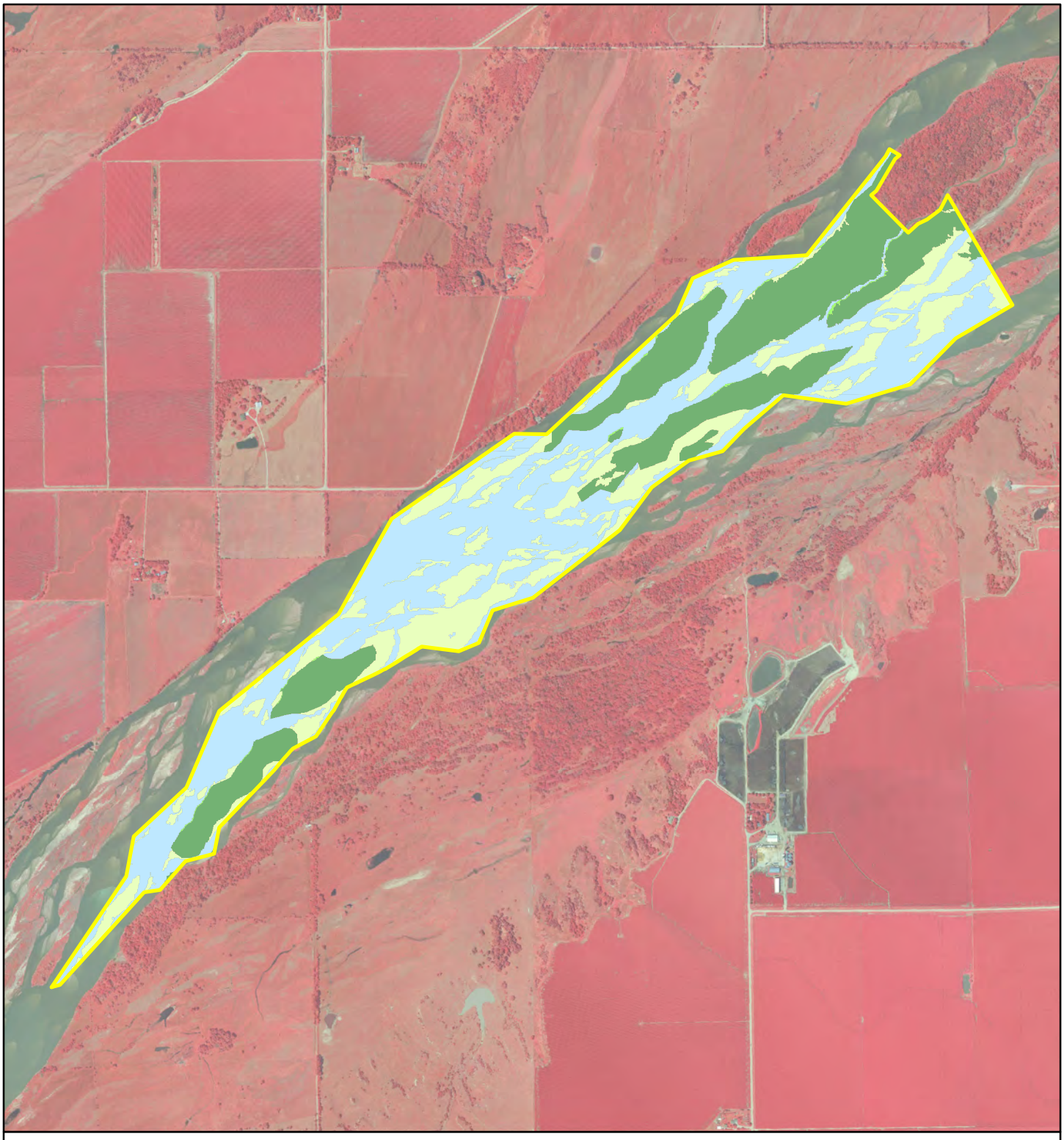
N

0.5 Miles

TRACT 2020001
JULY 2019
CIR IMAGERY

Date: 4/16/20
By: TRT

Figure A-6



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum

2020001

Complex - Riverine - Channel- 188 acres

Complex - Riverine - Shrubland- 99 acres

Complex - Riverine - Woodland- 125 acres

Complex - Wet Meadow - Grassland- 1 acre

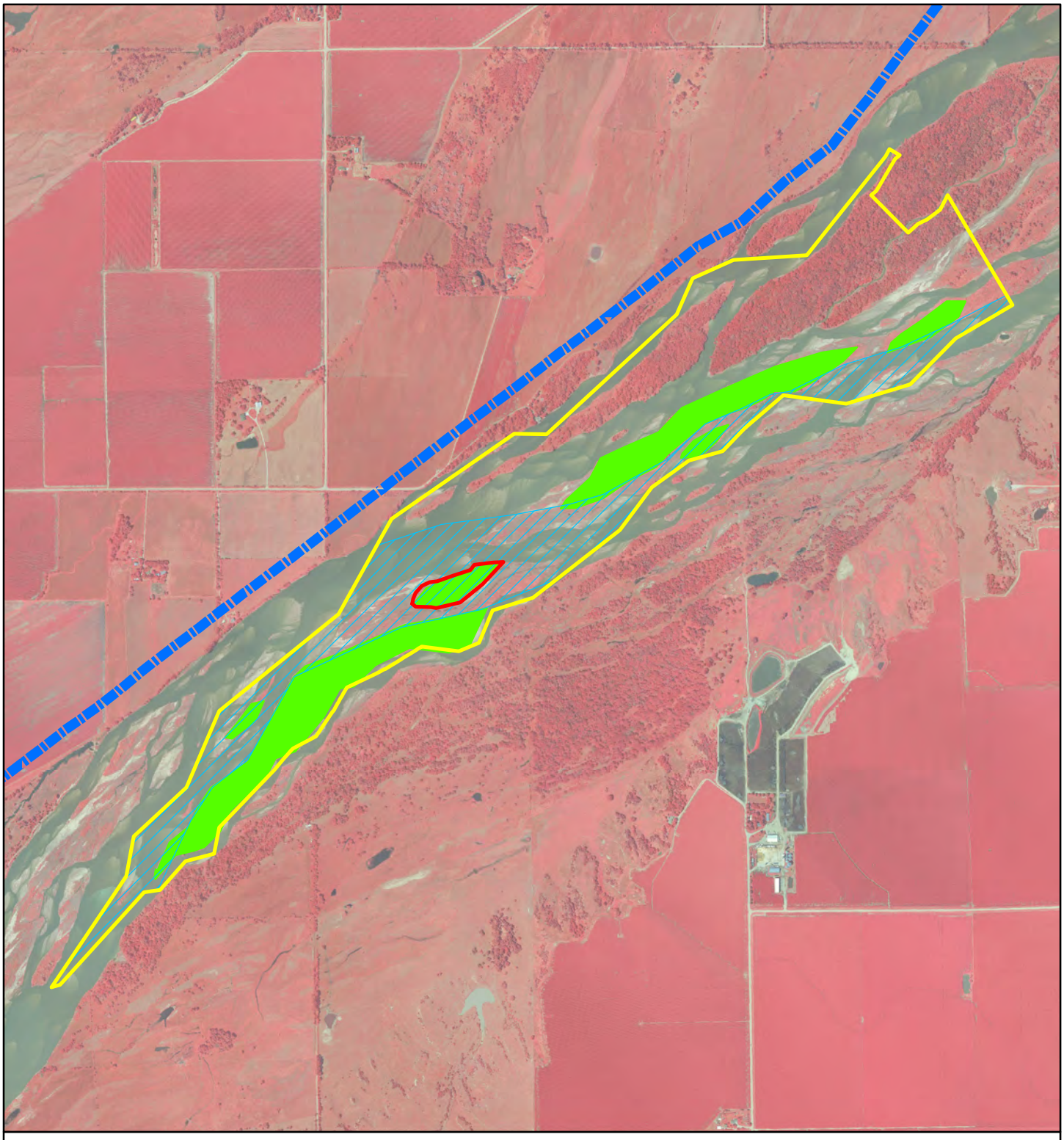
N

0.5 Miles

TRACT 2020001
Complex Acres

Date: 6/9/20
By: TRT

Figure A-7



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PRRIPTractNum

- 2020001
- Powerline
- MCA Habitat Manipulation Area
- In-channel Disking & Vegetation Control
- Island Tree Clearing

N

0.5 Miles

TRACT 2020001
Riverine Activities

Date:11/5/20
By: TRT

Figure A-8