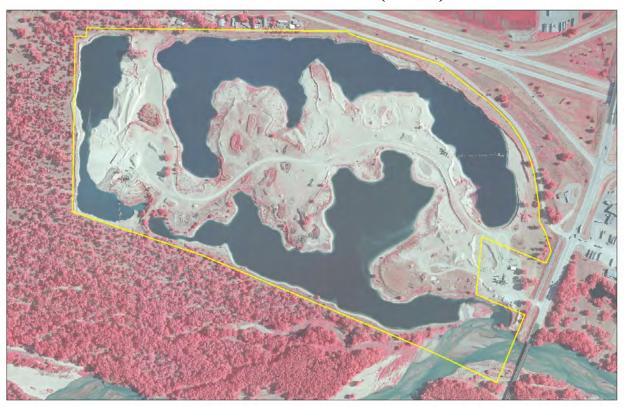

2020-2032 RESTORATION AND MAINTENANCE PLAN

For

TRACT 2020002 (1910)



Prepared for:
Platte River Recovery Implementation Program
Land Advisory Committee

Completion Date: **01/06/2021**

GC Approved Date: 03/10/2021

PRRIP	1/0	6/2020
	Table of Contents	
I. PROPERTY DESCRIPTION AND F	BACKGROUND	1
B. Tract Location and Size		1
D. Communication and Coordination	1	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 Modificati	ions	2
III. EXISTING HABITATS		3
A. Complex and Non-Complex Habi	tat	3
3. Excess Acres		3
C. Existing Land Features of Interest		4
1. Non-Riverine Surface Water		4
2. River Frontage and Active Chan	nnel Widths	4
3. Contiguous Sand Substrates		4
4. Island and Channel Bank Height	t	4
5. Groundwater		4
6. Flooding in Non-Wetland Areas	5	4
7. Power/Transmission Lines		4
	ental Concerns	
E. Certified Irrigated Acres		5
IV. OPERATIONS AND MAINTENA	NCE	<i>6</i>
A. Goals and Objectives		<i>6</i>
2. Property Maintenance		7
V. MONITORING AND RESEARCH		10
A. Baseline Monitoring		10
1. Least Tern, Piping Plover Monit	toring	10
VI. ENVIRONMENTAL LAWS, PER	MITTING AND COMPLIANCE	11
	nate Take of Least Tern and Piping Plover	
	nate Take of Whooping Crane	
	nate Take of Pallid Sturgeon	
	ct and Nebraska Non-game and Endangered Specie	



PRRIP	1/06/2020
3. Western Prairie Fringed Orchid	12
4. Platte River Caddis Fly	12
5. Vegetation Communities of Conservation Importance	12
6. Regal Fritillary	
C. Migratory Bird Treaty Act	
D. Bald Eagle Act	
E. United States Army Corps of Engineers Section 404 Permitting and Ne	braska Department
of Environmental Quality Section 401 Water Quality Certification	13
F. National Pollutant Discharge Elimination System Construction Stormw	ater Discharge
Permit	13
G. County Floodplain Development Permit	
H. State Historic Preservation Office Clearance	
I. Good Neighbor Policy	14
VII. PUBLIC ACCESS	
A. Education	14
B. Recreation	14
APPENDIX A – FIGURES	



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 2020002 (Evaluation Tract Number 1910) during the period of 2020-2032.

B. Tract Location and Size

Tract 2020002 is approximately 196 acres in size and is in portions of Sections 19 and 20, T-9N, R-21W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is located adjacent to the Lexington to Overton 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 are to 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. The sand pit area of this tract is considered as non-complex habitat in accordance with section II.B.2 and *Table 2. Non-Complex Habitat Guidelines* of the Program Land Plan.

1. Associated Complex Habitat

No portion of this tract is being considered as complex habitat.

2. Non-Complex Habitat Acres

The entirety of this tract is considered as non-complex habitat.

3. Excess Acres

This tract does not contain any excess acres.

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 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 Aerial Photography
- Figure A-6 1998 CIR Aerial Photography
- Figure A-7 2020 CIR Aerial Photography
- Figure A-8 OCSW Restoration Activities
- Figure A-9 OCSW Maintenance Activities

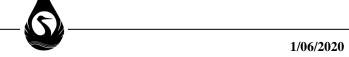


Table 1 – Tract 2020002 2005 Land Cover/Use Summary

Land Cover Classification	Acres	Percent of Total
Bare ground/Sparse Veg	12.6	6.4%
Phragmites	2.9	1.5%
Riparian Shrubland	7.7	3.9%
Riparian Woodland	13.5	6.9%
River Channel	1.9	1.0%
Rural Developed	99.2	50.6%
Sand Pit	53.8	27.4%
Xeric Wet Meadow	4.5	2.3%
	196.1	100.0%

C. Existing Land Features of Interest

1. Non-Riverine Surface Water

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This tract contains a sandpit lake covering approximately 82 acres.

2. River Frontage and Active Channel Widths

This tract was purchased as non-complex least tern and piping plover nesting habitat. The tract contains minimal river frontage adjacent to the highway 283 bridge.

3. Contiguous Sand Substrates

This tract contains approximately 82 acres of contiguous sand substrate, much of which could be converted to suitable least tern and piping plover nesting habitat with minimal restoration.

4. Island and Channel Bank Height

This tract includes no river channel.

5. Groundwater

There is no intent for wet meadow or wetland restoration for this tract. Observations of the lake level on site indicate groundwater approximately 5-8 feet below most of the sand area.

6. Flooding in Non-Wetland Areas

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

7. Power/Transmission Lines

Power lines on the tract are located along the east and northeast boundaries. They are not expected to be an issue for tern and plover habitat on this site.



D. Incompatible Uses and Environmental Concerns

Currently, the tract is an active sand and gravel mine. Mining will conclude in 2025. No environmental concerns were identified during the site visit, though some mining and construction rubble was present (old concrete, rebar, metal). The mining contractor is responsible for removing these materials at the conclusion of mining operations.

E. Certified Irrigated Acres

The tract includes no NRD certified irrigated acres.



IV. OPERATIONS AND MAINTENANCE

A. Goals and Objectives

Goals and objectives will function as the benchmark for evaluation of ongoing land-related actions. Implementation of Program actions to address goals and objectives will be accomplished at both complex and tract-level scales. Associated complex habitat for this non-complex tract is in the Plum Creek Complex.

1. Species Habitat

- ➤ Goal 1 Improve sand and water (off-channel sand and water; OCSW) habitat for interior least terns (LETE) and piping plovers (PIPL)
 - Objective 1a Create and maintain off-channel sand and water (OSCW) target bird species habitat that approximates *Table 1. Target Habitat Complex Guidelines* of the Program Land Plan, to the degree appropriate, and approximates at least the Program's minimum habitat guidelines.
 - Strategy Restore OCSW nesting habitat on the sandpit on the property. Phase 1 of the habitat restoration will occur in 2021 and later phases will occur through approximately 2025, as the mining activities at the site are concluded.
 - Methods OCSW nesting habitat restoration will be accomplished by grading and shallowing the slopes to the water on the mine peninsula. All vegetation will be removed from the peninsula, include the large trees. Application of pre-emergent herbicide will help with annual vegetation control and prevention. Predator fencing will be installed.
 - Area Grading/nesting areas and tree clearing areas for Phase 1 are presented in Figure A-8.
 - **Timeline** Phase 1 (2021 habitat area) will be created in the spring of 2021. Future phases of restoration of OCSW areas will occur as the miner concludes mining in other areas. The miner will be off-site in 2025.
 - Cost Phase 1 1 will cost up to approximately \$250,000. Total costs of the future phases are expected to be on the order of \$250,000, as well.
 - Responsibilities Program staff or contractors under the supervision of Program staff (in conjunction with the appropriate advisory committees) are responsible for design, permitting and monitoring. Construction and maintenance activities will be bid.



- o *Objective 2a* Maintain off-channel sand and water (OSCW) target bird species habitat that approximates *Table 2. Non-Complex Habitat Guidelines* of the Program Land Plan, to the degree appropriate, and approximates at least the Program's minimum habitat guidelines.
 - *Strategy* Maintain and protect OCSW nesting habitat on the peninsula located within the sandpit leased area.
 - Methods Typical OCSW maintenance will be accomplished by annual application of pre-emergent herbicide and installation of predator fencing (see also Obj. 3b). Mechanically clearing and grubbing of vegetation from proposed nesting areas will occur when necessary.
 - **Area** Habitat maintenance activities will occur on the existing nesting area shown in Figure A-9.
 - **Timeline** OCSW habitat maintenance will occur annually.
 - Cost Annual maintenance costs are estimated at \$4,000.
 - Responsibilities Program staff is responsible for coordination of maintenance activities. Contractors will perform herbicide applications.

2. Property Maintenance

- ➤ Goal 3 Fulfill basic property ownership obligations and needs.
 - o *Objective 3a* Maintain property boundary fencing and signage.
 - **Strategy** Maintain and/ or replace boundary fence, as necessary.
 - Methods Boundary fencing will be four wire livestock fencing and will be constructed per Natural Resources Conservation Service (NRCS) and Nebraska Game and Parks Commission (NGPC) design criteria. Boundary 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** Property boundary (Figure A-9).
 - **Timeline** –Boundary fence maintenance will occur as needed.



- Costs Boundary signage is expected to cost on the order of \$500.
 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.
- o *Objective 3b* Establish and maintain predator controls and signage.
 - Strategy A permanent predator fence will be constructed at each entrance to the nesting area to exclude people and predators from accessing the nesting area over land. Options for additional turtle fencing and/or strobe lights for further predator deterrent can be installed as need arises or research indicates success.
 - Methods The fence will be installed in 2021 on the existing nesting area. Maintenance methods may include mowing or spraying of woody species in the cleared area as well as routine fence upkeep.
 - Area Fence will be located at the entrance to the peninsula (identified on Figure A-9).
 - **Timeline** Fence will be installed in 2021.
 - Costs Predator fence is expected to cost on the order of \$15,000 and approximately \$200 annually for maintenance.
 - Responsibilities Program staff are responsible for design and permitting. Construction and maintenance activities will be bid.
- o *Objective 3c* Control noxious weeds on property.
 - Strategy Infestations of noxious weeds will be eliminated (to the extent possible) annually. Ongoing management/control needs will be assessed annually and incorporated into Work Plans. This tract will be maintained with little to no vegetation (see Obj. 2a) and noxious weed control needs should be minimal.
 - 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 weed control will be conducted on the entirety of the property.
- **Timeline** Noxious weed assessment and control activities will be conducted annually.
- Costs Annual costs will be identified in the annual Work Plans and are expected to be less than \$1,000.
- 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 4a Eliminate existing and control future infestations of invasive vegetation not listed as noxious weeds.
 - Strategy Existing stands of invasive vegetation will be eliminated (to the extent possible). Ongoing management/control needs will be assessed annually and incorporated into Work Plans. This tract will be maintained with little to no vegetation (see Obj. 2a) and invasive vegetation control needs should be minimal
 - **Methods** When necessary, invasive vegetation control will be accomplished through a combination of herbicide application and mechanical removal.
 - **Area** Invasive vegetation will be controlled on the entire property.
 - **Timeline** Maintenance and control efforts will continue annually.
 - 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.



V. MONITORING AND RESEARCH

A. Baseline Monitoring

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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. Least Tern, Piping Plover Monitoring

- Purpose Document LETE and PIPL use, nesting pairs, and fledging success.
- **Hypotheses Links** N/A
- **Timeline** Annual during First Increment Extension.
- **Responsibilities** Monitoring performed by ED Office.

2. 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.



VI. ENVIRONMENTAL LAWS, PERMITTING AND COMPLIANCE

A. 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 ensure 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

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 workday 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.



B. 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

The Program will conduct raptor surveys for management activities that may affect active raptor nests during the period of February 1 through July 15th. If a nest is discovered that tree will not be removed.

2. Northern River Otter

The Program will conduct natal den surveys when performing restoration or management actions during the period of February 15 to June 15 that may impact river channel or slough banks where natal dens may be present. If natal dens are discovered, the Program will coordinate with the NGPC to design appropriate buffers.

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

The tract was not surveyed for presence of Platte River caddisfly (PRCF). The bare sand and open water habitat that encompasses the entirety of this tract is not conducive to PRCF populations based on current knowledge of their biology.

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 reestablish 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.



C. Migratory Bird Treaty Act

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

D. Bald Eagle Act

Eagle nests will not be disturbed, and a quarter mile buffer will be maintained while occupied by adults or young. Known eagle roost trees will be left in place.

E. 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.

F. 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.

G. 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. 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.

H. State Historic Preservation Office Clearance

The legal description of Tract 2020002 will be provided to the State Historic Preservation Office (SHPO) to facilitate the early identification of potential cultural resources related issues. Potential cultural resource concerns on the property are not expected, as it is a location that has been actively mined for sand and gravel. 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.



I. 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.

VII. PUBLIC ACCESS

A. Education

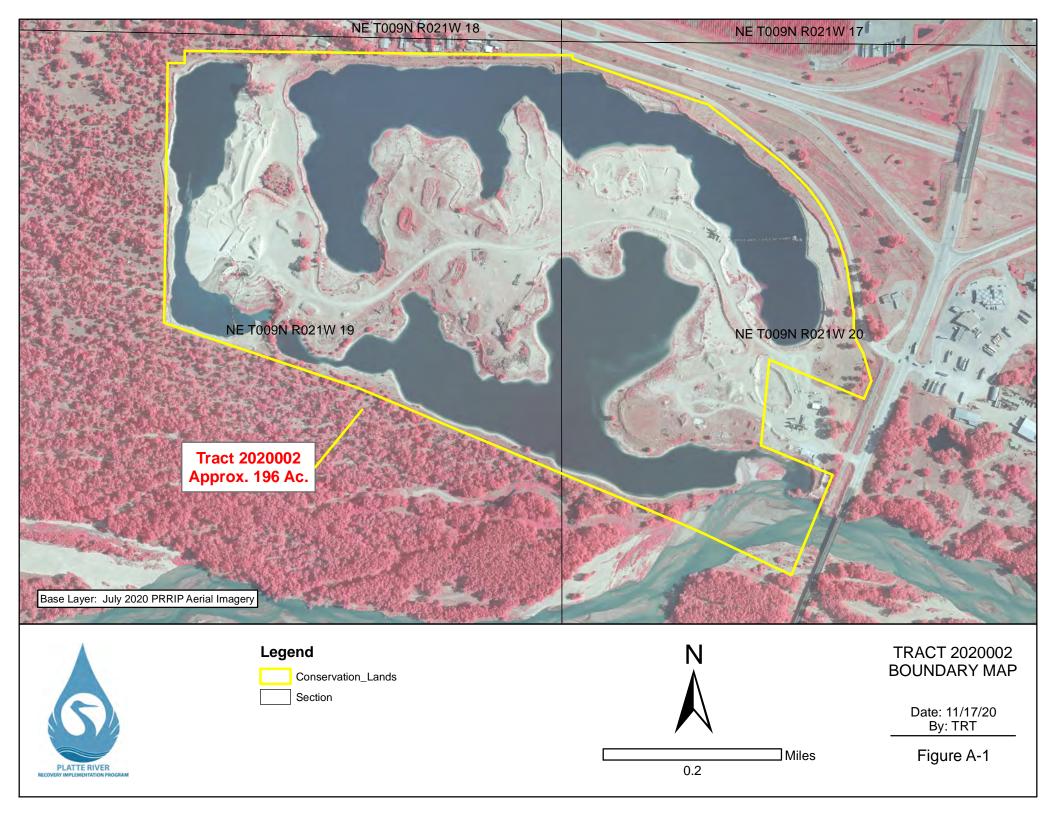
Access for education, including non-Program research, will be allowed on a case-by-case basis if it is compatible with target species usage and does not negatively impact species habitat. Program staff will be responsible for evaluating requests and granting access permission.

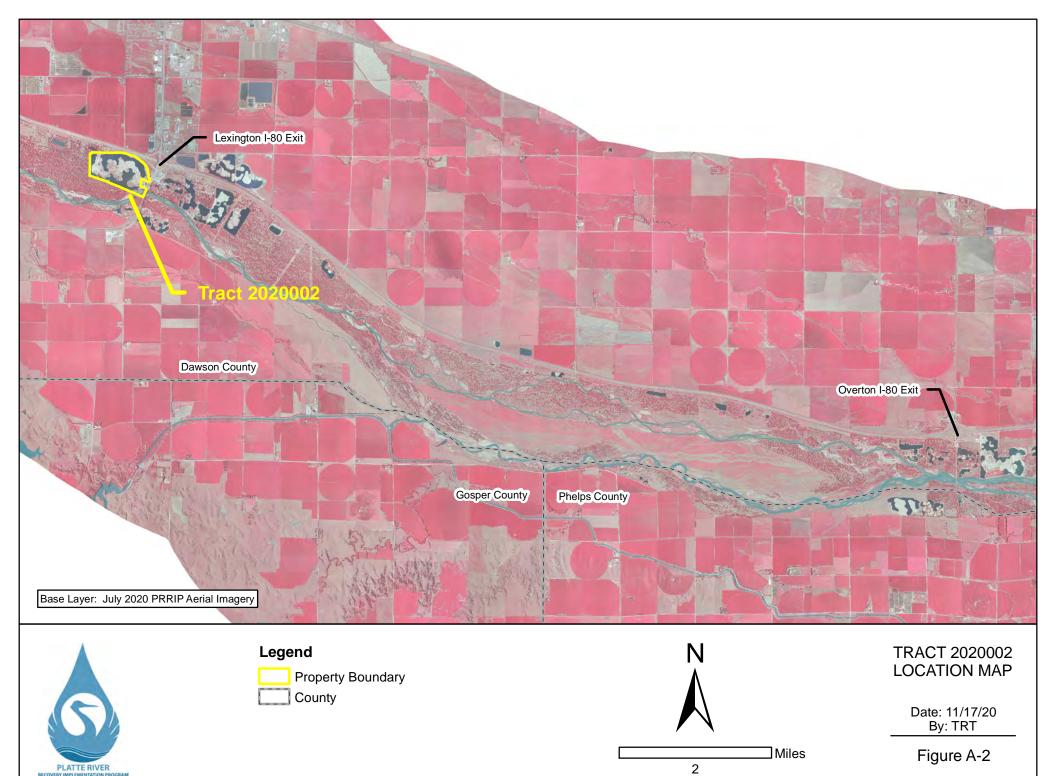
B. Recreation

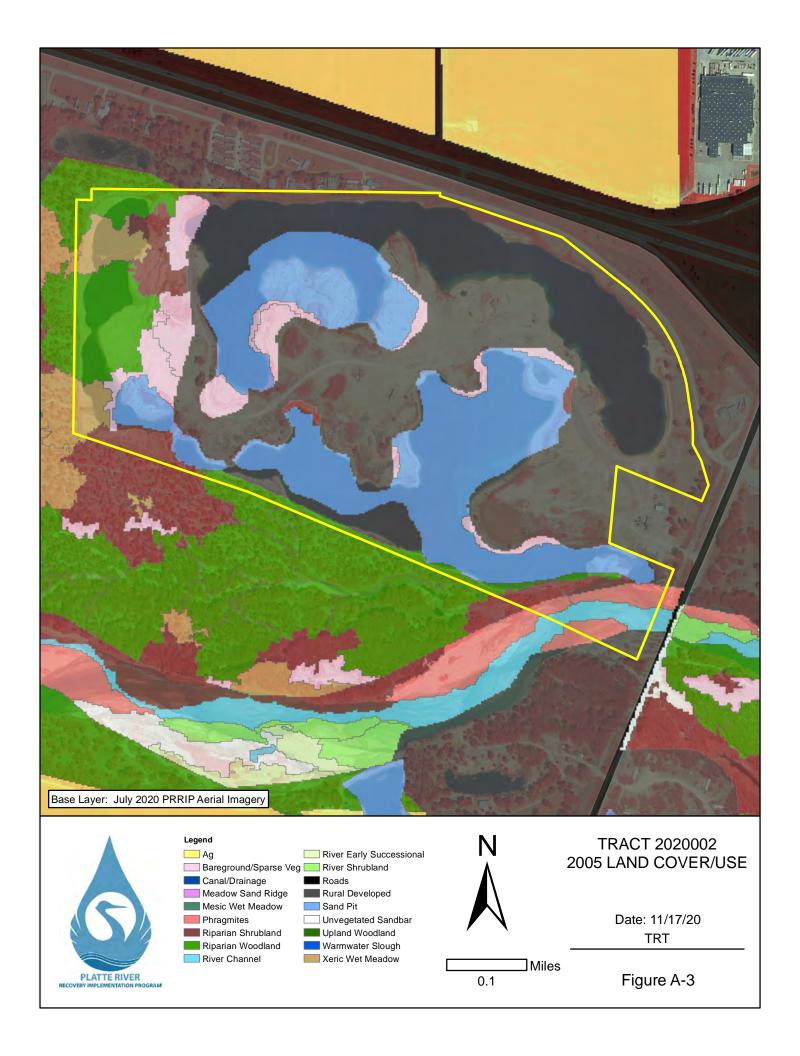
There will be no public recreation on this property due to the off-channel tern and plover site which is not conducive to public access.

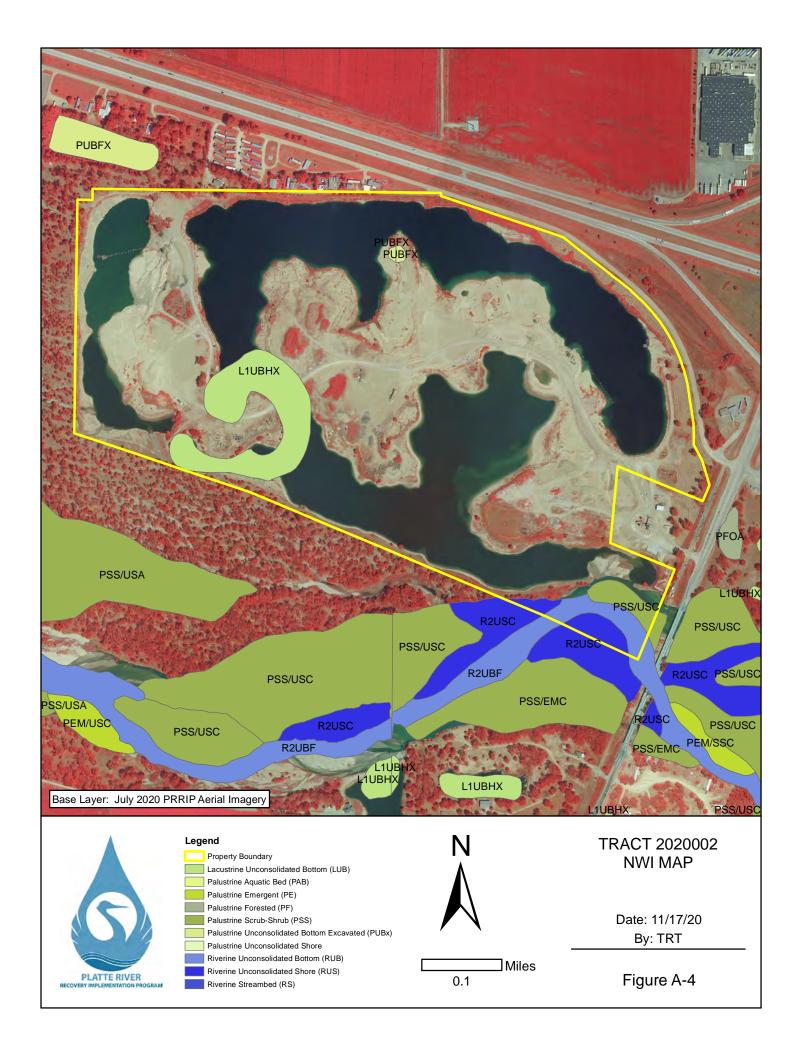


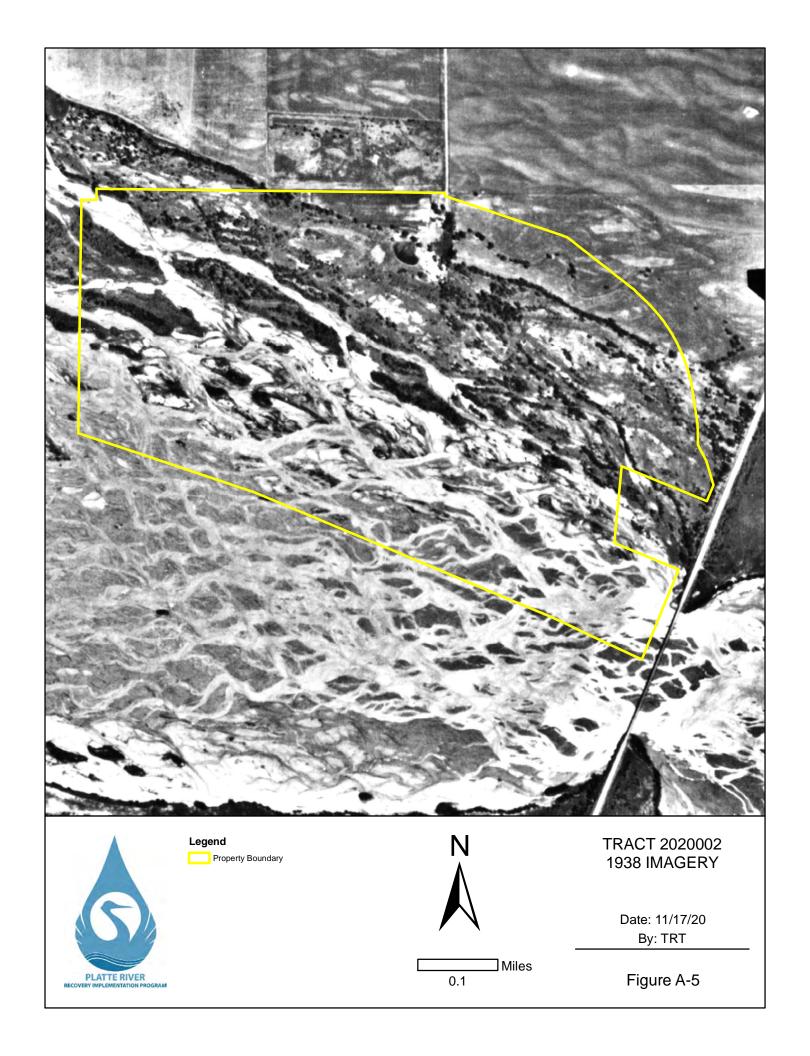
APPENDIX A – FIGURES

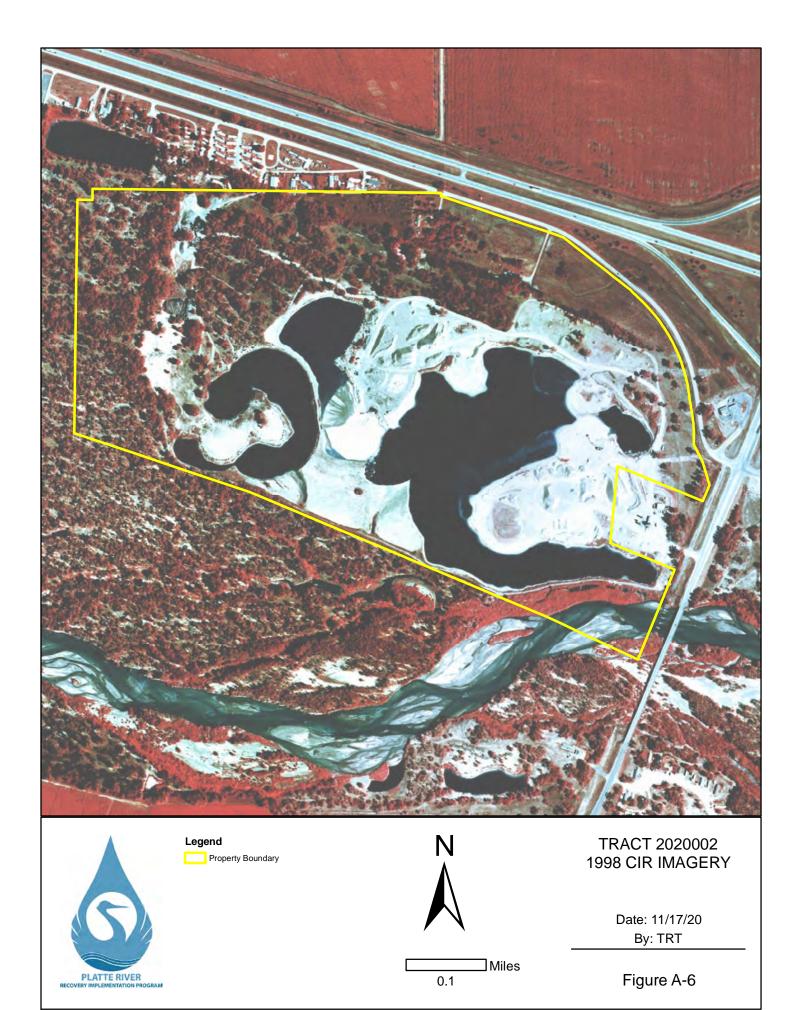


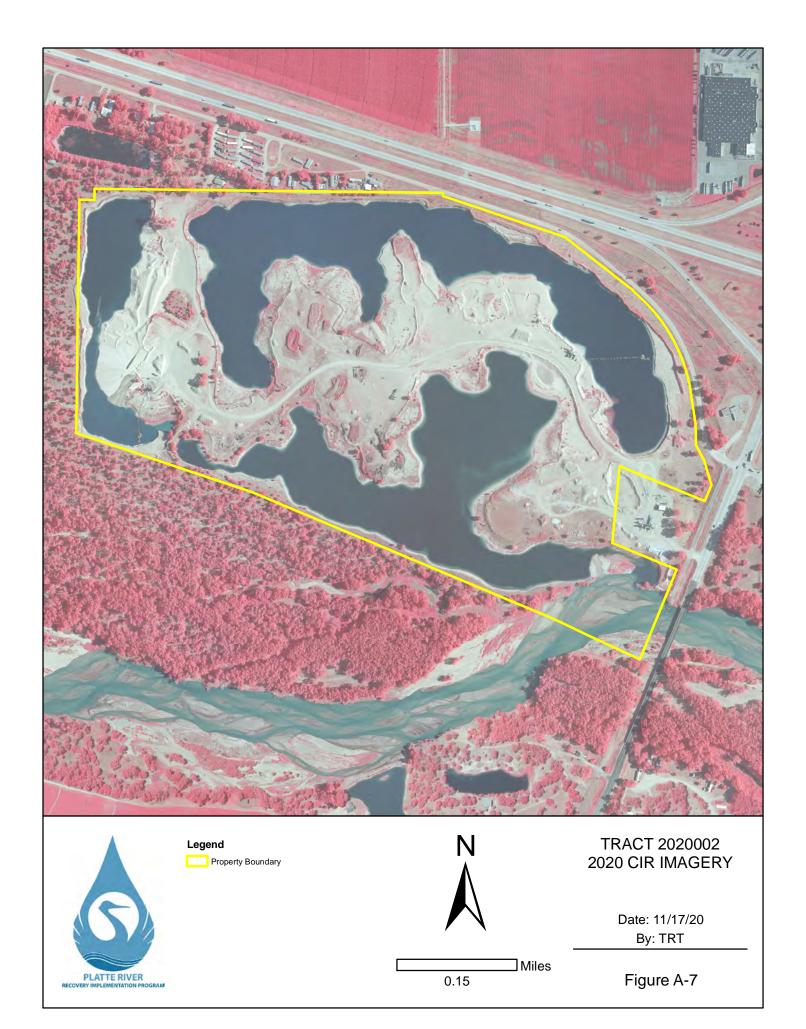


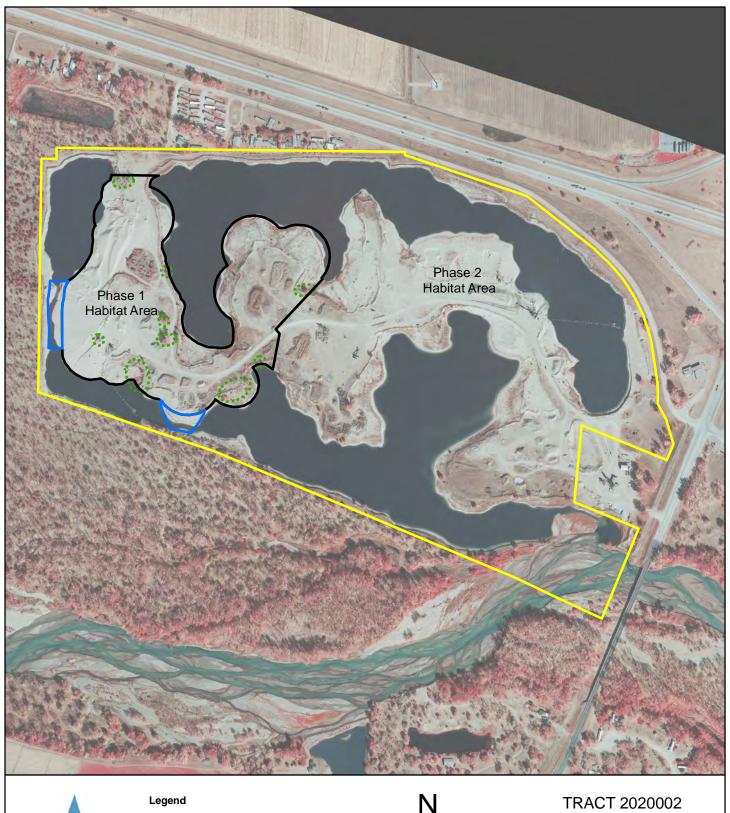














Moat Excavation Limits Phase 1 Habitat Grading Tree Clearing Property Boundary



OCSW Restoration Activities

> Date: 1/6/21 By: KLW

Miles 0.15

Figure A-8





2021 Permenant Predator Fence

2021-2023 Temporary Predator Fence

Property Boundary

Pre-emergent Herbicide Treatment Area 2021 Available Nesting Habitat

OCSW Maintenance Activities

> Date: 1/6/21 By: TRT

Miles 0.15

Figure A-9