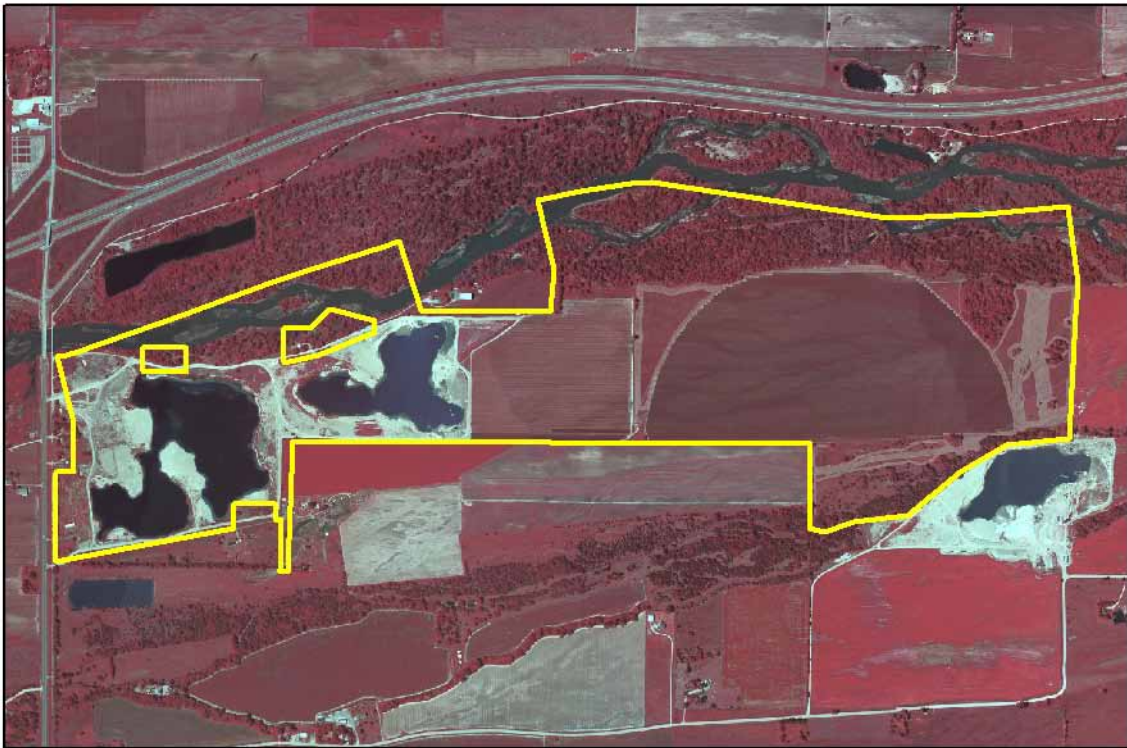




## 2011-2014 OPERATIONS AND MAINTENANCE PLAN

For

# TRACT 2009008



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

Completion Date:

**xx/xx/xx**



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## **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 2009008 (Evaluation Tract Number 0849) during the period of 2011-2014.

### **B. Tract Location and Size**

Tract 2009008 is approximately 524 acres in size and is located in portions of Sections 5, 6, 7, and 8, T-8N, R-14W. Figure A-1 (located in Appendix A) delineates the property boundary. The tract is located in the Minden to Gibbon 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 (as part of a complex-level annual work plan) 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.

It is anticipated that once every five years, complex-level restoration and management plans will go through a major revision process where the goals, objectives, and activities will be reevaluated. This Plan will also be reevaluated at that time and updated. Plan updates will be subject to the same comment and approval process as the original Plan.



### III. EXISTING HABITATS

#### A. Complex and Non-Complex Habitat

The entirety of the tract will be managed as non-complex habitat. The sand pit areas of this tract are 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*

The nearby Fort Kearny Complex, as well as Audubon's Rowe Sanctuary managed habitats can function as associated complex habitats for the purpose of adaptive management paired design experiments.

##### 2. *Non-Complex Habitat Acres*

The sand pit areas on the west half of the tract encompass approximately 130 acres and will be managed as non-complex habitat. All 130 acres are classified as Sandpit Habitat for Terns and Plovers (i.e. no acres classified as Non-riparian Habitat for Whooping Cranes).

##### 3. *Excess Acres*

The non-sand pit areas of this tract are considered as excess acres - approximately 360 acres in total. There are options to be explored for these acres, including their value as a land trade opportunity for complex habitat acres in another area of interest to the Program. Nebraska Game and Parks Commission (NGPC) Bassway Strip Wildlife Management Area bounds tract 2009008 to the north, and the opportunity may exist for land trades with NGPC for complex habitat near other Program lands. In addition, these excess acres include 180.9 Natural Resource District (NRD) certified irrigated acres, and may be of interest to the Water Advisory Committee for the Program pending their water review process.

#### 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 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 – 2010 CIR Aerial Photography



**Table 1 – Tract 2009008 2005 Land Cover/Use Summary**

<b>Land Cover Classification</b>	<b>Acres</b>	<b>Percent of Tract</b>
<b>Ag</b>	192.02	39.13%
<b>Bareground/Sparse Veg</b>	0.63	0.13%
<b>Mesic Wet Meadow</b>	7.71	1.57%
<b>Phragmites</b>	3.74	0.76%
<b>Riparian Shrubland</b>	36.54	7.45%
<b>Riparian Woodland</b>	80.10	16.32%
<b>River Channel</b>	5.43	1.11%
<b>River Shrubland</b>	0.41	0.08%
<b>Roads</b>	0.39	0.08%
<b>Rural Developed</b>	87.44	17.82%
<b>Sand Pit</b>	47.90	9.76%
<b>Upland Woodland</b>	3.07	0.63%
<b>Xeric Wet Meadow</b>	25.31	5.16%
	<b>490.69</b>	<b>100.00%</b>

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

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

There are two large sand pits on this tract. The western pit has a water surface area of approximately 37 acres. The eastern pit has a water surface area of approximately 21 acres.

The west sand pit has historically provided least tern and piping plover nesting habitat. However, much of the bare sand had become vegetated and the peninsula was restored in 2010.

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

The tract contains approximately 9,400 feet of Platte River frontage on the North Channel. The North Channel in this reach is narrow and vegetated and would not be considered for extensive habitat restoration.

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 2008 after the natural high flow event. Measured north-channel widths are presented in Table 2.



**Table 2– Tract 2009008 Channel Widths**

Measurement	Width (ft)
Minimum Channel Width	60
Maximum Channel Width	390
Median Channel Width	165
Mean Channel Width	180

### ***3. Contiguous Sand Substrates***

In June of 2008, when the CIR imagery was flown following the natural high flow event, there were approximately 10 acres of contiguous sand substrate. These acres are on peninsula areas of the two sand pits.

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

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

### ***5. Groundwater***

NDNR well logs for wells on and around the property indicate a ground water level of 5 feet below the surface.

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

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

### ***7. Power/Transmission Lines***

There is an above ground power line that services the gravel mining equipment and the residence near the north central part of the property. The power lines are mostly adjacent to large tree lines and away from nesting areas, and are not typically of concern for terns & plovers.

## **D. Incompatible Uses and Environmental Concerns**

Tract 2009008 does not currently have land uses that are incompatible with target species habitat. No environmental concerns have been identified.

## **E. Certified Irrigated Acres**

Tract 2009008 includes 180.9 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. This section addresses tract-level actions. Complex-level actions are presented in the Restoration and Management Plan for the Fort Kearny Complex. Tract-level goals and objectives are a function of property management and operations needs.

#### 1. *Species Habitat*

Ø **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 (OCSW) 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** Restore OCSW nesting habitat on the west sandpit on the property and coordinate pumping design and operations with current sand & gravel company to create additional OCSW nesting habitat on the east sandpit.

- **Methods** – OCSW restoration will be accomplished by removing all trees located within 200 feet of nesting habitat, mechanically clearing and grubbing all vegetation from proposed nesting areas and enhancing a second peninsula at the northwest corner of the west sandpit by excavating a channel to narrow the base of the northwest peninsula. OCSW nesting habitat maintenance will be accomplished by annual application of pre-emergent herbicide and installation of predator fencing. In addition, the Program will work with the gravel mining company to create a peninsula on the east sandpit via mining.

§ **Area** – Habitat restoration and management activities are presented in Figure A-8. This figure shows conceptual layouts for the new peninsulas and will likely change as design is completed.

§ **Timeline** – OCSW habitat restoration will be conducted in 2011. Mining a new peninsula in the east sandpit could take approximately three years. Nesting habitat maintenance will occur annually.



- § **Cost** – Annual vegetation control is estimated at \$3,000. Sandpit rehabilitation costs are expected to be on the order of \$50,000.
- § **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.

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

- **Objective 2a** – Evaluate habitat protection for other species of concern as need or opportunity is brought forward by USFWS or NGPC.
  - § **Strategy** – The Program will utilize the tract management planning and consultation process as the mechanism for identification of opportunities to benefit other species of concern. Following acquisition of a parcel, the Program will request that the USFWS and NGPC provide guidance on species of concern that may be present and benefit from management measures. The Program will survey all 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** – Program staff are responsible for initiating coordination. 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. Adaptive Management Goals and Objectives

This section contains objectives related to the experimental design of implementation of the Program’s Adaptive Management Plan and experiments to be conducted through that plan. The following summarizes major AM experimental design components that may be conducted completely or in part on this property:

1. “Paired Design” – River nesting vs. OCSW nesting (LETE, PIPL).
  - a. The objective of this experiment is to determine differences in nest success and productivity, as well as species preference and use, between river nesting and OCSW nesting of the target species by offering both types of available habitats in close proximity.



## 2. *Conservation Monitoring and Directed Research*

- a. System-wide Program conservation monitoring protocols (tern and plover, whooping crane, geomorphology/in-channel vegetation) and directed research projects (tern and plover foraging habits study) may occur on this property based on monitoring and research priorities and schedules.

### Ø *Goal 3 – Refine Program’s understanding of interaction between LETE and PIPL riverine and off-channel sand and water (OCSW) nesting habitat.*

- **Objective 3a** – Test Program System, LETE and PIPL hypotheses related to bird response to habitat development, habitat preference for and productivity on riverine versus OCSW nesting habitat. (Priority hypotheses S1b, T1, P1, TP1)

§ **Strategy** – Monitor LETE and PIPL use and productivity on Program sandpit OCSW habitat and adjacent Rowe Sanctuary or Fort Kearny Complex riverine habitat. Occurrence, use and productivity will be monitored per the Program’s LETE and PIPL monitoring protocol.

- **Methods** – Past maintenance has included using mechanical methods and/or annual application of pre-emergent herbicide to control vegetation. OCSW habitat creation and maintenance methods are presented under Objective 1a. Monitoring methods are presented in the Program’s LETE and PIPL monitoring protocol.

§ **Area** – See Objective 1a and Figure A-8 for location of OCSW habitat. The location of Audubon’s Rowe Sanctuary and Program-owned Fort Kearny Complex properties can be seen on Figure A-2.

§ **Timeline** – Maintenance and monitoring will occur annually.

§ **Cost** – None

§ **Responsibilities** – Program staff are responsible for design and permitting of new habitat construction. Program staff or contractors under the supervision of Program staff are responsible for maintenance and monitoring.

## 3. *Property Maintenance*

### Ø *Goal 4 – Fulfill basic property ownership obligations and needs.*

- **Objective 4a** – Establish and maintain property boundary fencing and signage.



- § **Strategy** – In 2010, a woven wire perimeter fence was constructed around the west pit to exclude people and predators from accessing the pit. Portions of the remaining south fence are not on the actual property boundary. The south boundary fence will be constructed on the property boundary.
  - **Methods** – Boundary fencing will be four wire livestock fencing and will be constructed per Natural Resources Conservation Service (NRCS) and NGPC design criteria. South of the eastern sandpit, a 4 foot woven wire fence with 2 inch horizontal spacing and 4 inch vertical spacing and topped off with a single strand of barb wire 6 inches above the woven wire will be constructed according to Ducks Unlimited (DU) 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** – Portions of south property boundary.
- § **Timeline** – Boundary signage will be installed on existing boundary fences in 2011. New fence construction would begin no earlier than July 15, 2011.
- § **Costs** – Boundary signage is expected to cost on the order of \$500.
- § **Responsibilities** – Program staff are responsible for design and permitting. Construction and maintenance activities will be bid.
- **Objective 4b** – 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 weed control will be conducted on the entirety of the property.
- § **Timeline** – Noxious weed control activities will be conducted annually.
- § **Costs** – Annual costs will be identified in the annual Work Plans and 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.

Ø **Goal 5 – Minimize habitat impacts due to invasive vegetation.**

- **Objective 5a** – 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) 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 application 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. Cottonwood and other woody species will be control around the perimeter of the west sandpit
  - § **Timeline** –Control efforts will begin after July 15, 2011 and maintenance/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 \$5,000.



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

#### 4. Agricultural Operations

##### Ø *Goal 6 – Manage excess acres to benefit target species, other species of concern and for management of invasive vegetation.*

- **Objective 6a** – Convert approximately 20 acres of marginal feedlot area located on the west side of the property to grassland for management of invasive vegetation.

- § **Strategy** – Grassland establishment strategy will be to use a commercial or local ecotype mix of native grasses and forbs seeded outside of the growing season. Future management will be primarily haying.

- **Methods** – Seeding areas will be drilled with a commercial or local ecotype native grass seed mix. Seeded areas will be excluded from haying until well established.

- § **Area** – Habitat restoration and management activities are presented in Figure A-8.

- § **Timeline** – Seeding will occur during the winter of 2010-2011.

- § **Costs** – Seeding is expected to cost on the order of \$3,000. Estimated future income from haying is \$600.

- § **Responsibilities** – Program staff are responsible for coordination. Seeding will be contracted.

##### Ø *Goal 7 – Manage cropland responsibly.*

- **Objective 7a** – 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.
- § **Timeline** – Annual.
- § **Costs** – Cropland oversight and input costs are estimated on the order of \$28,000 annually. Estimated gross income is \$60,000.
- § **Responsibilities** – Program staff or a farm management contractor acting on behalf of the Program will be responsible for annual planning and coordination.

## 5. Land Asset Management

### Ø Goal 8 – *Dispose of Excess Acres*

- **Objective 8a** – Dispose of part of tract 2009008 identified as excess through practical means.
  - § **Strategy** – ED staff will work with committees to identify area determined to be excess. Options will be explored for the Program to divest of their interest in the identified parcel.
    - **Methods** – Once a final area is identified, ED staff will explore practical options for divesting of the excess acres. These options may include, but are not limited to, trade for additional Program land or fee title sale with conservation easement. All transactions are subject to GC approval.
  - § **Area** – To be identified, but likely to include all area east of the gravity irrigated crop field.
  - § **Timeline** – Area will be finalized as designs for western non-complex habitat are developed in 2011. Divestment of identified excess area should occur by 2013.
  - § **Costs** – Costs will depend on method of divestment, but transaction is likely to result in a breakeven or net income situation.
  - § **Responsibilities** – Program staff will work with committees to identify excess acres. Program staff will pursue opportunities to divest of the parcel subject to GC approval.



## 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. Channel LiDAR Project

- **Objectives** – Document channel topography at beginning of First Increment. LiDAR will be collected again near the end of the First Increment to document changes in channel topography.
- **Hypotheses Links** – S1, S1a, Flow1, Sediment1-4
- **Timeline** – LiDAR collection completed in March of 2009. Next collection in 2018.
- **Responsibilities** – Collection and analysis by contractor under supervision of ED Office.

#### 3. 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.

#### 4. In-Channel Geomorphology and Vegetation Monitoring

- **Purpose** – System-wide analysis of changes/trends in geomorphology and in-channel vegetation over time. Correlate Program actions with changes/trends. Rotating panel point 30 is located near the center of the complex.
- **Hypotheses Links** – Flow1-5, Sediment1-4
- **Timeline** – Annual during First Increment.
- **Responsibilities** – Monitoring performed by contractors under supervision ED Office.

#### 5. Least Tern, Piping Plover and Whooping Crane Monitoring

- **Purpose** - Document WC use, document LETE and PIPL use, nesting pairs, and fledging success.
- **Hypotheses Links** – T1, P1, TP1-5, WC1 & 3
- **Timeline** – Annual during First Increment.





- **Responsibilities** – Monitoring performed by contractors or cooperators under supervision ED Office.

#### ***6. 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**

Research efforts to be conducted in full or part on this complex under the IMRP include:

#### ***1. LETE, PIPL and WC riverine habitat selection experiment (Goal 2, Objectives 2a & 2b)***

- **Purpose** - Refine Program’s understanding of interior LETE, PIPL and WC riverine habitat needs and test associated AMP priority hypotheses for each species.
- **Hypotheses Links** - S1b,T1, P1, TP4d, TP5, WC1, WC3
- **Timeline** – Design and construction in 2010. Monitoring annually.
- **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.

#### ***2. LETE and PIPL riverine versus OCSW experiment (Goal 3, Objective 3a)***

- **Purpose** - Determine LETE and PIPL preference for and productivity on riverine versus OCSW nesting habitat.
- **Hypotheses Links** - S1b, TP1
- **Timeline** – Design and construction in 2010. Monitoring annually.
- **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.

#### ***3. Vegetation scour research (Goal 4, Objective 4a)***

- **Purpose** – Evaluate the potential for flows to scour vegetation of differing species and age classes. Results will be used in a larger investigation of ability for managed flows to maintain an active channel free of vegetation.
- **Hypotheses Links** - Flow1, Flow3, Flow4, Flow5
- **Timeline** – Contractor selection in 2010. Research 2010 – 2011.

#### ***4. Wet Meadow Information Review and Related Experiments (Goal 6, Objective 6a)***

- **Purpose** – Refine Program’s understanding of interaction between target species and wet meadow habitat. Information review on wet meadows scheduled for 2010. Specific



experiments and locations will be identified pending advisory committee and Program staff review of wet meadow information.

- **Hypotheses Links** - S1b, S1c, S2, WC-1, WC-4, WM-2, WM-3, WM-4, WM-8a
- **Timeline** – Information review completed in 2010. Planning in 2010.
- **Responsibilities** – Information review to be completed by contractors under the supervision of Program staff. 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.



## **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 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***

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.



## **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 15<sup>th</sup>. 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 7<sup>th</sup>. If this species is present, activities will be modified to prevent destruction of existing plants.

### ***4. Platte River Caddis Fly***

The tract was surveyed for presence of Platte River caddisfly (PRCF) in March of 2010 by USFWS personnel. As noted by USFWS in the correspondence following the survey, two areas of suitable habitat were identified. The westernmost tree line on the property was walked and no standing water or suitable habitat was located. The easternmost tree line contained a few areas of standing water. Two, thirty-minute surveys for the PRCF were conducted, and discarded larval cases were found at one of these locations (UTM 14N, 0505816, 4503969). Presumably this is an extant population, based on the availability of suitable habitat there, and follow-up surveys will be conducted annually or prior to any management that might impact the species or its habitat.

### ***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.

## **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 30 and July 15 without first doing surveys to insure 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. 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.



#### **H. State Historic Preservation Office Clearance**

The legal description of Tract 2009008 was provided to the State Historic Preservation Office (SHPO) to facilitate the early identification of potential cultural resources related issues. SHPO did not identify any potential cultural resources concerns on the property. If Program actions uncover potential artifacts or human remains, work will cease until such time that the Program can consult with SHPO to determine the appropriate course of action.

#### **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**

Public 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**

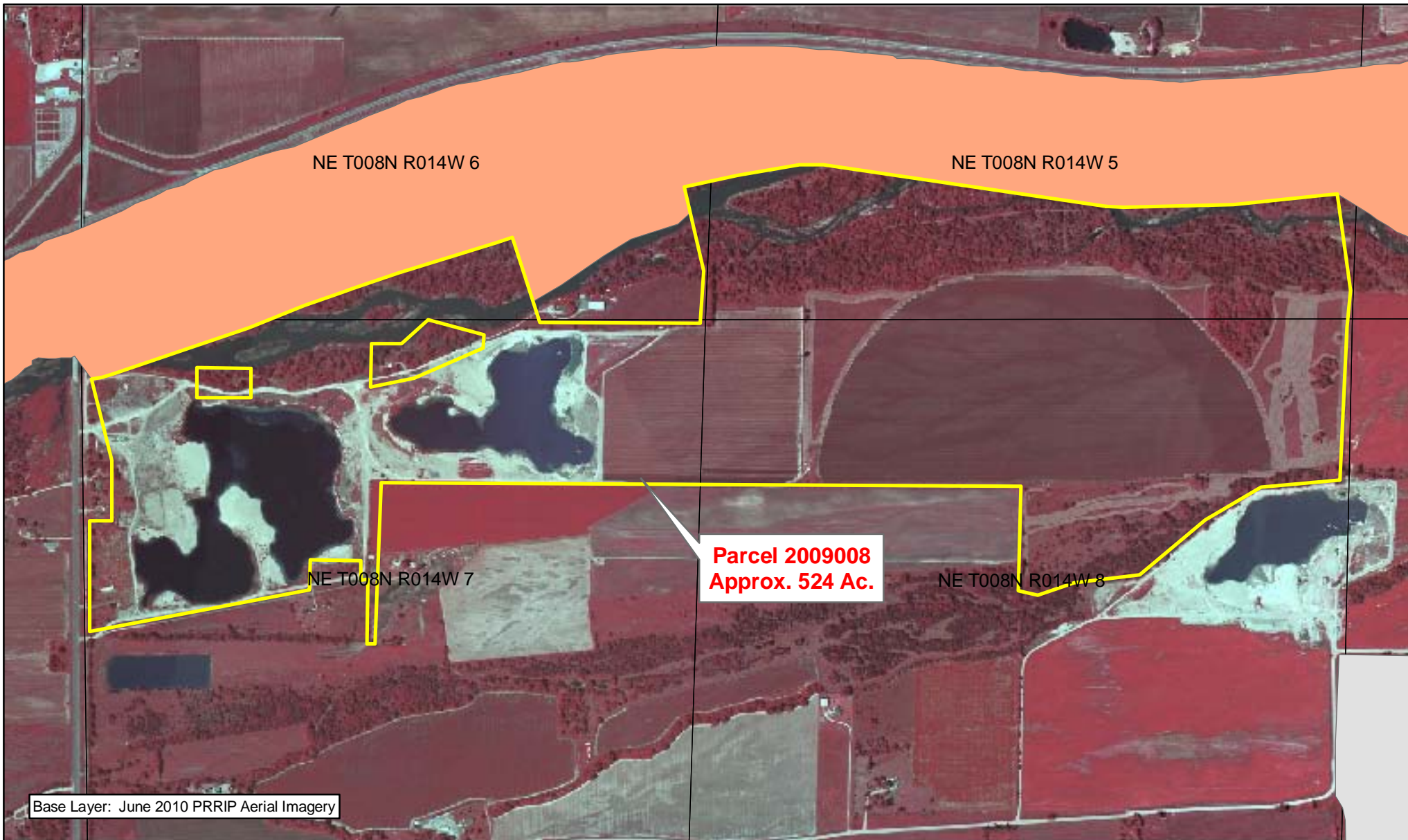
Public access for outdoor recreation is currently being managed by Program staff using a combination of good neighbor policy considerations, wildlife management needs, and compatibility with tenant farming practices, as well as available options to control access and minimize conflicts. Presently whitetail doe harvest is being accomplished by allowing and requiring each hunter to take three does with the supervision of a selected individual chosen and approved by Program staff. Credentials are provided identifying all individuals allowed to hunt this area. Hunting will not occur during whooping crane migration. As hunters complete their required take of animals' additional hunters will be allowed through a drawing. Names of the next opportunity will be given to the individual area supervisor to coordinate hunting opportunities.

Development of a more comprehensive outdoor recreation policy will be addressed in 2011.




**APPENDIX A – FIGURES**













### Legend

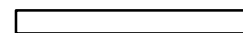
 Section

### Conservation Lands

 Audubon  
 CNPPID  
 NGPC  
 NPPD

 PRRIP  
 PRWCT  
 TNC  
 Wyoming



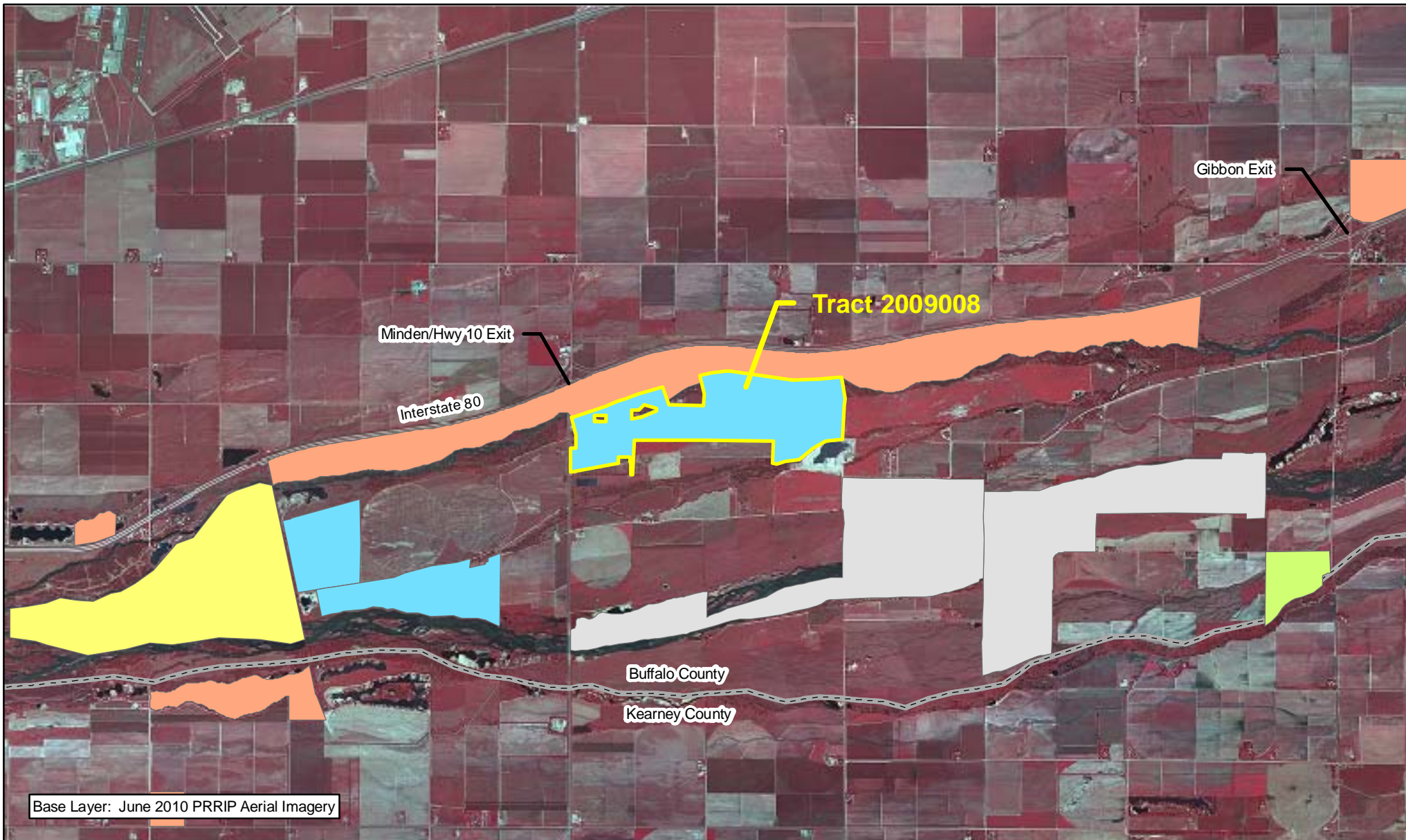
 Miles  
0.25

### TRACT 2009008 BOUNDARY MAP











Parcel Evaluation  
Date: 11/18/10  
By: JDB

Figure A-1






### Legend

	2009008		Audubon		PRRIP
	County		CNPPID		PRWCT
			NGPC		TNC
			NPPD		Wyoming



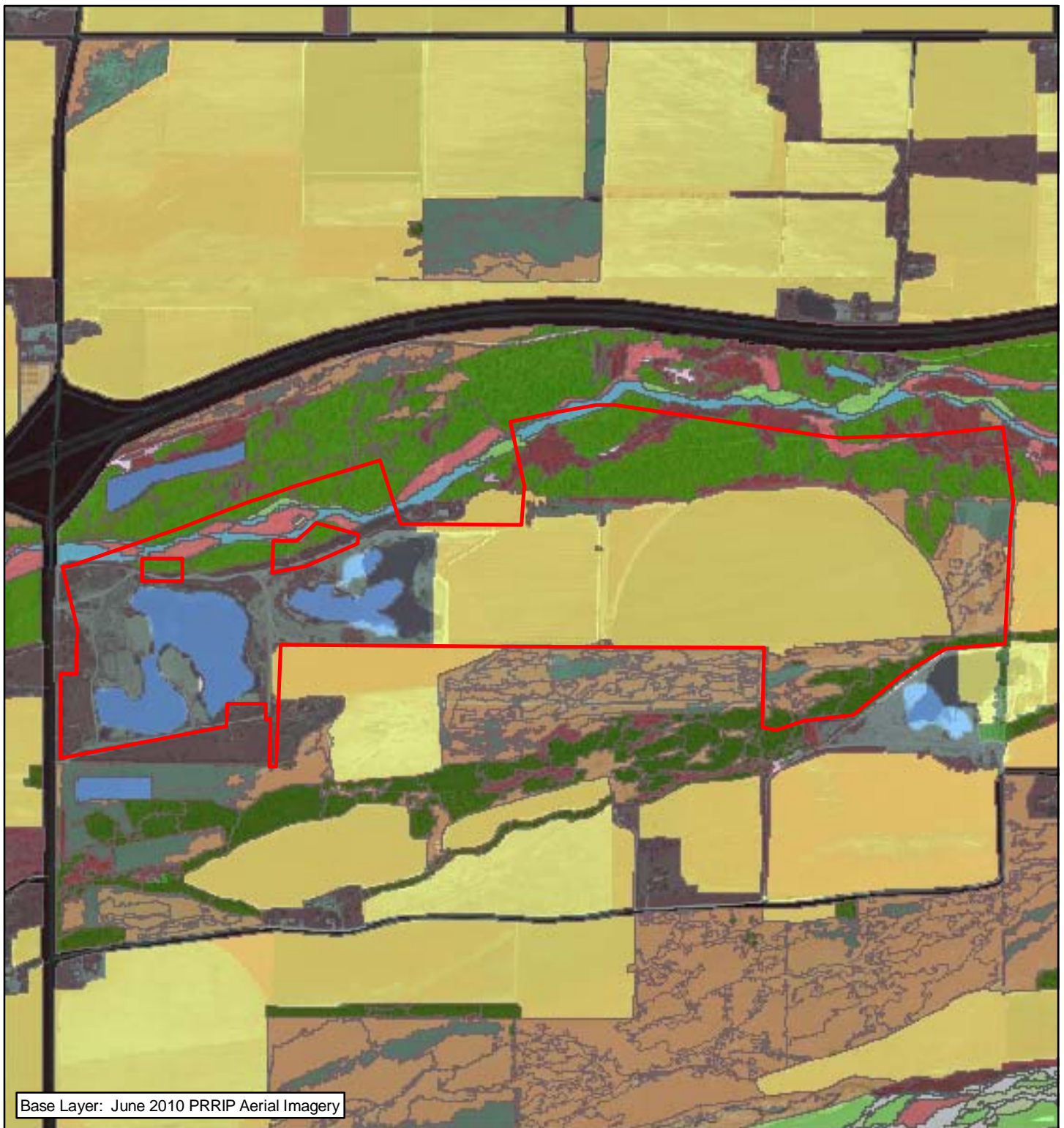
 Miles  
1

### TRACT 1007 LOCATION MAP

Date: 11/18/10  
By: JDB

Figure A-2





Base Layer: June 2010 PRRIP Aerial Imagery



#### Legend

- |  |   |
|--|---|
| <span style="border: 2px solid red; display: inline-block; width: 15px; height: 10px;"></span> 2009008                   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #d9ead3;"></span> River Early Successional                   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #ffff00;"></span> Ag                    | <span style="display: inline-block; width: 15px; height: 10px; background-color: #90ee90;"></span> River Shrubland                            |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #f4cccc;"></span> Bareground/Sparse Veg | <span style="display: inline-block; width: 15px; height: 10px; background-color: black;"></span> Roads  |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #0000ff;"></span> Canal/Drainage        | <span style="display: inline-block; width: 15px; height: 10px; background-color: #808080;"></span> Rural Developed                            |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #008000;"></span> Mesic Wet Meadow      | <span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6;"></span> Sand Pit                                   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #ff0000;"></span> Phragmites            | <span style="display: inline-block; width: 15px; height: 10px; background-color: white; border: 1px solid black;"></span> Unvegetated Sandbar |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #a52a2a;"></span> Riparian Shrubland    | <span style="display: inline-block; width: 15px; height: 10px; background-color: #006400;"></span> Upland Woodland                            |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #008000;"></span> Riparian Woodland     | <span style="display: inline-block; width: 15px; height: 10px; background-color: #0000ff;"></span> Warmwater Slough                           |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6;"></span> River Channel         | <span style="display: inline-block; width: 15px; height: 10px; background-color: #d2b48c;"></span> Xeric Wet Meadow                           |



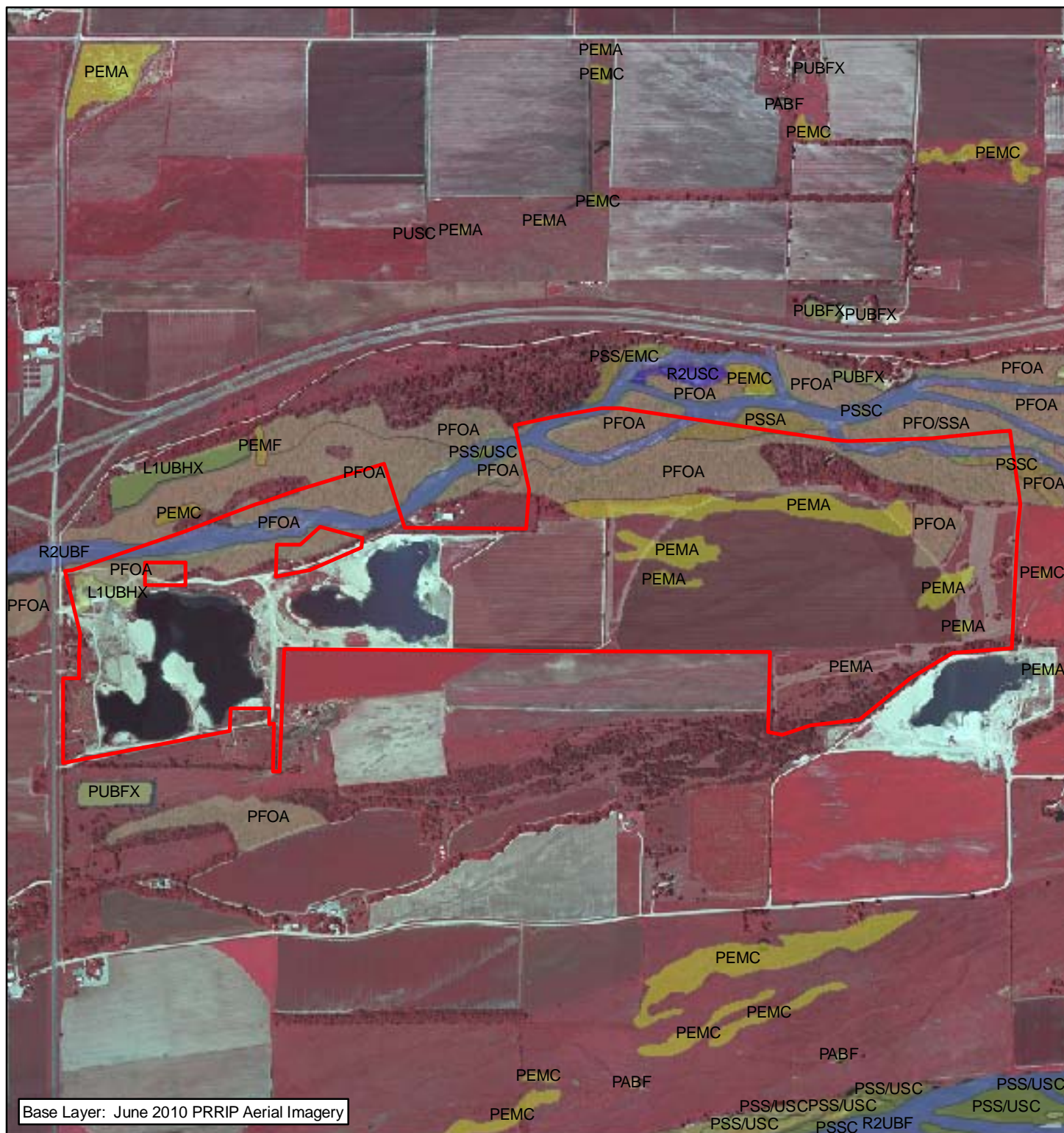
Miles  
0.25

TRACT 2009008  
2005 LAND COVER/USE


Date: 11/18/10  
By: JDB

Figure A-3






### Legend

-  2009008
-  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)



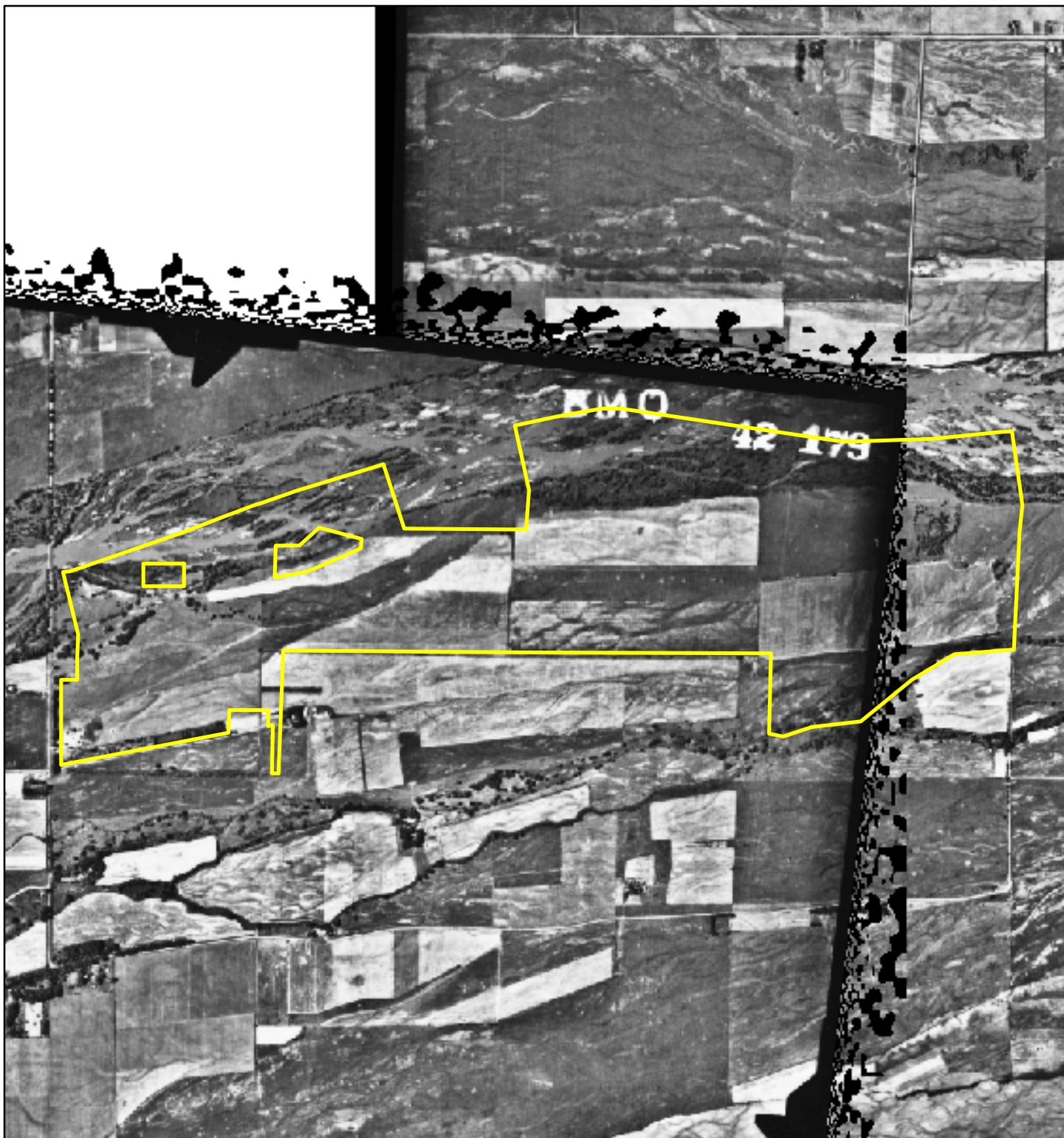
 Miles

TRACT 2009008  
NWI MAP

Date: 11/18/10  
By: JDB

Figure A-4





Legend  
2009008

TRACT 2009008  
1938 IMAGERY

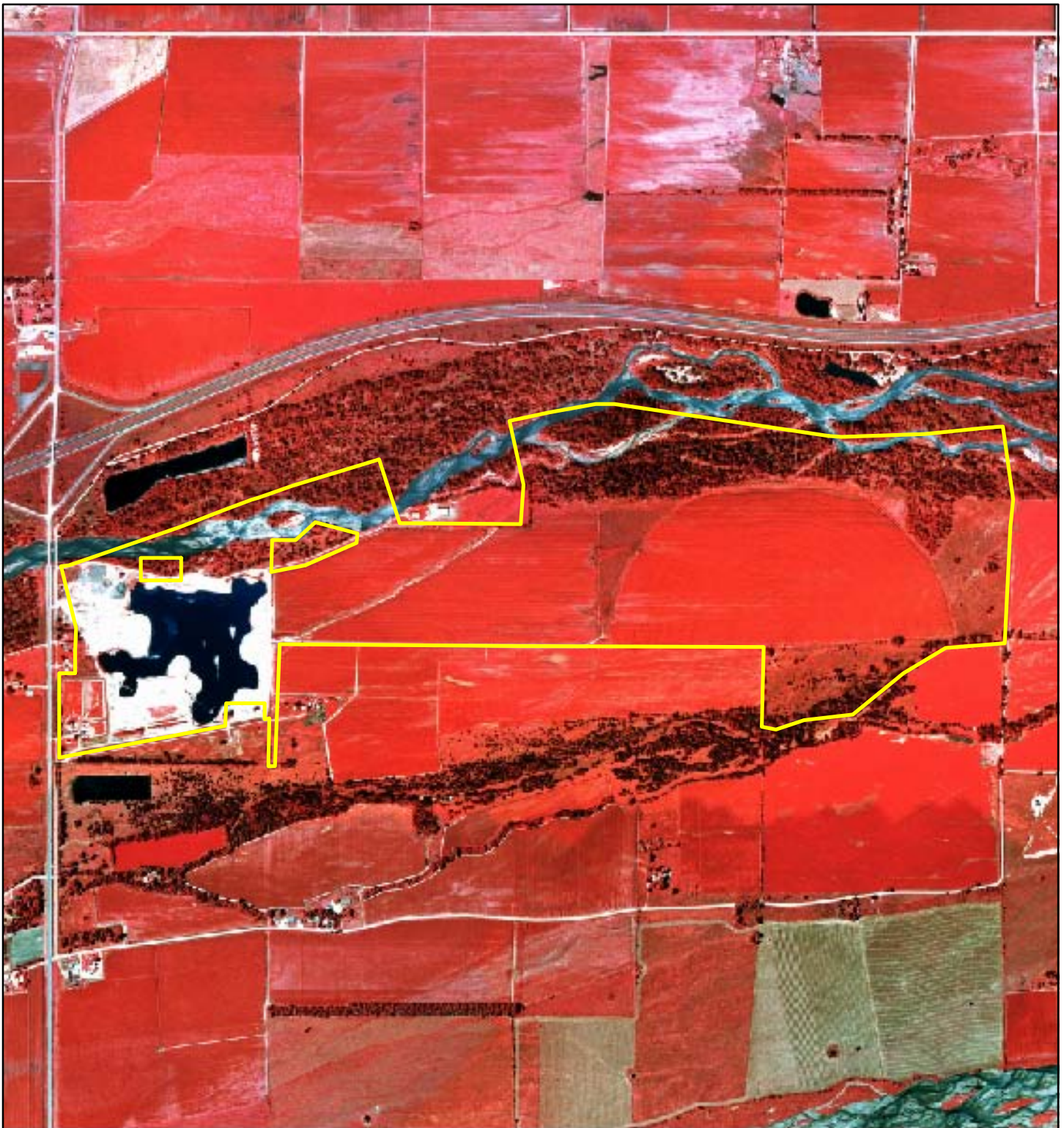
Date: 11/18/10  
By: JDB



0.25 Miles

Figure A-5





Legend  
2009008



0.25 Miles

TRACT 2009008  
1998 CIR IMAGERY

Parcel Evaluation  
Date: 11/18/10  
By: JDB

Figure A-6





**Legend**  
2009008



0.25 Miles

TRACT 2009008  
2010 CIR IMAGERY

Date: 11/18/10  
By: JDB

Figure A-7



