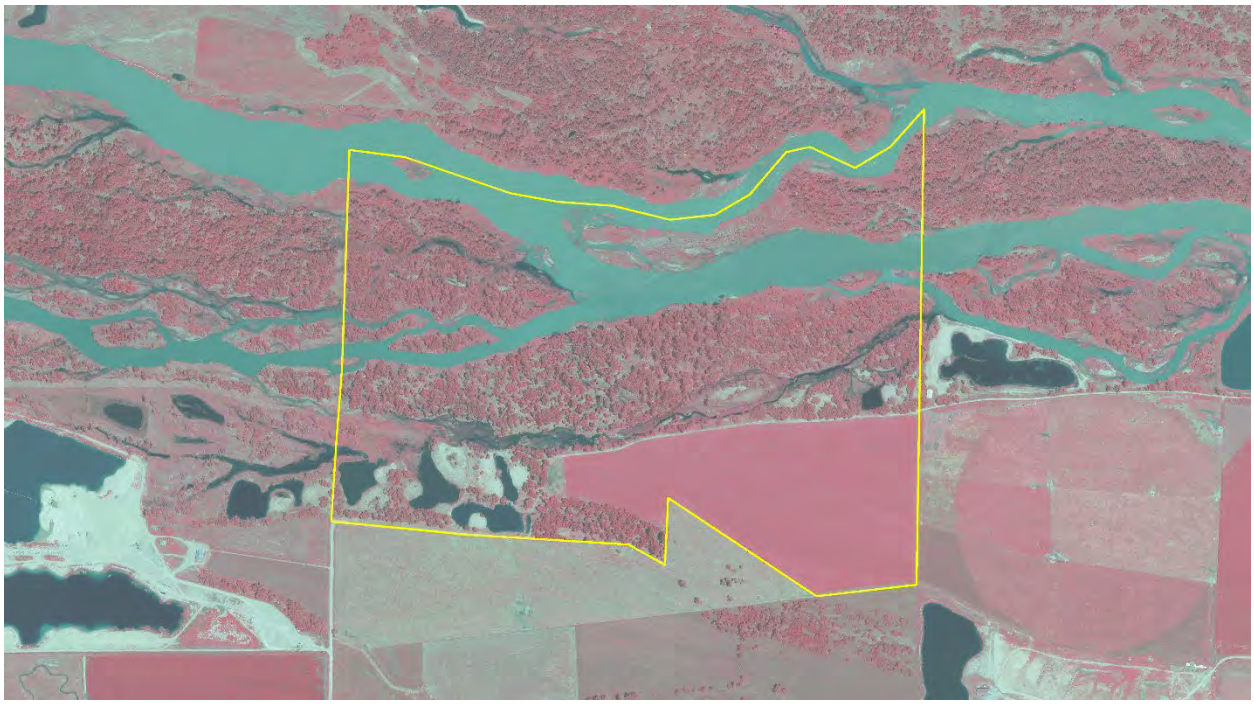
2024-2032 RESTORATION AND MAINTENANCE PLAN

For

TRACT 2024002 (W201601)



Prepared for:
Platte River Recovery Implementation Program Land Advisory Committee

Completion Date:
X/X/2024
GC Approved Date:
X/X/2024

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 2024002 (Water Tract Number W201601) during the period of 2024-2032. Species habitat and Adaptive Management research and monitoring actions associated with this tract are addressed in the "**RESTORATION & MANAGEMENT FRAMEWORK FOR PRRIP HABITAT COMPLEXES-2023 REVISION."** 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 W201601 is approximately 374 acres in size and is in section 7, T-8N, R-18W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is in the Overton to Elm Creek bridge segment also referred to as the Cottonwood Ranch Complex. Figure A-2 shows the parcel location within the Program land acquisition area and bridge segment.

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 2024002 Habitat Complex Acres

Land Classification*	Acres
Riverine	
Channel	161
Buffer	
Woodland	216
Dryland Crop	72

* 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 2008002, 2009006, and 20210001managed 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 – 1938 CIR Aerial Photography
- Figure A-6 – 1998 CIR Aerial Photography
- Figure A-7 – 2008 CIR Aerial Photography
- Figure A-8 – 2018 CIR Aerial Photography
- Figure A-9 – 2023 CIR Aerial Photography
- Figure A-10 – Riverine Activities
- Figure A-11 – Cropland Field

Table 2 – Tract 2024002 2005 Land Cover/Use Summary

Land Cover Classification	Acres	Percent of Tract
Bare ground/Sparse Veg	10.07	2.69%
Mesic Wet Meadow	11.55	3.09%
Phragmites	28.96	7.74%
Riparian Shrubland	19.27	5.15%
Riparian Woodland	134.20	35.87%
River Channel	9.40	2.51%
River Early Successional	12.46	3.33%
River Shrubland	8.42	2.25%
Rural Developed	43.91	11.74%
Unvegetated Sandbar	7.80	2.08%
Sand Pit	0.61	0.16%
Xeric Wet Meadow	82.10	21.95%
	374.10	**100.00%**

C. Existing Land Features of Interest

1. Non-Riverine Surface Water

There is non-riverine surface water on the property in the form of sand pits at the southwestern and southeastern corners of the property.

2. River Frontage and Active Channel Widths

The tract contains approximately 5,725 feet of Platte River frontage on the main channel. The property also contains a small southern channel that crosses through the center of the tract for approximately 5,197 feet.

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 of 2023. Channel width information is presented in Table 2.

Table 2 – Tract 2024002 Channel Widths

Measurement	Width (ft)
Minimum Channel Width	264
Maximum Channel Width	512
Median Channel Width	339
Mean Channel Width	356

3. Contiguous Sand Substrates

At the time of the review, there were approximately 0.5 acres of contiguous sand substrate, mostly confined to one large island in the main channel that appeared to have been cleared mechanically.

4. Island and Channel Bank Height

Channel bank height is on the order of zero to five feet above water surface under typical summer flow conditions. Islands in the channel are mostly vegetated and range from zero to three feet above water surface

5. Groundwater

NDNR well logs for wells just south of Tract W201601 indicate a ground water level of five to eight feet below the surface.

6. Flooding in Non-Wetland Areas

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

7. Power/Transmission Lines

There are above ground power lines on this property.

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 2024002 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 10- acres of riverbank and a 7-acre island (Figure A-8). 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. 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 and in-channel disking is identified on Figure A-10 – (66 acres in-channel disking area, 10 acres tree clearing and 7 acres of downfall clean-up).

    - **Timeline** – Project planning will take place in 2024. Tree clearing/disking will take place in late 2024 - early 2025.

    - **Costs** – Tree clearing, grubbing, burning, burying and tree stump relocation, in-channel disking, and 17 acres is expected to cost on the order of $25,500. 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 5a*** – Rehabilitate and maintain property boundary fencing and signage.
    - **Strategy** – The existing boundary fence is in good condition approximately (8,425 LF or 1.6 miles). The overall strategy will be to clear woody vegetation as necessary for access and fence reconstruction and rebuilding or replacing the boundary fence (with signage) as necessary. Fence maintenance strategy will be a combination of minimizing maintenance needs and scheduled maintenance.
    - **Methods** – Where necessary, trees will be cleared using heavy equipment. They will be stacked into piles and burned and buried. 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 –** Segment of fence are displayed on Figure A-11.
    - **Timeline** – Fence reconstruction and associated vegetation removal will begin when necessary.
    - **Costs** – Annual maintenance costs are expected to be on the order of $1,000. New fence construction is expected to be $2.50 per linear foot and $0.30 per linear foot for removal.
    - **Responsibilities** – Program staff are responsible for design and permitting. Construction and maintenance activities will be bid.
  - ***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 $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 4 – Minimize habitat impacts due to invasive vegetation.***

o ***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 $1,000.

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

3. Agricultural Operations

➢ ***Goal 7 – Manage cropland responsibly***

o ***Objective 7*** – 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) as specified in the "Restoration & Management Framework for PRRIP Habitat Complexes."

- **Strategy** – The Program will make entry into a rental agreement subject to agreement to coordination and approval of the above-mentioned items.

- **Methods** – Methods will be determined annually by Program staff and/or farm management contractors in association with the renter.
- **Area –** Dryland cropland field (72 acres). Figure A-11 shows dryland cropland.
- **Timeline** – Annual.
- **Costs** – Cropland management activities are expected to cost on the order of $500 annually. Estimated income is $11,000.
- **Responsibilities** – Program staff or a farm management contractor acting on behalf of the Program will be responsible for annual planning and coordination.

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

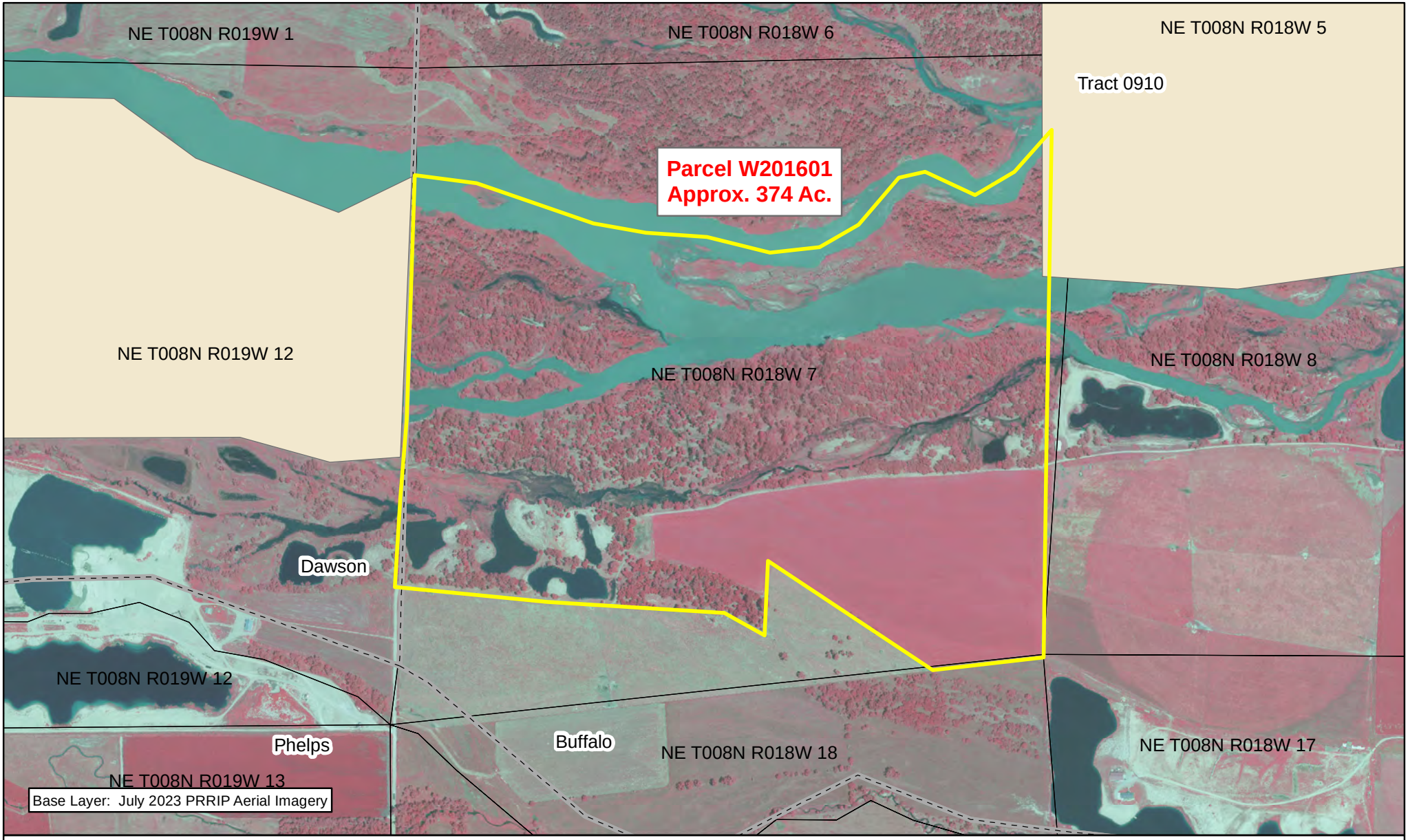
A. Education

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.

APPENDIX A – FIGURES



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Property Boundary
- Conservation_Lands
- County
- Section

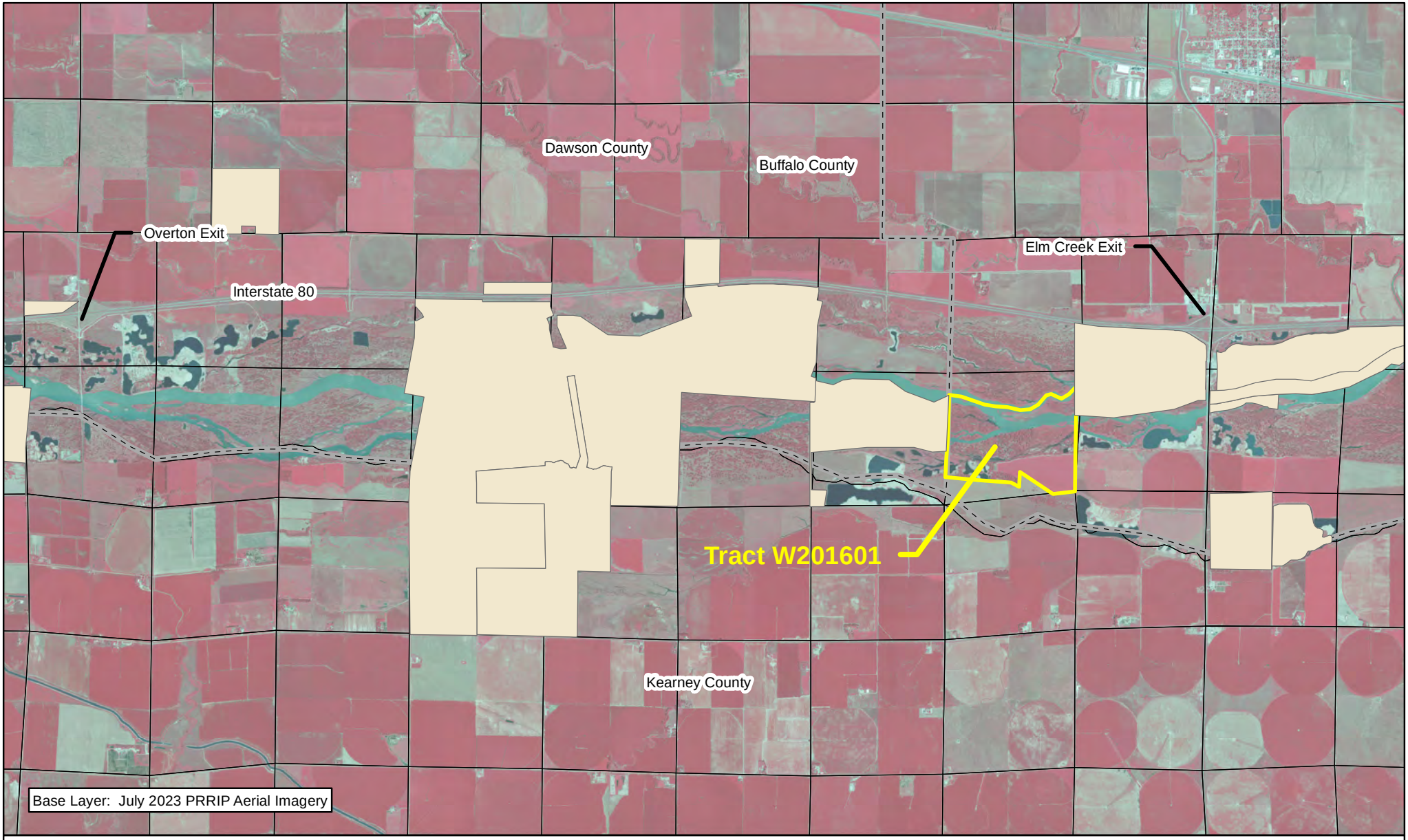
N

0.25 Miles

TRACT W201601
LOCATION MAP

Date: 01/22/24
By: TRT

Figure A-1



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- Conservation_Lands
- Property Boundary
- County
- Section

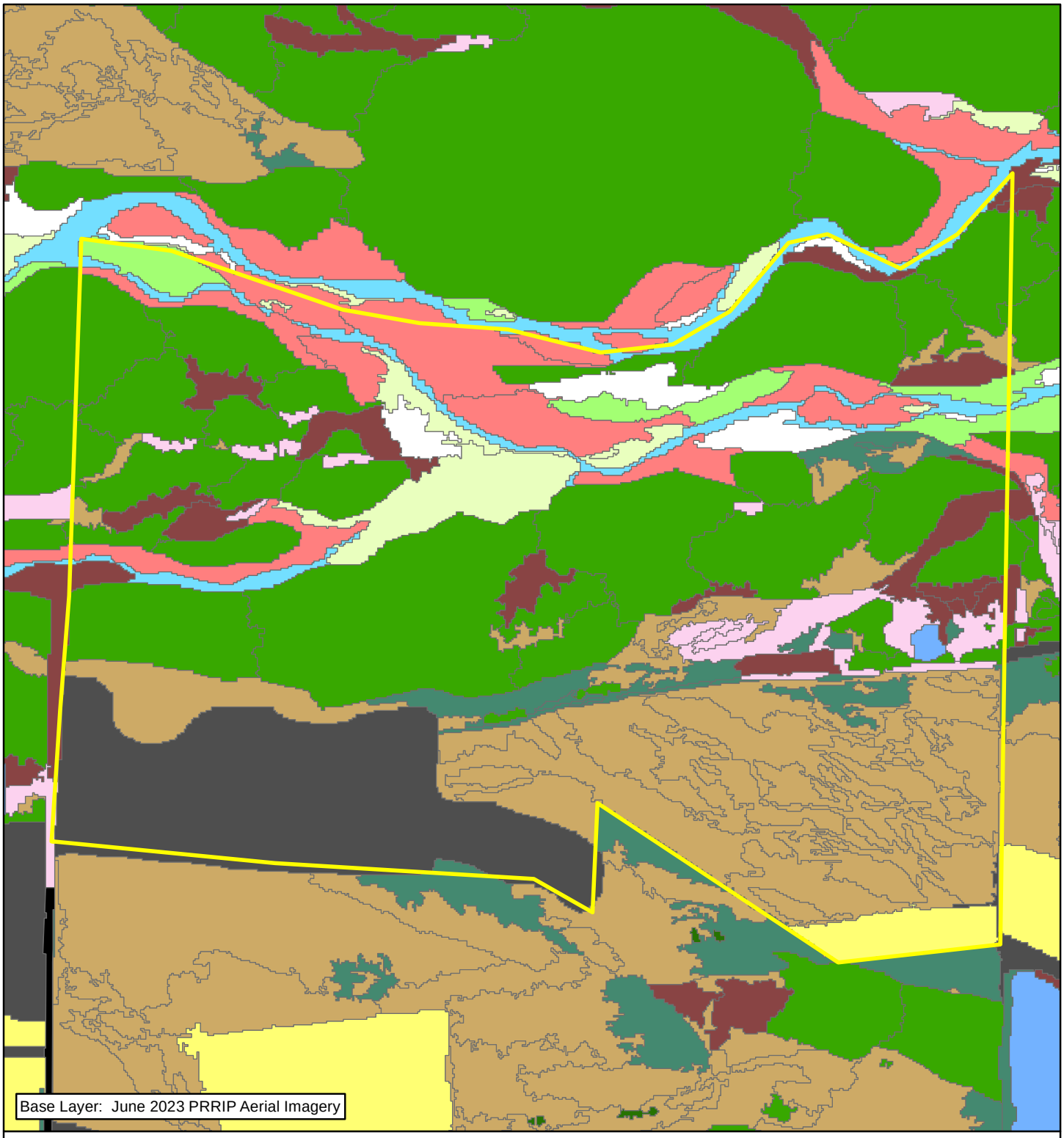
N

2 Miles

TRACT W201601
LOCATION MAP

Date: 01/22/24
By: TRT

Figure A-2



Legend

- PlatteRiver_2005LC_Lindstrom
- Property Boundary
- 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

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

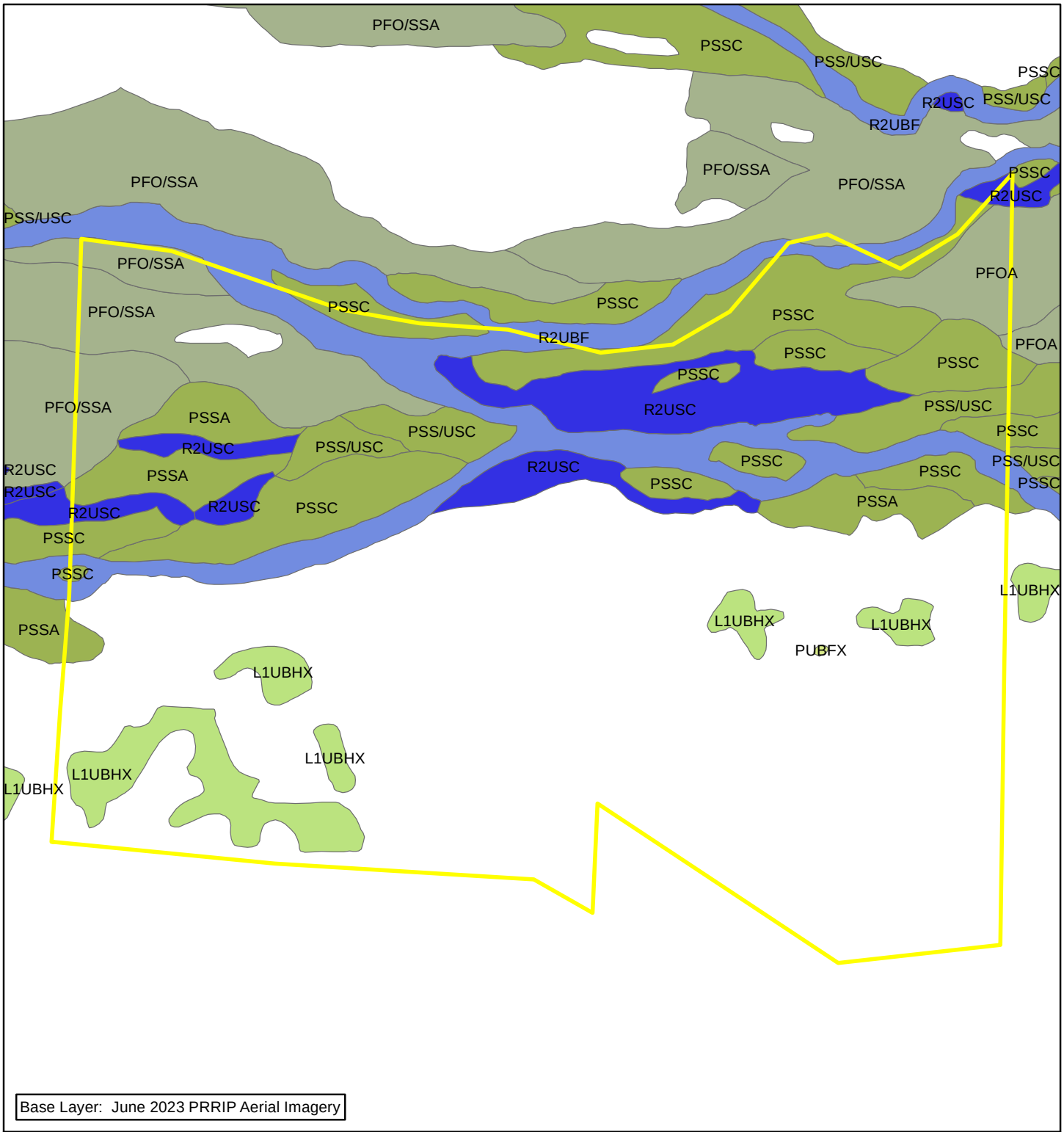
N

0.1 Miles

TRACT W201601
2005 LAND COVER/USE

Date: 01/22/24
By: TRT

Figure A-3



Legend

- Property Boundary
- 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)
- ne_nwi_poly

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

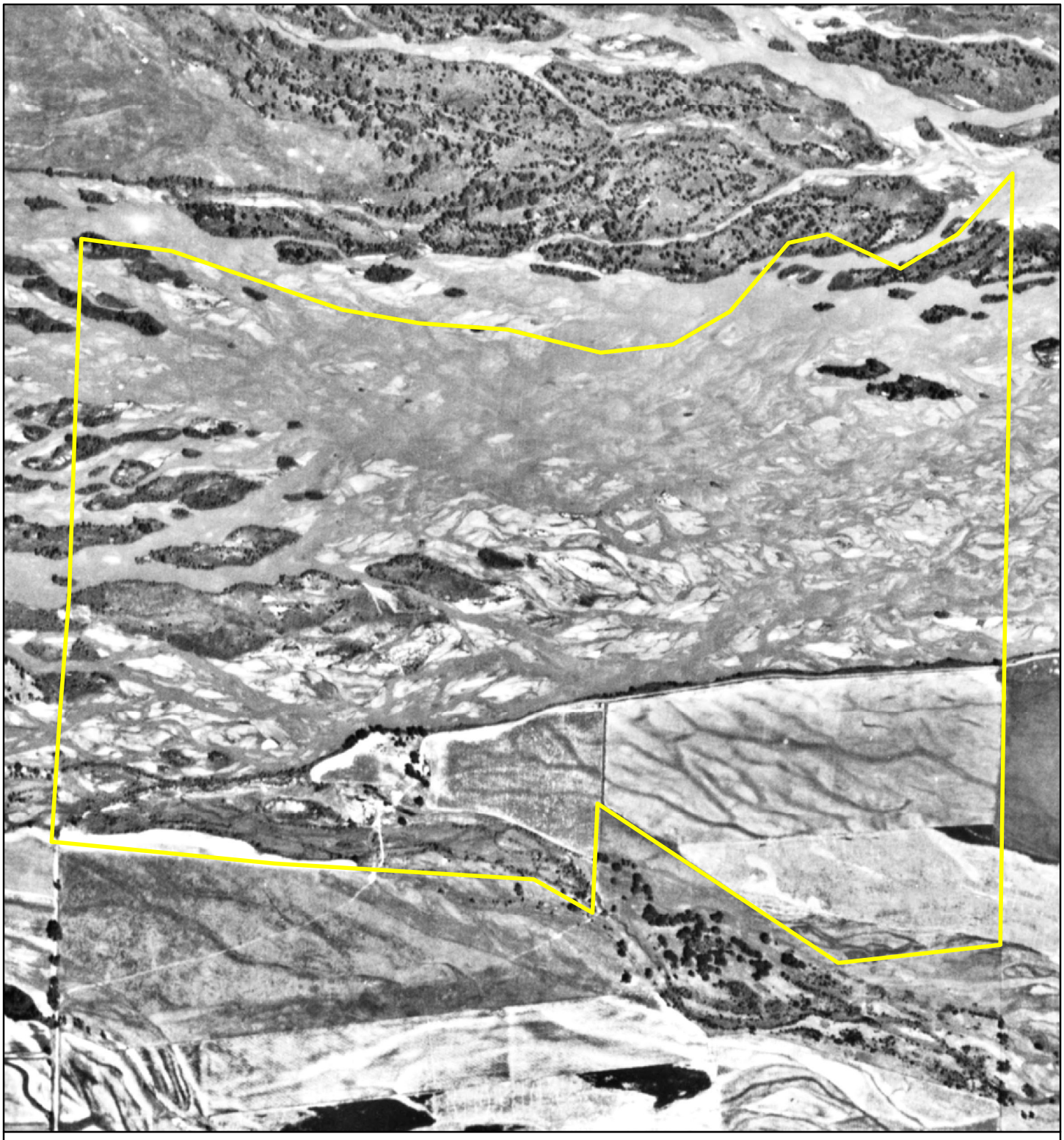
N

0.095 Miles

TRACT W201601
NWI MAP

Date: 1/22/24
By: TRT

Figure A-4



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Property Boundary

N

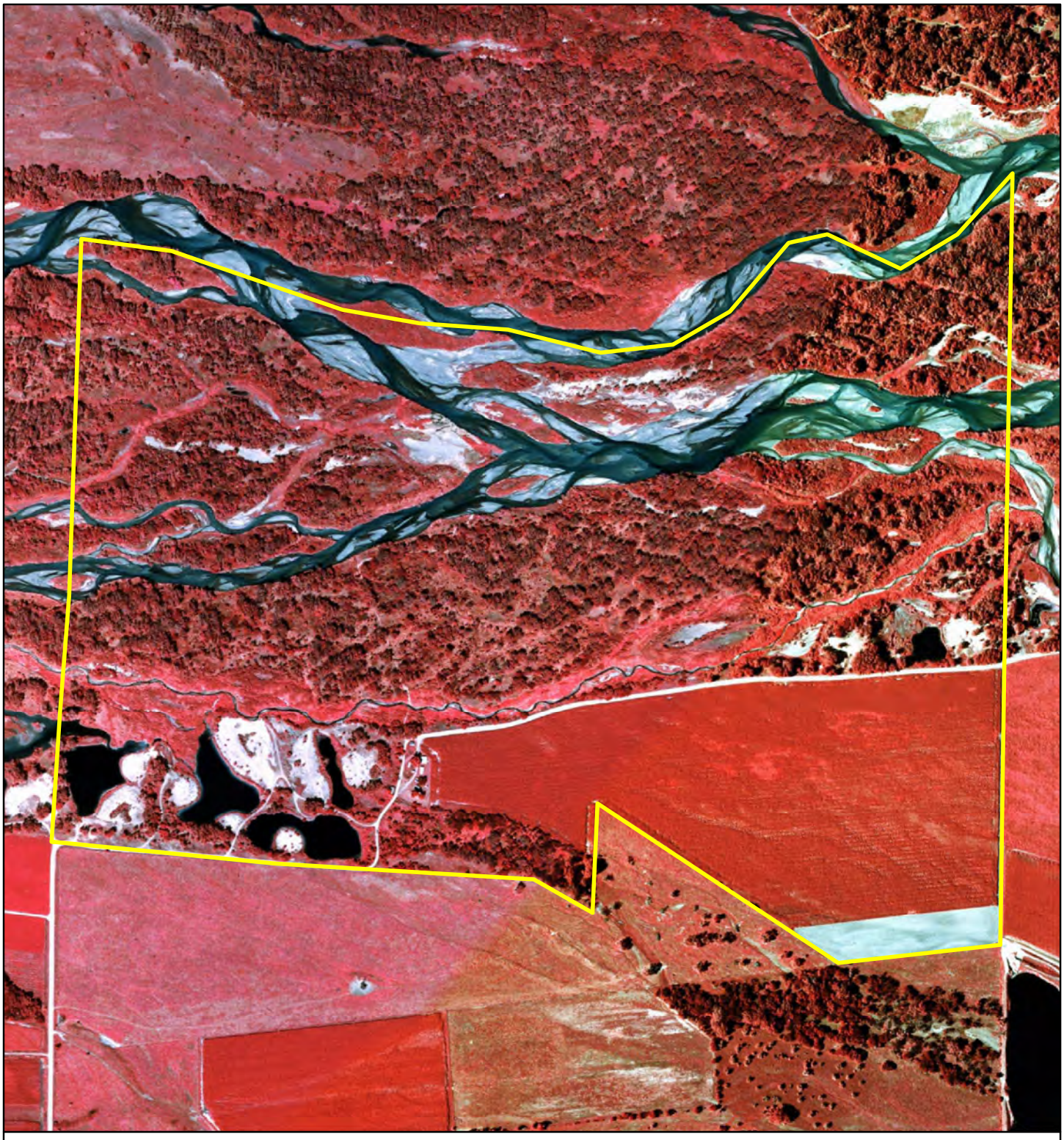
Miles

0.1

TRACT W201601
1938 IMAGERY

Date: Date: 1/22/24
By: TRT

Figure A-5



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Property Boundary

N

0.1 Miles

TRACT W201601
1998 CIR IMAGERY

Date: 1/22/24 By: TRT

Figure A-6

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Property Boundary

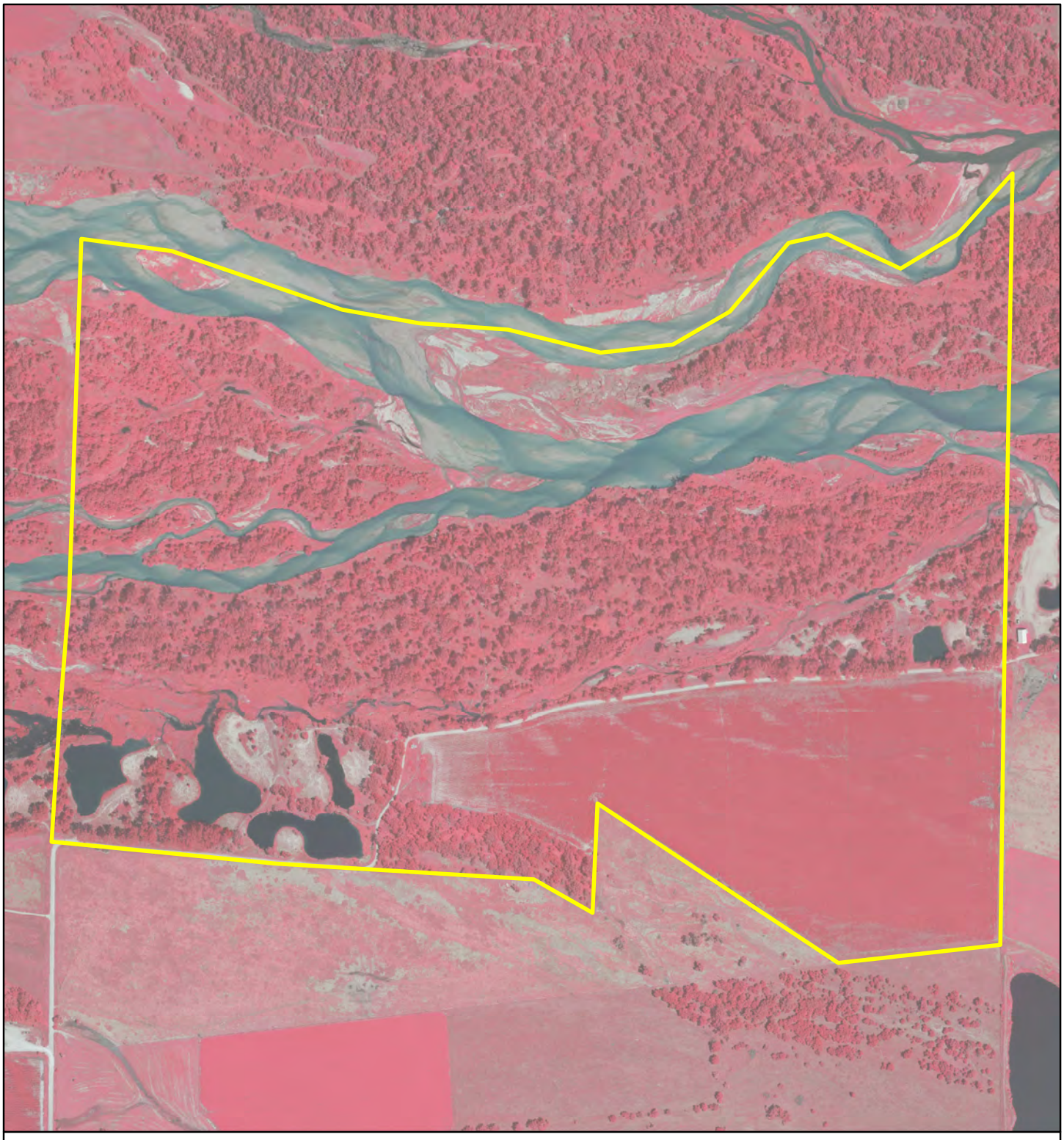
N

0.1 Miles

TRACT W201601
2008 CIR IMAGERY

Date: 1/22/24
By: TRT

Figure A-7



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Property Boundary

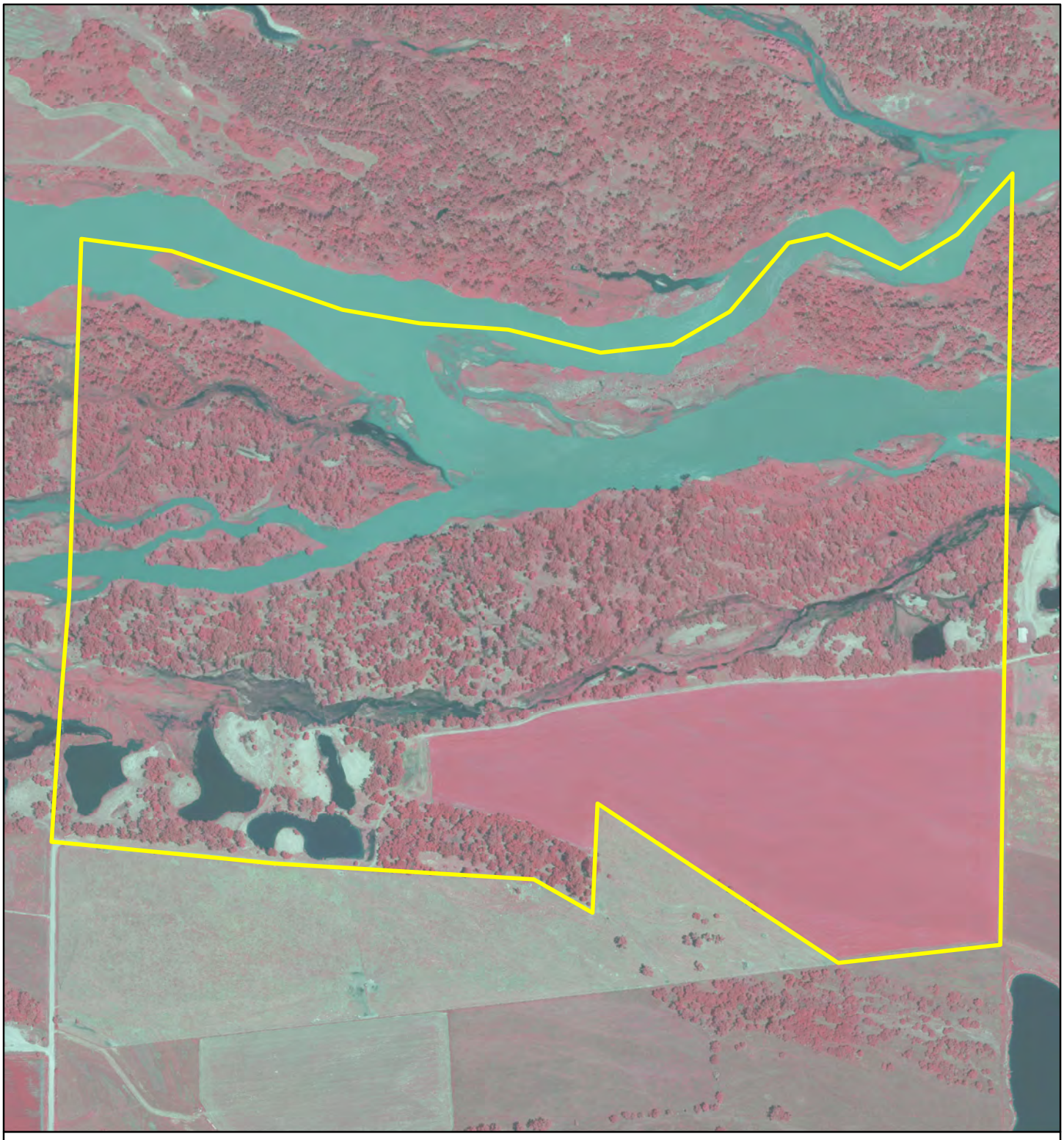
N

0.1 Miles

TRACT W201601
2018 CIR IMAGERY

Date: 1/22/24
By: TRT

Figure A-8



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

Property Boundary

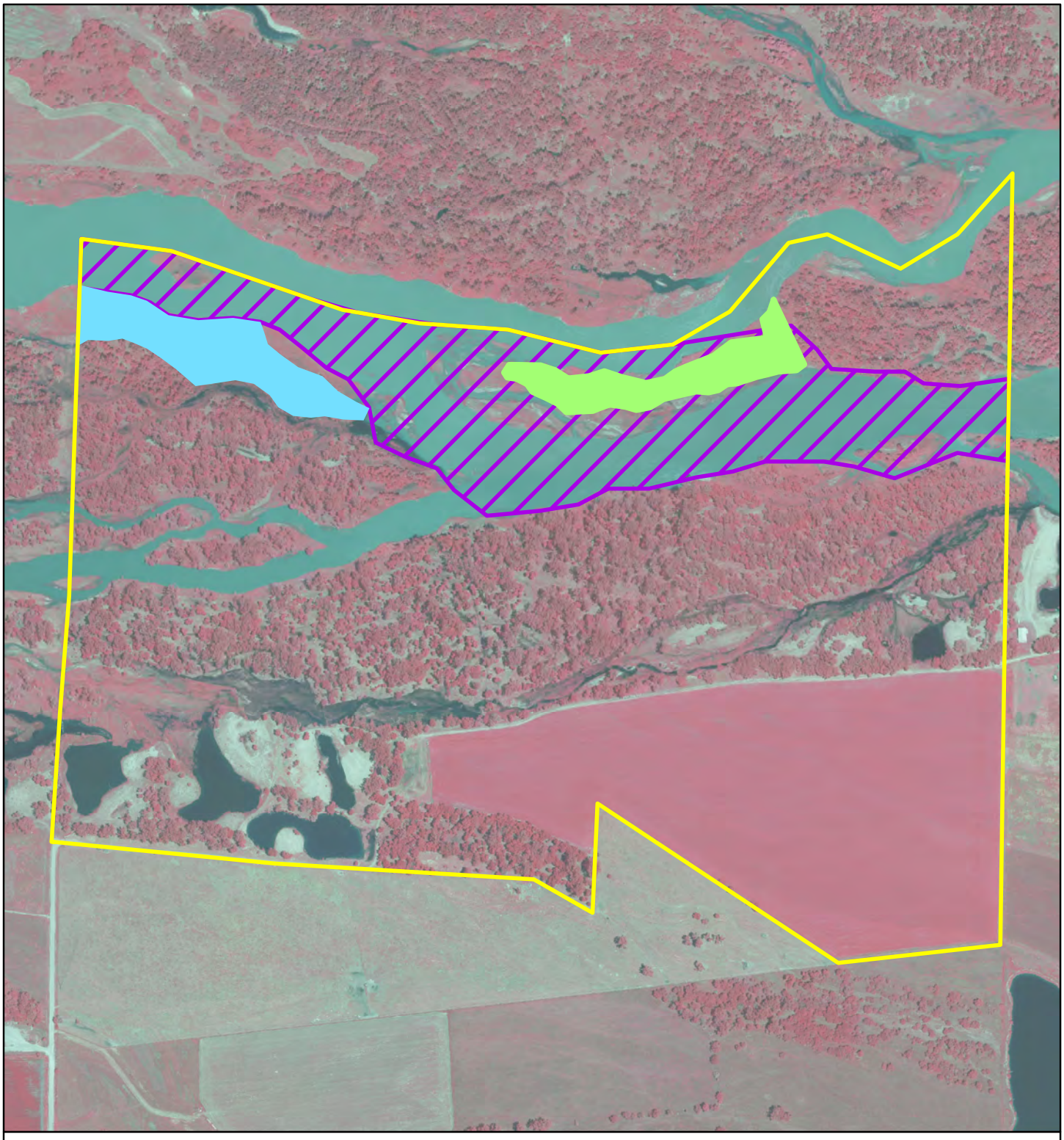
N

0.1 Miles

TRACT W201601
2023 CIR IMAGERY

Date: 1/22/24
By: TRT

Figure A-9



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

- PROPERTY BOUNDARY
- DEADFALL CLEANUP
- CLEAR & GRUB
- INCHANNEL DISKING

N

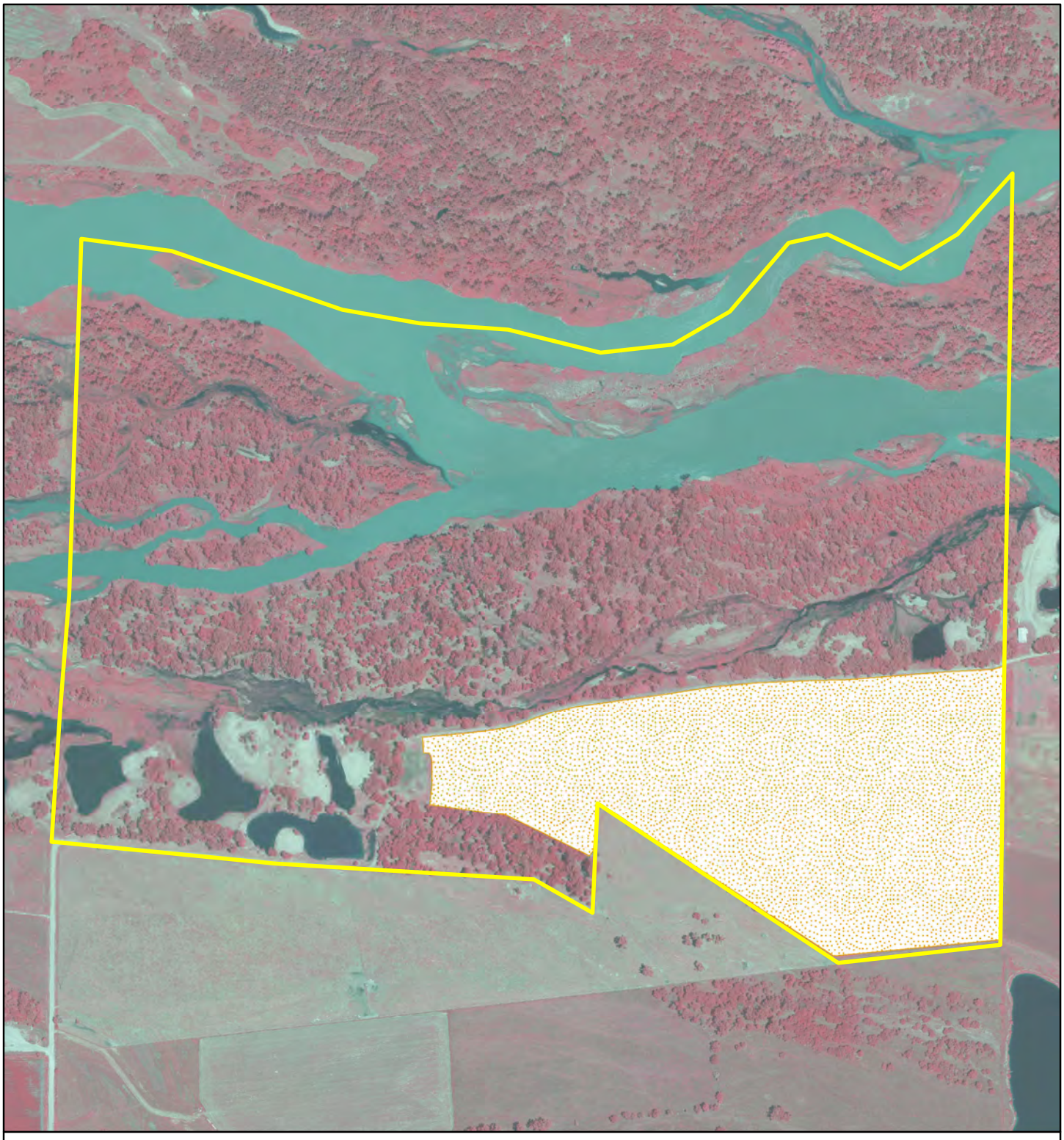
0.1 Miles

CONCEPTUAL RESTORATION DESIGN

Date: 5/7/24

By: TRT

Figure A-10



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Legend

PROPERTY BOUNDARY

DRYLAND CROP GROUND

N

0.1 Miles

CROPLAND AREA

Date: 5/7/24

By: TRT

Figure A-11