



PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

FISCAL YEAR 2022 BUDGET AND ANNUAL WORK PLAN

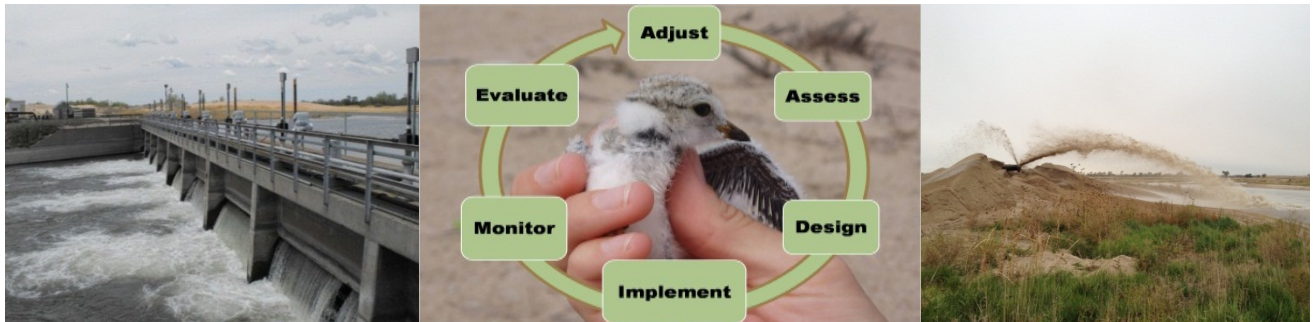
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Prepared for:

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Final Budget and Work Plan Revised and Approved by Governance Committee
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Introduction

The Platte River Recovery Implementation Program (“Program” or “PRRIP”) initiated on January 1, 2007, as a basin-wide effort between the states of Colorado, Wyoming, and Nebraska and the Department of Interior to provide land, water, and scientific monitoring and research to evaluate Program benefits for the target species. The Program is being implemented in an incremental manner, with the First Increment covering the 13-year period from 2007 through 2019 and the First Increment Extension covering a 13-year period from 2021 through 2032. In general, the purpose of the Program is to implement certain aspects of the U.S. Fish and Wildlife Service’s (Service) recovery plans for the target species that relate to the Program’s identified “associated habitats” in the central Platte River by securing defined benefits for those species and their habitats. The Program will also provide ESA compliance for existing and certain new water-related activities in the Platte basin upstream of the Loup River confluence for potential effects on the target species; help prevent the need to list more Platte River species under the ESA; mitigate the adverse effects of certain new water-related activities through approved depletions plans; and establish and maintain an organizational structure that will ensure appropriate state and federal government and stakeholder involvement in the Program.

The Program is led by a Governance Committee (GC) consisting of representatives of Colorado, Wyoming, Nebraska, the Bureau of Reclamation, the Service, South Platte River water users, North Platte River water users, Nebraska water users, and environmental groups. The Program established key standing Advisory Committees to assist the GC in implementing the Program. Those committees include the Technical Advisory Committee (TAC), the Land Advisory Committee (LAC), the Water Advisory Committee (WAC), the Finance Committee (FC), and the Independent Scientific Advisory Committee (ISAC).

Jason Farnsworth serves as Executive Director (ED) of the Program. Farnsworth and staff in the Executive Director’s Office (EDO) maintain offices in Nebraska and Colorado. The EDO worked closely with the GC, the Advisory Committees and their subcommittees and working groups, Program cooperators and partners, and others to develop the FY 2022 Program Budget and Work Plan based on guidance from the Final Program Document and Program goals and priorities.

This document presents a quick reference snapshot of the FY22 Program Budget Spreadsheet (which is a separate document that is incorporated by reference) and the final FY22 Program Annual Work Plan.





Table 1. Quick-reference snapshot of the FY 2022 PRRIP Budget Spreadsheet, including a Table of Contents reference page number corresponding to the beginning page location for each budget line item in this FY2022 Work Plan. Line item numbers in red indicate new line items or items that have been modified.

PRRIP Budget ID	PRRIP Line-Item Description	FY 2022 Estimated New Money	FY 2022 Work Plan Page #
ADMINISTRATION			
ED-1	EDO Salaries/Travel/Office Expenditures	\$ 2,366,000	5
ED-2	Legal Services & Public Notices	\$ 57,000	6
ED-3	Public Outreach	\$ 23,000	8
GFC-1	Financial Services	\$ 247,000	11
GFC-2	Program Insurance	\$ 80,000	12
PD-8	Program Website and Database	\$ 77,000	13
CTE-1	Committee Meeting Expenses	\$ 6,000	14
Administration Sub-Total		\$ 2,856,000	

LAND PLAN			
LP-3	Land Acquisition, LIHE Fees, and Property Taxes	\$ 864,000	16
LP-4	Land Operations and Maintenance	\$ 165,000	20
LP-6	EDO Special Advisors - Land Plan	\$ 20,000	21
LP-7	Public Access Program Management	\$ 40,000	23
Land Plan Sub-Total		\$ 1,089,000	

WATER PLAN			
WPCP-1	North Platte Choke Point	\$ 50,000	24
WPRT-1	Retiming Projects: Canal Recharge	\$ 536,000	25
WPRT-2	Retiming Projects: Elwood Reservoir Recharge	\$ 795,000	28
WPRT-3	Retiming Projects: Broad-Scale Recharge	\$ 72,000	29
WPRT-4	Retiming Projects: Recapture Wells	\$ 80,000	31
WPST-1	Storage Leases: Lake McConaughy	\$ 1,648,000	32
WPST-2	Storage Leases: Upstream Sources	\$ 624,000	33
WPIR-1	Irrigator Leases	\$ 310,000	34
WPLW-1	General Maintenance of Land-for-Water Properties	\$ 17,000	35
WPWM-1	Water Monitoring Activities	\$ 36,000	36
WPMT-1	Water Management Tools (COHYST)	\$ 5,000	38
WPSA-1	EDO Special Advisors - Water Plan	\$ 50,000	39
Water Plan Sub-Total		\$ 4,223,000	



SCIENCE PLAN			
LP-2	Habitat Restoration and Management Actions on Program Lands	\$ 336,000	41
LP-2-P	Trapping Projects	\$ 89,000	42
PD-22	Sediment Augmentation Implementation	\$ 150,000	43
WP-1(b)	<i>Phragmites</i> Control	\$ 200,000	44
G-1	Remote Sensing Data Collection	\$ 306,000	45
TP-1	Tern and Plover Monitoring & Research	\$ 20,000	46
WC-1	Whooping Crane Monitoring & Research	\$ 135,000	47
PS-1	Pallid Sturgeon Monitoring & Research	\$ 747,000	48
G-5	Geomorphology & Vegetation Monitoring and Research	\$ 74,000	50
PD-15	Environmental Permitting	\$ 50,000	51
PD-18	Science Plan-related Equipment	\$ 93,000	52
IMRP-3	EDO Special Advisors - Science Plan	\$ 50,000	54
ISAC-1	ISAC Stipends & Expenses	\$ 261,000	56
PD-3	PRRIP Peer Review and Publications	\$ 9,000	59
PD-11	Science Plan-related Workshops	\$ 10,000	60
Science Plan Sub-Total		\$ 2,530,000	

FY2022 PRRIP BUDGET TOTAL	\$ 10,698,000
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PROGRAM TASK & ID: ED-1. EDO Salaries/Travel/Office Expenditures

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$2,366,000		

Task Description

Salaries, travel, and other direct costs associated with ED and staff in ED Offices (EDO). ED and EDO responsible for implementation of all items detailed in remainder of the Work Plan.

Products

Staff support for all Program activities.

Notes on Cost

See Exhibits A and B from Amendment 3 to the 2019-2023 EDO Contract for detailed documentation of effort. Overall, the ED-1 cost estimate increased by \$147,000 from 2021. Specific items of note include:

- Labor costs include 16 full-time equivalent (FTE) staff.
- The workload of data compilation, analysis, and synthesis is ongoing; EDO staff are now implementing the whooping crane, least tern and piping plover, and geomorphology/vegetation monitoring protocols; initiation of new fronts of species and physical process investigations continues to increase; and the EDO will complete development of the Science Plan for the Extension in early 2022.
- The workload for developing and evaluating additional Water Action Plan alternatives and efforts to support water leasing negotiations is uncertain but will remain stable for at least one more year.
- The workload for land acquisitions is nearly complete. Approximately 98% of PRRIP property has been acquired.



PROGRAM TASK & ID: ED-2. Legal Services and Public Notices

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$57,000		

Task Description

Administrative support in the form of legal advice and review of contracts associated with land and water acquisitions as well as other contract- and legal issues as well as procurement-related notices in newspapers.¹ ED-2 costs are summarized by item below.

Item	Cost
Attorney fees	\$ 53,000
Newspaper notices	\$ 3,400
TOTAL	\$56,400 Round to \$57,000

Notes on Cost

The primary use of ED-2 is for attorneys with expertise in Nebraska water rights; water service/leasing agreement contract law; environmental law covering NEPA, ESA, or CWA; Nebraska NRD processes; and county statutory authorities. These are very specialized areas of practice, limiting our options and commanding, in many cases, a premium rate. Attorneys for work in the arenas cited above are selected based on knowledge and experience in these arenas, availability, reputation, quality of work, and previous direct dealings with EDO staff. Rates are compared to customary and standard rates for the Denver/Lincoln/Omaha areas, and based on a comparative, extensive vetting process are known to be fair and reasonable. Billing rate for specialized water and contract-related legal counsel is \$375/hour based on vetting experience of the past several years. We anticipate that a long-term water agreement will need to be negotiated in 2022. This will require substantial input from legal counsel. It is estimated that approximately 120 hours of legal support will be necessary assist in water-related matters (\$45,000). In addition, we anticipated the need for legal support for potential land-related items. Rates for land-related legal services range from \$150 - \$275/hour and average \$200/hour. Based on a fee of \$200/hour and an estimated 40 hours of service, the anticipated legal fees for land-related issues in 2022 Are \$8,000 and total attorney fees are \$53,000 (\$45,000 + \$8,000).

A second common use of line item ED-2 is to cover the expense of publishing public notices or Request for Proposals/Invitations for Bid (RFP/IFB) in local and regional newspapers. The Denver Post, Omaha World Herald, Wyoming Eagle Tribune (Cheyenne, WY), and the Kearney Hub are the newspapers that are always used to run notices and RFP/IFB announcements. When appropriate for specific, local interest projects, other papers may also be added, such as the Grand Island Independent, North Platte Telegraph, Lincoln Journal Star, or Keith County News.

¹ During the First Increment accounting database management services were included in ED-2. Those costs have been moved to line item GFC-1 to consolidate financial management costs into one line item.



Recent costs to run a three-day (Friday, Saturday, and Sunday) announcement in the papers is tabulated below:

Newspaper	Three Day Cost (\$)
Denver Post	\$ 910
Omaha World Herald	\$ 761
Wyoming Eagle Tribune	\$ 94
Kearney Hub	\$ 48
TOTAL	\$ 1,813 (Round to \$1,900)

We are anticipating one full RFP in 2022 at \$1,900. Six additional newspapers notices (either for IFBs published exclusively in local papers or supplemental ads in local papers for RFPs/IFBs also published in regional papers) are also anticipated at a cost of \$250 each, $6 \times \$250 = \$1,500$. The total for three major and six supplemental advertisements is: \$3,400 ($\$1,900 + \$1,500$).



PROGRAM TASK & ID: ED-3. Public Outreach

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$23,000		

Task Description

Communication of information about the Platte River Recovery Implementation Program and general education-oriented activities are an important function to gain and advance acceptance of the Program in all our stakeholder communities. The Program stakeholders include; residents of the three states, the Department of the Interior agencies, farmers and ranchers, recreational users of the Platte, the biological sciences community, national and international conservation and environmental groups, and bird watchers from around the world. The education-oriented sponsorships are focused on youth-oriented, experience-based programs. Exhibits and sponsorships help the Program spread its message and its brand. ED-3 costs are summarized by item below.

Item	Cost
Exhibit Fees	\$ 2,000
Major Sponsorships	
<i>Rowe Sanctuary Education Program</i>	\$ 5,000
<i>Prairie Loft Education Program</i>	\$ 5,000
<i>Greenway Foundation SPREE Program</i>	\$ 5,000
Other Sponsorships	\$ 3,000
Promotional Materials	\$ 2,500
Total	\$22,500 Round to \$23,000

Notes on Cost

To reach our audiences, the Program utilizes the following:

1. "Exhibit Fees" is a category covering Program exhibit booths at scientific and professional conferences, community events, farm shows and nature centers. Venues are chosen based on both location (i.e., coverage of the three states) and the ability to reach our target audience of stakeholders. There are several annual events at which the Program exhibits; Husker Harvest Days in Nebraska, Colorado Water Congress in Colorado, and the Four States Irrigation Council Annual Meeting (held in Colorado and includes Wyoming and Nebraska). Exhibits provide written information about the Program as well as Program giveaways. Typically, the Program exhibits at five to six events per year and booth costs vary from no charge to \$1,250 per event. Including display costs and printed material an approximate annual expenditure for exhibits is \$2,000.
2. "Major Sponsorship" is a category covering educational programs oriented specifically for young people at nature and agricultural centers and special projects that are presented to the Program. Sponsorships are chosen based on both location and the ability to reach our target audience of stakeholders. Examples include environmental education programs for Rowe Sanctuary, Prairie Loft Center for young people in Nebraska, and the Greenway Foundation South Platte River Environmental



Education program for young people in Colorado. The education programs we sponsor focus support on youth-oriented, experience-based activity programs. For 2022, \$15,000 is budgeted for major sponsorships including \$5,000 each for public educational programs for Rowe Sanctuary in Nebraska, Prairie Loft Center for agricultural education for children in Nebraska, and for the South Platte River Environmental Education (SPREE) children’s educational program by The Greenway Foundation in Colorado. The nature of the expenditures and associated activities for Rowe Sanctuary, Prairie Loft, and SPREE remain largely the same as for 2021.

3. “Other Sponsorship” is a category used to allow the Program to participate in known events that are smaller in magnitude than the Major Sponsorships covered above, were not anticipated at the time of budget development, or events that were under consideration, but decisions had not been made as to which events to support. These sponsorships assist in defraying the cost of a conference or event. The Program receives higher visibility and recognition at these conferences and events as a result. Program staff is at these conferences or events to interact with the participants and capitalize on the increased visibility achieved by the sponsorships. Depending on the organization and event, sponsorships provides recognition in the event program and proceedings, recognition by emcees during meals, the ability to display banners, recognition for sponsoring specific breaks or meals, and other similar types of enhanced visibility and recognition. Examples include:
 - Program logo and tagline ads in newspapers when special edition sections are printed, such as the Earth Day and Migration editions in the Kearney Hub newspapers are estimated for 2022 at about \$500.
 - Break or event sponsorships at conferences such as National Committee of Ecological Restoration, Society for Ecological Restoration, Collaborative Adaptive Management Network, Nebraska Association of Resource Districts Conference, Nebraska Water Resources/Nebraska Irrigation Association Conference, Colorado Water Foundation for Education events, and Colorado Summer Water Congress are typical of the events that are considered for sponsorships. The decision on which events to sponsor depend on the relevance of the group or conference theme to the Program, which can vary from year to year. Such sponsorships can range from \$250 to \$750. Allowing for three to five such sponsorships to be awarded, costs for 2022 are estimated at about \$2,500
4. “Promotional Materials” is a category covering materials distributed to increase awareness of the Program. The distinctive Program logo is utilized in all Program communications, reports, and on all promotional materials including fact sheets, brochures, biennial reports, and giveaways. Promotional materials are chosen for their uniqueness and compatibility with the overall goals and objectives of the Program. Chosen items are branded with the Program logo and/or the Program website address and all items must cost below \$4.00 an item. On average, the cost of the promotional material is approximately \$2.00. Examples of giveaways include pens, carabiner key chains, can coolers, stylus, mobile phone cradle, tote bags, shoulder bags, small tools, and water bottles. The Program anticipates distributing about 2,500 items in 2022 for a cost of about \$2,500.



The following tables provide specific cost estimate breakdowns for each of the Major Sponsorship items in FY21:

Rowe Sanctuary Education Program Cost Estimate Breakdown

Category	Unit Rate (\$/hr.)	Quantity	Cost (\$)	Comments
LABOR				Personnel hours include planning preparation, and in-field instructor time
Sr. Instructor	\$30/hr.	150	\$4,500	
LABOR TOTAL			\$4,500	
MATERIALS				
Jeweler’s Loupes Magnifiers	\$7	35	\$250	
Butterfly Nets	\$15	16	\$250	
MATERIALS TOTAL			\$500	
TOTAL			\$5,000	

Prairie Loft Education Program Cost Estimate Breakdown

Category	Unit Rate (\$/hr.)	Quantity	Cost (\$)	Comments
LABOR				Personnel hours include teaching, facilitation, curriculum and program development, professional development, and outreach to schools, teachers, families, and partner organizations.
Lead Educator	\$14/hr.	200	\$2,800	
Assistant Educators	\$10/hr.	68	\$680	
LABOR TOTAL			\$3,480	
MATERIALS			\$1,220	Education program supplies includes items such as books, writing materials, field study equipment, printing, tools, and resources for additional and enhanced outdoor learning areas.
Program Evaluation			\$300	Evaluation includes surveys and assessment to establish measurement tools to prove and enhance program impact.
Total			\$5,000	

The Greenway Foundation, SPREE Program

SPREE Program	Expenses	Income	Total	
Expenses				
Labor	(\$4,400)		(\$4,400)	Seasonal educator to lead school-based field trips and virtual programs (as needed) for classroom groups, family friendly weekend events, and day off school camps.
Program Supplies	(\$600)		(\$600)	Supplies include printed materials, field study equipment, scientific discovery supplies, etc.
Income				
PRRIP		\$5,000	\$5,000	
Totals	(\$5,000)	\$5,000	\$0	



PROGRAM TASK & ID: GFC-1. Financial Services

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$247,000		

Task Description

Fees paid to the Nebraska Community Foundation (NCF) for administration of the financial aspects of the Program in 2022 and costs associated with maintenance of a financial database for the Program.² GFC-1 costs are summarized by item below.

Item	Cost
Nebraska Community Foundation Fees	\$ 231,000
Financial Database Services	\$ 16,000
TOTAL	\$ 247,000

Notes on Cost

The primary use of this budget will be reimbursement of NCF for its direct and indirect costs pursuant to the Department of the Interior’s acquisition services requirements. In addition to the direct and indirect costs prescribed by this Agreement, NCF will be reimbursed at actual cost of extraordinary expenses incurred at the request of Parties to the Agreement, such as overnight express mail services, and/or reasonable travel expenses for travel at the request of the Governance Committee, Finance Committee, or a Party to the Agreement. The estimated cost associated with Financial Management Services rendered by the NCF is based on estimated direct costs of approximately \$49,000 (700 hours X \$70/hour), and an estimated provisional indirect cost ratio of 1.82% applied to approximately \$10 million in direct costs based on budgeted PRRIP expenditures in 2022. Only actual indirect costs will be recouped by NCF and the rate will fluctuate from year to year depending on overall total expenditures of the NCF.

In addition, this budget includes professional financial services costs (\$16,000) associated with populating and maintaining the Program’s newly updated financial accounting database (IT costs are in PD-8). The database contains a record of all invoices submitted by Program contractors for payment and all income the program generates from its holdings. The database produces both monthly and annual reports showing breakdowns by year, budget items, contractors, and balances for each participant (Colorado, Wyoming and DOI). Database information is shared with DOI and reconciled monthly with Nebraska Community Foundation.

² Accounting database services have been moved from ED-2 to this line item for the Extension and the line item has been renamed from NCF Fees to Financial Services.



PROGRAM TASK & ID: GFC-2. Program Insurance

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$80,000		

Task Description

Insurance acquired for representatives of the GC and subcommittees (including alternates) and ED Office for activities that will be undertaken through Program implementation. Major insurance coverages include property/crime insurance associated with Program land and associated infrastructure, public officials and management liability, cyber liability, and general/umbrella liability which would cover damages caused by implementation of Program management actions including flow releases.

Notes on Cost

The estimated cost of insurance is based upon previous year’s expenses, experience, and previous negotiations with insurance providers conducted by the Program’s insurance agent. Despite generally increasing insurance costs, the Program has been advised by our agent that insurance costs will remain relatively stable. Our clean claims record and no new major risk additions have mitigated the factors pushing toward increased costs and will keep the Program expenditure for this item at nearly the same level as 2021.



PROGRAM TASK & ID: PD-8. Program Website and Database

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$77,000		

Task Description

Ongoing website and species database development and management by D.J. Case & Associates. Tasks include basic maintenance, hosting, and minor site improvements. This task also includes hosting and support for the Program financial tracking and disbursement database.

Notes on Cost

The contract was awarded in 2018 through a competitive procurement process in conformance with the Procurement policy. The budget estimate is developed using rates and the level of effort for similar work acquired for the Program through the competitive procurement process, and final negotiation and award of the contract was acquired through competition, the estimate for this work is considered fair and reasonable.

Specific FY22 tasks include:

- Web and Database hosting through Digital Ocean hosting service, 99.9% uptime, 24/7 support, daily & weekly backups.
- Security, including Drupal platform updates and upgrades, SSL technology.
- On-call support, including troubleshooting, content management, consultation, user assistance.
- Ongoing site improvements, including:
 - Content review & redevelopment
 - User interface and experience improvement
 - Map viewer & streamflow visualization updates as needed
 - Other site improvements & functionality
- Support, refinement, and hosting for the Program’s target species data repository, which houses PRRIP target species monitoring data and reporting tools.
- Support, refinement, and hosting for new Program financial tracking and disbursement database, developed in 2020.



PROGRAM TASK & ID: CTE-1. Committee Meeting Expenses

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$6,000		

Task Description

Budget to cover costs related to committee meetings (GC, FC, LAC, TAC, and WAC). Costs include room rentals, audio-visual fees, refreshments, etc.³ CTE-1 costs are summarized by committee below.

Item	Cost
Governance Committee	\$ 3,300
Land Advisory Committee	\$ 300
Water Advisory Committee	\$ 1,000
Technical Advisory Committee	\$ 500
TOTAL	\$ 5,400 Round to 6,000

Notes on Cost

General Note: This budget line item assumes in-person committee meetings will resume in 2022.

Governance Committee

GC meetings are held quarterly, two are held in Kearney, NE at the EDO, one in Cheyenne, WY at the Wyoming Water Development Commission, and one in Denver, CO. There is no room charge or equipment charge for the Kearney and Cheyenne locations, just for the Denver location. The Denver December meeting has recently been held in downtown Denver, CO at the Warwick Hotel for two half days (Tuesday afternoon and Wednesday morning). Meeting room costs, and refreshments, for one afternoon break and one morning break are included in the cost. Based on 108-2019 experience, 2022 estimate of room and break expenses is \$1,500/day. Equipment costs are limited to Polycom conference phone and screen at \$250, as EDO can provide projector from its Denver office. The meeting expense table provided below provides a breakdown of costs.

Meeting Room Rental & Break Costs	Meeting Equipment Costs	Total Costs
\$3,000 (December GC, two half days)	\$250 (phone and screen at each Denver meeting)	\$3,250 (Round up to 3,300)

Land Advisory Committee

The LAC meets quarterly at in Kearney, NE at the EDO which has no room charge. Two activities associated with LAC do have costs specifically associated to them, an annual field tour for LAC members and site evaluation of potential properties. The annual field tour for LAC members typically consists of a half day

³ This is a new line item that incorporates the budgets from First Increment line items GFC-3, LAC-1, WAC-1, and TAC-1.



in the field with lunch and drinks (water and sodas) in field provided for 10 to 15 people at an average cost of about \$20.00 per person, based on 2018-2019 experience, provide the basis for the \$300 estimate.

Meeting Room Rental & Break Costs	Meeting Costs	Total Costs
\$0	\$300 (annual field tour expenses @ \$300)	\$300

Water Advisory Committee

The WAC meets quarterly. We assume that meetings will be held at the Visitor’s Center near Lake McConaughy in Ogallala for which there is no room or equipment charge but due to its remote location working lunches are provided (25 people/meeting x \$20/person = \$500/meeting). Working groups and subcommittee frequently meet by conference call and at other locations. All meetings are assumed to be focused on Water Action Plan projects (e.g., Water Project scoring, broad-scale groundwater recharge, slurry wall storage, hydrologic monitoring, or other candidate topics) with meetings involving a mix of technical/administrative topics.

The Meeting Expenses table provided below provides a breakdown of costs and additional information.

Meeting Room Rental & Break Costs	Meeting Equipment Costs	Total Costs
\$1,000 (working lunches at two quarterly meetings)	\$0	\$1,000

Technical Advisory Committee

The TAC generally meets quarterly but working group and sub-committee meetings can meet more frequently. Most of these regular TAC meetings are held in Kearney, NE at the EDO or via conference call. Four regular in-person TAC meetings were assumed. No equipment costs are expected but working lunches are typically provided (25 people/meeting x \$10/person = \$250/meeting)

Meal Costs	Meeting Equipment Costs	Total Costs
\$1,000 (4 meetings @ \$250/meeting)	\$0	\$1,000



PROGRAM TASK & ID: LP-3. Land Acquisition, LIHE Fees, and Property Taxes

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$864,000		

Task Description

Funding for acquisition of interest in land (own, lease, easements, other agreements) according to implementation of the Land Plan and the AMP; fees for Platte River Recovery Implementation Foundation, the land interest holding entity (LIHE) for the Program, as well as property taxes and other annual fees. LP-3 costs are summarized by item below. LP-3 costs are summarized by item below.

Item	Cost
LIHE Fees	\$65,000
Property Taxes	\$165,000
Land Acquisition Associated Costs	\$16,750
Revenue Replacement at NPPD Cottonwood Ranch	\$17,000
Buy, Lease or Easement (100 acres)	\$600,000
TOTAL	\$ 863,750 Round to \$864,000

Notes on Cost:

LIHE Fees

LIHE fees are charged to the Program by the Platte River Recovery Implementation Foundation. The fees are assessed based on actual incurred direct expenses (attorney fees and insurance), baseline fee, number of parcels held in various categories (fee simple, easement, lease, or management agreement), and number of transactions. The insurance cost is for General Liability to provide specific protection to PRRIF as title holder for any claims that might arise associated with injury or damage incurred on or associated with the properties. This is separate and distinct from the insurance carried by the Program covered in Program line item GFC-2. The fees are billed quarterly. Charges for 2015-2020 are provided below. It is estimated that 2022 fees will be slightly higher than 2020, on the order of \$65,000.

Quarter	2015 Fee	2016 Fee	2017 Fee	2018 Fee	2019 Fee	2020 Fee
First	\$11,919	\$9,300	\$10,094	\$14,170	\$14,000	\$14,425
Second	\$11,813	\$12,384	\$13,178	\$11,165	\$13,800	\$11,492
Third	\$12,030	\$18,052	\$19,312	\$21,014	\$17,763	\$21,963
Fourth	\$12,200	\$12,725	\$13,755	\$14,100	\$13,925	\$14,896
TOTAL	\$47,962	\$52,461	\$56,339	\$60,449	\$52,488	\$62,776



Property Taxes

PRRIP is required to pay property taxes. A summary of the property taxes paid on habitat land in 2017-2021 is provided by county below. All PRRIP properties are in Nebraska.

Nebraska County	Taxes Paid in 2017	Taxes Paid in 2018	Taxes Paid in 2019	Taxes Paid in 2020	Taxes Paid in 2021
Buffalo	\$50,614.28	\$50,760.52	\$71,224.60	\$68,525.56	\$64,645.02
Dawson	\$8,094.72	\$7,965.52	\$12,558.70	\$12,348.79	\$13,909.11
Gosper	\$1,064.40	\$1,092.34	\$1,101.64	\$1,103.82	\$1,085.52
Hall	\$35,158.82	\$34,527.26	\$26,018.30	\$27,123.16	\$24,988.04
Phelps	\$29,945.18	\$29,125.78	\$26,360.78	\$26,594.60	\$27,234.24
Kearney	\$14,367.68	\$14,190.96	\$14,416.46	14,366.50	14,484.36
Merrick					\$3,180.80
Hamilton					\$1,870.78
TOTAL	\$139,245.08	\$137,662.38	\$151,680.48	\$150,062.43	\$151,397.87

Property taxes have been stable at approximately \$150,000. Land acquisitions in late 2021 will increase taxes by approximately \$15,000 annually. Based on the 2020/2021 taxes and additional property acquisitions, an estimated \$165,000 in property tax payments will be made in 2022.

Land Acquisition Associated Costs

These costs are based on experience on 2018-2021 acquisitions. The associated costs per transaction are provided in the table below:

Item	Fee
Appraiser fee	\$3,000
Surveyor fee	\$4,000
Attorney fee (@\$200/hr for 40 hours)	\$8,000
Miscellaneous costs and fees (@8-10% of total other fees)	\$1,750
TOTAL	\$16,750

Assuming acquisition of one tract in 2022, in the 100-acre range, an estimate of \$18,750 was developed. Appraisers are selected through mutual agreement with the seller based on knowledge of real estate in specific locales, reputation, ability to meet “Yellow Book” standards, and previous direct experience of EDO staff with the appraisers. Appraisals must meet “Yellow Book” Uniform Appraisal Standards for Federal Land Acquisitions in conformance with Federal Law 91-646 of the Uniform Appraisal Act. This criterion limits the number of appraisers qualified to perform appraisals for the Program and increases the cost. Rates are compared against customary and standard rates for appropriately qualified appraisers in the Lexington to Grand Island, NE area. A fee of \$3,000 per appraisal is the average fee for a relatively straightforward appraisal of a small tract of rural land in the Lexington to Grand Island area. Based on this market survey rate comparison and the qualifications of the potential appraisers, these rates are known to be fair, reasonable, and competitive.

The market survey process is composed of the following steps:

- Determine which appraisers are qualified to do a “Yellow Book” Uniform Appraisal Standard. This is accomplished through asking LAC members experienced in real estate transactions in the Associated



Habitat Region who they know to be qualified and what their experience has been with various appraisers, and internet and yellow page searches followed up with phone calls or office visits to determine qualifications, experience, and assess skill levels. While this search may not be exhaustive it is extremely comprehensive with virtually all “Yellow Book” qualified appraisers in the Lexington to Grand Island area considered. Appraisers outside of this region would not have sufficient local knowledge to be considered qualified.

- As part of the list development process, rates and estimated (by the appraisers) costs of a standard basic appraisal were solicited.
- A comparison of qualifications, reputation, specific experience, and assessed skill level together with rates and estimated cost formed the basic information basis for then soliciting appraiser services for specific tracts. Acceptability by the selling party is also a critical factor.
- The experience gained through 10 years of land acquisition for the Program provides a solid basis for verification or modification of initial information gathered and is of great value in selecting appraisers.

Survey charges are based on time and materials, with hourly rates of approximately \$75/hr. for research, \$85/hr. for drafting, and \$125/hr. for in-field surveying. A fee of \$4,000 per survey is an average fee for a basic boundary survey of a 100-acre parcel with the Platte River as one boundary, including basic research and a filed, stamped survey document. Based on a market survey of surveyor rates in the eastern half of Nebraska, these rates are known to be fair, reasonable, and competitive.

The market survey process is composed of the following steps:

- Determine which surveyors are qualified to perform riparian boundary surveys. This is accomplished through asking LAC members experienced in surveying issues and that have required the service of riparian boundary surveyors in the Associated Habitat Region who they know to be qualified and what their experience has been with various surveyors, and internet and yellow page searches followed up with phone calls or office visits to determine qualifications, experience, and to assess skill levels. Also, supplementing this information with the over 35 years of experience working with surveyors in Nebraska represented by the Program Staff person leading the land acquisition effort. While this search may not be exhaustive it is extremely comprehensive with virtually all experienced riparian boundary surveyors in the North Platte to Omaha area considered.
- As part of the list development process, rates and estimated (by the surveyors) costs of a standard basic riparian boundary survey were considered
- A comparison of qualifications, reputation, specific experience, and assessed skill level together with rates and estimated cost formed the basic information basis for then soliciting surveyor services for specific tracts.
- The experience gained through 12 years of land acquisition and associated surveys for the Program provides a solid basis for verification or modification of initial information gathered that is of great value in selecting surveyors.

Attorneys for real estate work are selected based on knowledge and experience in riparian boundary law, specific experience in a section of river, reputation, quality of work, lack of conflict of interest, and previous direct dealings with EDO staff. Rates are compared to customary and standard rates for the South Central and Eastern Nebraska areas. A fee based on 40 hours per transaction is a conservative estimate of time required for legal efforts, assuming some unique issues will need resolution, such as complications from riparian boundaries, and occasionally multiple county jurisdictions that arise on properties that



straddle the river and lie in two counties. Based on this market survey rate comparison and the qualifications of the attorneys being considered, these rates are known to be fair, reasonable, and competitive. The market survey process is composed of the following steps:

- Determine which attorneys are qualified to perform riparian real estate transactions. This is accomplished through asking Advisory Committee or Governance Committee members experienced in riparian real estate legal issues and that have required the service of such attorneys in the Associated Habitat Region who they know to be qualified and what their experience has been with various attorneys, and internet and yellow page searches followed up with phone calls or office visits to determine qualifications, experience and to assess skill levels. Also, supplementing this information with the over 25 years of experience working with riparian real estate attorneys in Nebraska represented by the Program Staff person leading the land acquisition effort. While this search may not be exhaustive it is extremely comprehensive with virtually all experienced riparian real estate attorneys in the North Platte to Omaha area considered.
- As part of the list development process, rates and estimated (by the attorneys) costs of a standard basic riparian boundary survey were considered.
- A comparison of qualifications, reputation, specific experience, and assessed skill level together with rates and estimated costs for a basic riparian real estate transaction formed the basic information basis for then soliciting surveyor services for specific tracts.
- The experience gained through 10 years of land acquisition for the Program provides a solid basis for verification or modification of initial information gathered that is of great value in selecting attorneys.

Miscellaneous fees could include items from among the following: Phase I Environmental Site Assessments (@\$1,000 to \$1,500 per site with one always performed for each tract purchased), additional title searches, clouds on the title that must be resolved (fence issues, material removal from site, previous owners or heirs of previous owners that must be tracked down to positively clear titles), copying and printing fees, and unusual boundary issues that require additional research or surveys. No two acquisitions are the same, and some peculiarity often arises that must be dealt with. They rarely involve large expenditures to resolve, but, on the other hand, when they arise they are not trivial, negligible costs.

Revenue Replacement at NPPD Cottonwood Ranch

Lost grazing revenue at Cottonwood Ranch due to recharge of water will continue to reduce dollars available from cattle leasing at Cottonwood Ranch. Those lost revenues will be replaced for 2022 grazing year. In 2020 approximately \$16,000.00 were needed to compensate NPPD under the Sponsorship Agreement. Unknown rent revenue income will affect the needed dollars to offset lost dollars in the lease.

Land Purchase Costs (Buy, Easement or Lease)

Current land prices for the types of non-complex lands we will be acquiring typically range from \$4,500 to \$8,000 per acre. It is estimated that approximately 100 acres of land will be acquired in complex habitat plus-up acres. At an approximate average cost of 6,000 per acre, total acquisition cost would be \$600,000.

Note: NO provision for income generated from land disposal actions is included in the budget estimate. The budget reflects only anticipated expenditures, not a net of expenditures and income.



PROGRAM TASK & ID: LP-4. Land Operations and Maintenance

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$165,000		

Task Description

Funding for non-AMP related management activities (fencing, routine agricultural operations, weed management, property maintenance, day-to-day management, non-AMP tree and channel clearing, etc.). Specific land management activities for the year are defined in the Land Management Plans developed through the LAC and approved by the GC. A summary of Program land work proposed for 2022 is included as **Appendix A** in this document.

Notes on Cost

See **Appendix A** in this document for specific details.



PROGRAM TASK & ID: LP-6. EDO Special Advisors – Land Plan

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$20,000		

Task Description

Negotiation and drafting of agricultural leases on Program properties as well as oversight of sharecropping agreements and marketing of sharecropping commodities. Special expertise is necessary for development and negotiation of appropriate crop and pasture rental rates as well as decision-making related to sharecropping arrangements.

Notes on Cost

Two agricultural management firms will be used to handle tenant leases for Program properties in 2022. The properties will be divided geographically between the two firms, with the properties at and east of Kearney handled by AgriAffiliates and the properties to the west of Kearney handled by United Farm Management. The workload will be generally equal between the two firms. Labor costs are billed at \$75 per hour by each firm. The breakdown of hours and costs estimated for each firm based on experience and discussions with each firm are tabulated below:

Firm	Direct Costs	Hours	Labor Costs	Total
AgriAffiliates	\$1,000	120 hrs @\$75/hr	\$9,000	\$10,000
United Farm Mgmt.	\$1,000	120 hrs @\$75/hr	\$9,000	\$10,000
TOTAL				\$20,000

The firms were selected based on a comparative vetting process involving most of the firms that provide such services that were located within the Lexington to Grand Island corridor. The selection was made based on qualifications, reputation, capacity, and competitive labor rates/time estimates.

General note on all Special Advisor budget line items: Please refer to the third paragraph in the Exceptions: section of the Procurement Policy adopted by the Governance Committee in June 2016, “Retention of special advisors to the ED of a technical or legal nature is exempt from the procedures provided in this directive.”

Consequently, special advisors are not selected through a competitive process involving advertised RFQs or RFPs. Special advisors are selected by the Executive Director based on qualifications – education, relevant experience, expertise and skills, reliability, credibility, and ability to work effectively with the ED and the staff of the EDO. Special Advisors and the firms they are associated with cannot do any other work for the Program, individually or as part of a team. This is a critical restriction and generally orients special advisor selection to individuals who are sole proprietors or part of small firms that would not likely be doing significant levels of work for the Program on other specific, larger projects.

The billing rates are negotiated with the special advisors by the ED and are kept within the industry standard of practice based on each individual’s qualifications. While industry standard of practice may not be precisely defined, anyone who is a practicing member of that professional community understands the limits of reasonableness associated with those boundaries. Appropriate expertise to make this assessment



resides with the ED or EDO staff. The industry standard of practice rates guidelines used in this process is established based on an on-going market survey process comparing labor rates of similarly qualified professionals in the field.

In the case of Special Advisors, individuals with similar experience and qualifications have been part of consultant teams selected through the Program’s competitive procurement process over an eight-plus-year period. Comparison of the Special Advisor rates to the rates charged by comparable individuals through the competitive procurement process provides an indisputable basis for comparison. In all cases the Special Advisor rates are not only within the range of rates seen on the consultant teams which have been selected competitively, but typically at the middle to lower end of the range. As rates charged by Special Advisors are at the middle to low end of the range of rates for similar work acquired through the Program’s competitive procurement process, the estimate for Special Advisors is considered fair and reasonable.

The anticipated level of effort for the upcoming year is also discussed with the special advisors by the ED and members of the EDO staff, but all work is assigned on an as-needed basis with no guarantee of any minimum level of assignments.

During the budgeting process, the special advisors anticipated to be needed and roughly the level of effort expected to accomplish the work plan for the budget year is scrutinized by and discussed with the appropriate advisory committees, the Finance Committee, and the Governance Committee. Input is received and taken under advisement from all these sources as to the appropriateness of the budgets for these line items with appropriate adjustments made prior to budget approval.



PROGRAM TASK & ID: LP-7. Public Access Program Management

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$40,000		

Task Description

Cost associated with management of public recreation access program on Program lands. Costs are for the maintenance and administration of an on-line reservation system and the on the ground monitoring of recreational use of the properties.

Notes on Cost

Nebraska Game and Parks Commission will manage public access to Program lands in 2022 pursuant to a contract between the Nebraska Community Foundation and the Nebraska Game & Parks Commission. The annual cost of this agreement is \$40,000.



PROGRAM TASK & ID: WPCP-1. North Platte Choke Point

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$50,000		

Task Description

The objective of this task is to increase and maintain an active river channel capacity of 3,000 cfs on the North Platte River at North Platte. Channel capacity improvements will provide the Program with more flexibility in implementing flow tests made under the Adaptive Management Plan and in delivery of Program water to meet shortage reduction to target flow goals under the Water Plan. WPCP-1 costs are summarized by item below.

Item	Cost
State Channel Berm Maintenance	\$ 10,000
In-Channel Vegetation Control	\$ 40,000
TOTAL	\$ 50,000

Notes on Cost

Routine maintenance and repair of the state channel berm and the Albrecht property will include tasks such as mowing, minor earthwork repair, culvert cleanout, and channel debris maintenance, as needed to maintain project function.

In 2021, vegetation treatment was completed on behalf of the Program through a reach extending about 3.5 miles upstream from the Highway 83 bridge at North Platte. This included herbicide spraying of all vegetation in a 50 ft strip along the riverbanks as well as other areas in dry, overgrown side channels. The total area sprayed was about 43 acres. Mechanical removal (disking) of vegetation in these same areas and potentially more is proposed for 2022. A budget of \$40,000 assumes disking of 80 acres at a cost of \$500/acre.



PROGRAM TASK & ID: WPRT-1. Retiming Projects: Canal Recharge

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$536,000		

Task Description

Retiming of excess flows through intentional groundwater recharge in CNPPID, NPPD and CPNRD canal systems.⁴ Recharge operations will occur during the non-irrigation season as conditions allow, subject to the availability of excess flows, groundwater elevations below designated thresholds, and ice-free operating conditions. Estimated WPRT-1 recharge costs are summarized by district/canal below.

Item	Cost
CNPPID Phelps Canal	\$ 186,000
NPPD Canals	\$ 175,000
CPNRD Canals	\$ 175,000
TOTAL	\$ 536,000

Notes on Cost

Phelps County Canal Ground Water Recharge

The Program intends to continue retiming excess flows through intentional groundwater recharge in the Phelps County Canal in 2022, as it has done each year since 2011. Recharge operations can occur during the non-irrigation season as conditions allow, subject to the availability of excess flows, groundwater elevations below designated thresholds, and ice-free operating conditions. To facilitate recharge, a check structure at Mile Post (MP) 13.3 allows water to pool in the canal and seep into the aquifer. The CNPPID will obtain a temporary permit to divert unappropriated excess flows for groundwater recharge.

The project budget will be used for recharge operations during the winter, spring, and fall of calendar year 2022. The anticipated expenditures by the Program include the cost of divertible excess flows as measured at the CNPPID’s flume at MP 1.6 of the Phelps County Canal. A Water Service Agreement (WSA) with the CNPPID is in place, the terms of which specify that the Program’s share is 75% of the total amount diverted.⁵ Details of anticipated 2022 Phelps County Canal groundwater recharge are shown in the table below. Actual expenditures in 2022 will be based on the measured deliveries into the canal for recharge operations.

⁴ This line item combines recharge operations that were previously included in WP-4(b)l, WP-4(f)i, and WP-4(f)ii.

⁵ The other 25% share is allocated to the State of Nebraska, but their agreement expired December 31, 2017. Since the start of 2018, the Program has received 100% of Phelps recharge water.



Item	Value
Water Service Agreement	Expires December 31, 2023
Unit Cost	\$34.87 per acre-foot
Estimated Volume ¹	5,000 acre-feet
Budget²	\$175,000

¹ Estimated volume based on 2015-2020 excess flow diversions (range = 712 to 5,182 acre-feet, average = 3,073 acre-feet).

² Unit Cost × Estimated Volume, rounded to the next \$1,000.

In 2016, the Program constructed a well on the Cook tract to recapture groundwater intentionally recharged through the Phelps County Canal. The well was permitted through the Tri-Basin Natural Resources District. The well is equipped with an 800 gallon per minute pump and is used by the Program to extract recharged water from the alluvium. The extracted water is pumped into the North Phelps County Ditch as surface water (via a pipeline) and returns to the Platte River as measurable returns at a point location during shortages to target flows.

The 2022 budget includes funds for continued operation and maintenance of the existing Cook tract recapture well. The Cook well pumped a maximum of 217 acre-feet in 2020 but is on track to exceed that number significantly in 2021. For budget purposes, about 500 AF of Cook well pumping will be assumed in 2022. The estimated cost of pumping is about \$10.00 per acre-foot, based on electrical power costs for 2016-2020 pumping operations. Combined with a power company fee of \$533.21 billed twice annually, total pumping cost for 2022 is estimated to be \$6,100. A maintenance budget of \$2,500 is included for general upkeep of the well in 2022, and \$2,500 is allocated for the installation of a new SCADA system for remote control of the Cook well. The total 2022 budget for power, O&M, and SCADA for the Cook well is \$11,100.

Overall total budget for the Phelps County Canal groundwater recharge project is rounded to \$186,000.

NPPD Gothenburg and Dawson County Canal Ground Water Recharge

The Program has a WSA with the NPPD effective January 1, 2022, for diversion of excess flows into the Gothenburg and Dawson County Canals for groundwater recharge operations during the non-irrigation season. Per the terms of the WSA, the Program will pay NPPD for a Net Amount Diverted, which is defined as “the flow measured by NPPD using the Gothenburg Canal and Dawson County Canal measuring flumes located near the river head gates...and subtracting each canal’s river returns as measured by NPPD.” To facilitate the project, NPPD will obtain the necessary temporary permits to divert unappropriated excess flows for groundwater recharge. Details of anticipated 2022 CPNRD canals groundwater recharge are shown in the table below. Actual expenditures by the Program will be based on measured diversions into the Gothenburg and Dawson County Canals for groundwater recharge in 2022.



Item	Value
Water Service Agreement	Expires December 31, 2025
Unit Cost	\$34.87 per acre-foot
Estimated Volume ¹	5,000 acre-feet
Budget²	\$175,000

¹ Estimated volume based on 2015-2020 net recharge (range 2,701 to 9,433 acre-feet, average = 4,881 acre-feet).

² Unit Cost × Estimated Volume, rounded to the next \$1,000.

CPNRD Orchard-Alfalfa, Thirty Mile and Cozad Canal Groundwater Recharge

The CPNRD diverts excess flows for non-irrigation season recharge through the Orchard-Alfalfa, Thirty Mile, and Cozad canals. Permanent appropriations for recharge diversions (100 cfs each at Thirty Mile and Cozad, 75 cfs at Orchard-Alfalfa) were approved by the Nebraska DNR in 2015. Details of anticipated 2022 CPNRD canals groundwater recharge are shown in the table below. Actual expenditures in 2022 will be based on the measured deliveries.

Item	Value
Water Service Agreement	Expires December 31, 2024
Unit Cost	\$34.87 per acre-foot
Estimated Volume ¹	5,000 acre-feet
Budget²	\$175,000

¹ Maximum Total Amount Diverted specified in the WSA.

² Unit Cost × Estimated Volume, rounded to the next \$1,000.



PROGRAM TASK & ID: WPRT-2. Retiming Projects: Elwood Reservoir Recharge

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$795,000		

Task Description

Retiming of excess flows through intentional groundwater recharge in CNPPID’s Elwood Reservoir.⁶ Recharge operations will occur during the non-irrigation season as conditions allow, subject to the availability of excess flows, groundwater elevations below designated thresholds, and ice-free operating conditions.

Notes on Cost

The Program intends to continue purchasing excess flows delivered into Elwood Reservoir in the CNPPID system for recharge in 2022, as it has done each year since 2015. Elwood Reservoir is an unlined reservoir that acts as a holding basin to allow excess flows to seep and recharge the alluvial aquifer. Excess flows are delivered through the E-65 Canal to the Carl T. Curtis Pump Station, which pumps the water into Elwood Reservoir. A WSA with the CNPPID is in place, the terms of which specify that the Program’s share is 50% of the total amount diverted up to a maximum of 30,000 acre-feet per year. Details of anticipated 2022 Elwood Reservoir groundwater recharge are shown in the table below. Actual expenditures in 2022 will be based on the measured deliveries into the reservoir for recharge operations.

Item	Value
Water Service Agreement	Expires December 31, 2023
Unit Cost	\$52.96 per acre-foot
Estimated Volume ¹	15,000 acre-feet
Budget²	\$795,000

¹ Based on maximum annual diversions of 30,000 acre-feet and a 50% Program share.

² Unit Cost × Estimated Volume, rounded to the next \$1,000.

⁶ This line item includes budget previously allocated to WP-4(b)i.



PROGRAM TASK & ID: WPRT-3. Retiming Projects: Broad-Scale Recharge

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$72,000		

Task Description

This project concept consists of developing a series of large, shallow recharge ponds in the Central Platte Basin, focused on the reach between Gothenburg, NE and Odessa, NE to maximize the benefit to the habitat reach. The Program recently completed construction of its first broad-scale recharge project at the Cottonwood Ranch Complex, which included the construction of a series of earthen berms and water control structures to allow for the ponding of water and subsequent recharge of the alluvial aquifer.⁷ The water is delivered to the property via a constructed pipeline from the Phelps County Canal at times when the Platte River flow at Grand Island is in excess of USFWS target flows, and the infiltrated water returns to the Platte River over time. Estimated WPRT-3 recharge costs are summarized by item below.

Item	Cost
Rubicon Gate/SCADA Service & Maintenance	\$6,000
Electricity	\$400
Berm maintenance	\$62,500
Groundwater monitoring	\$3,000
TOTAL	\$71,900 Rounded to \$72,000

Notes on Cost

The Program will begin operation of the recharge project in the spring of 2022, ideally during the spring whooping crane migration. The CNPPID will charge the Program \$27.60 per acre-foot (with a 2% annual escalator) for water diverted to the delivery pipeline in 2022. However, the Program will not be responsible for a cash payment to the CNPPID until the cost of water deliveries exceeds the cost of the design and construction of the delivery pipeline (estimated by CNPPID to be \$1,074,900). At 2022 rates, the estimated pipeline costs are equivalent to approximately 39,000 acre-feet of water deliveries. This far exceeds anticipated deliveries to Cottonwood Ranch in 2022, so no additional budget is included for water deliveries.

Seven of the eight water control structures at the Cottonwood Ranch project are solar powered, self-regulating gates manufactured by Rubicon. Gates are linked to a cellular SCADA system allowing EDO staff to remotely operate the gates and monitor their performance. Annual Rubicon gate maintenance will cost \$1,400 (~\$200 per gate). The annual cost of the subscription to the remote-control software is \$4,600 (~\$650 per gate). The annual maintenance and subscription will be budgeted for each year.

Electrical power service from Southern Power to power pipeline valves and other equipment is estimated to be approximately \$400 (~\$33.00 per month).

⁷ This line item includes budget previously allocated to WP-4(b)ii.



Some amount of annual maintenance will be necessary at the project. This could include fixing berms or spillways that are damaged from high flows or precipitation events, re-seeding berms, replacing riprap, or other things of this nature. The Nebraska Resources Development Fund Guidelines recommends budgeting 1.25% of the constructions costs per year for maintenance for projects similar to the broad-scale recharge project. Given the capital cost of the project (\$5,000,000), \$62,500 has been budgeted for general site and berm maintenance.

Project water accounting for the Program and for regulatory agencies (Department of Natural Resources and Tri-Basin Natural Resources District) will be accomplished through detailed monitoring of water surface levels in the recharge basins and the Peterson Drain. It is estimated that about \$3,000 will be needed for new and/or repaired equipment, which equates to about two new data loggers.



PROGRAM TASK & ID: WPRT-4. Retiming Projects: Recapture Wells

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$80,000		

Task Description

Groundwater recapture projects are retiming projects utilizing the water from existing recharge operations, such as the Phelps County Canal groundwater recharge project and Elwood Reservoir recharge. Since recharge accretions are not controllable and may return to the river during excesses to target flows, groundwater recapture allows the Program to pump intentionally recharged water to the river during shortage periods to maximize the score of the already recharged water.⁸

Notes on Cost

The Program entered into a water service agreement with the Tri-Basin Natural Resources District (TBNRD) to construct and operate a network of wells to recapture water recharged through the Phelps County Canal, Elwood Reservoir, and the broad-scale recharge project at Cottonwood Ranch. Construction of seven recapture wells is anticipated to be completed by the spring of 2022. Per the Program’s water service agreement with Tri-Basin NRD, all project operations costs will be reimbursed by the Program with no markup. Given the project has not yet been constructed, and because the project will not be completed until the spring of 2022, estimated 2022 operations costs in the table below are highly uncertain.

Item	Cost
Electricity	\$ 52,000
Well/Pipeline Maintenance	\$ 11,000
Tri-basin NRD Staff Time and Indirect Costs	\$ 17,000
TOTAL	\$ 80,000

⁸ This line item includes budget previously allocated to WP-4(b)i.



PROGRAM TASK & ID: WPST-1. Storage Leases: Lake McConaughy Sources

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$1,648,000		

Task Description

In 2019, an agreement was reached between CPNRD, NPPD, CNPPID the Nebraska DNR, to test a “pilot exchange project” in which surface water would not be used by CPNRD and NPPD irrigation districts and a portion of that water would be transferred to the EA at the end of the irrigation season.⁹ These projects continued in 2020 and 2021. There is the potential to transition to long-term agreements in 2022 as well as lease additional storage water from CNPPID. Estimated WPST-1 leasing costs are summarized by source below.

Item	Cost
CPNRD Exchange	\$1,350,000
NPPD Exchange	\$298,000
CNPPID Storage Lease	\$ -
TOTAL	\$1,648,000

Notes on Cost

The money included in this line item assumes a one-year continuation of the CPNRD and NPPD Water Leasing Agreements in 2022. CNPPID storage leasing is not anticipated in 2022. Details of anticipated 2022 CPNRD surface water leasing are shown in the table below. Actual expenditures will be based on the volume credited to the Lake McConaughy EA in October 2022.

Item	Value
Unit Cost	\$90.00 per acre-foot
Assumed Volume ¹	15,000 acre-feet
Budget²	\$1,350,000

¹ Based on maximum lease volume specified in the 2021 Water Leasing Agreement.

² Unit Cost × Estimated Volume, rounded to the next \$1,000

Details of anticipated 2022 NPPD surface water leasing are shown in the table below. Actual expenditures will be based on the volume credited to the Lake McConaughy EA in October 2022.

Item	Value
Unit Cost	\$90.00 per acre-foot
Assumed Volume ¹	3,306 acre-feet
Budget²	\$298,000

¹ Based on maximum lease volume specified in the 2021 Water Leasing Agreement.

² Unit Cost × Estimated Volume, rounded to the next \$1,000.

⁹ This line item includes budget previously allocated to WP-4(f)i, WP-4(f)ii, and WP-4(f)iii.



PROGRAM TASK & ID: WPST-2. Storage Leases: Upstream Sources

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$624,000		

Task Description

This line item includes leasing of surface water from sources upstream of Lake McConaughy, which presently consists of water leased from Wyoming’s Pathfinder Municipal Account .¹⁰ Estimated WPST-2 leasing costs are summarized below.

Item	Cost
Pathfinder Municipal Account Lease	\$ 624,000
TOTAL	\$ 624,000

Notes on Cost

Pathfinder Municipal Account

The Program has a contract with the Wyoming Water Development Office (WWDO) for water from the Municipal Account in Pathfinder Reservoir. The contract is effective on January 1, 2020, and the term extends until December 31, 2032. For 2022, the maximum water available from the Pathfinder Municipal Account is 9,600 acre-feet at a unit cost of \$65 per acre-foot. The resulting 2022 budget is \$624,000.

¹⁰ This line item includes budget previously allocated to WP-4(d) and WP-4(f)viii.



PROGRAM TASK & ID: WPIR-1. Irrigator Leases

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$310,000		

Task Description

The Program can temporarily lease surface water rights from individual irrigators under the CNPPID system. Irrigators then dryland farm the enrolled parcels, which are generally odd-shaped or hard-to-irrigate lands, during the term of the lease agreement. The consumptive use portion of the surface water—9 inches per acre during a full-allocation year—is available in Lake McConaughy and transferred into the EA for the Program.¹¹ The CNPPID serves as the administrator, managing the individual lease agreements, processes, and operations. The Program and the CNPPID agreed upon a 5-year extension of the irrigator lease, beginning with the 2019 irrigation season, and continuing through the 2023 irrigation season. The table below provides details of the CNPPID irrigator lease for 2022.

Item	Value
Water Leasing Agreement	Expires December 31, 2023
Unit Cost ¹	\$100 per enrolled acre
Assumed Enrollment ²	3,000 acres
CNPPID Administration Fee	\$10,000
Budget³	\$310,000

¹ Pricing Addendum for 2021 reduced the unit cost from \$220 per acre to \$100 per acre. Terms for 2022 are unchanged.

² Maximum acreage specified in the Water Leasing Agreement.

³ Unit Cost × Estimated Enrollment, plus CNPPID Administration Fee.

With full enrollment, the CNPPID irrigator lease would result in 2,250 acre-feet credited to the Lake McConaughy EA in October 2022. Actual cost and project yield will be based on irrigator lease enrollment for the 2022 irrigation season.

¹¹ This line item includes budget previously allocated to WP-4(f)iv.



PROGRAM TASK & ID: WPLW-1. General Maintenance of Land-for-Water Properties

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	17,000		

Task Description

This line item includes the funds necessary for general land management and maintenance activities at Program properties acquired for developing Water Action Plan projects, including the Lindstrom, Edlund, and Lakeside tracts.¹²

Notes on Cost

Associated tasks and individual budgets are shown in the table below. See **Appendix A** in this document for more detail.

Item	Cost
Fence & Road Maintenance	\$ 1,000
Noxious Weed Control	\$ 5,000
Mowing	\$ 1,000
Tracts W2016002 and W2017001 Electricity	\$ 100
Taxes	\$ 9,750
BUDGET	\$ 16,850 Round to \$17,000

¹² This line item includes budget previously allocated to WP-4(j).



PROGRAM TASK & ID: WPWM-1. Water Monitoring Activities

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$36,000		

Task Description

The Program maintains a network of surface and groundwater monitoring locations equipped with manual and automated data loggers. Data from this network provides information on regional groundwater levels, river and wetland stage, and surface/groundwater interactions. In addition, the Program leases two weather stations on its Binfield South and Morse properties and shares in the expense of maintaining three stream gages in the upper portion of the AHR.¹³ Estimated WPWM-1 costs are summarized by item below.

Item	Cost
Groundwater Monitoring	\$ 10,633
Cottonwood Ranch Stream Gages	\$ 20,000
Overton Stream Gage	\$ 5,000
BUDGET	\$ 35,633 Round to \$ 36,000

Notes on Cost

The Program maintains a network of surface and groundwater monitoring locations equipped with manual and automated data loggers. Data from this network provides information on regional groundwater levels, river and wetland stage, and surface/groundwater interactions. In addition, the Program leases two weather stations on its Binfield South and Morse properties. All monitoring equipment supports WAP reporting, accounting, and decision making as well as future WAP design. Data loggers and other equipment require ongoing maintenance and replacement, as shown in the following table.

Item	Unit cost	Units	Quantity	Total
Hydro Vu subscription	\$ 240.00	ea.	2	\$ 480.00
Desiccant: Interra sSorb blue indicating silica gel	\$ 30.00	lbs.	5	\$ 150.00
Additional large desiccant containers	\$ 195.00	ea.	5	\$ 975.00
AWDN Annual Maintenance	\$ 2,600.00	ea.	2	\$ 5,200.00
Staff gage replacements	\$ 35.00	ea.	4	\$ 140.00
Channel posts, 6'	\$ 10.00	ea.	10	\$ 100.00
In Situ Level Troll maintenance	\$ 1,344.00	ea.	2	\$ 2,688.00
In Situ Tube telemetry maintenance	\$ 900.00	ea.	1	\$ 900.00
BUDGET				\$ 10,633

¹³ This line item includes budget previously allocated to H-2 and IMRP-2.



In addition to the items in this table, stream gages have been installed at the request of the Program. The U.S. Geological Survey (USGS) installed and maintains two gages located on the Cottonwood Ranch Complex. These gages are used primarily in conjunction with geomorphology and sediment augmentation related research. Annual maintenance costs include physical maintenance of the gage, checking and adjusting the rating curve through field measurements, QC/QA of the data, and making data available real-time. The USGS gages were established in a service agreement negotiated and still held by NPPD, but with the costs passed through to the Program. Costs are set at \$20,000 but vary slightly annually if significant equipment components, such as probes or cables, need replacing.

The Program will also cost-share with CNPPID for the continued operation of the USGS gage at Overton, NE. The Overton gage is essential to Program decision-making through the availability of real-time data provided by the USGS equipment. Costs for this arrangement are anticipated to be about \$5,000 based on 2014-2021 experience.

There are two entities in Nebraska that can establish official stream gaging stations, the USGS and the NDNR, and these stations must be official gaging stations to establish scientific rigor and credibility. Because there are no other options for establishing an official stream record through a competitive selection process, and because each entity is a government agency bound by their rules and regulations for providing their services and the associated costs, and because the USGS costs are comparable to the NDNR costs; therefore, these rates (total \$25,000) are considered fair and reasonable.



PROGRAM TASK & ID: WPMT-1. Water Management Tools (COHYST)

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$5,000		

Task Description

The COHYST Tool provides an integrated surface water, ground water, and watershed model for the Platte River between Lake McConaughy and Duncan, Nebraska. It is a tool used by the NDNR for water planning and administration, and it is anticipated to be a valuable tool for project planning and evaluation efforts under the PRRIP Water Plan. ¹⁴ The COHYST Sponsors Group is outlining its Phase 3 workplan now that the modeling tool is fully developed and documented. As a user of the modeling tool, the PRRIP may require additional training or support from the consultants that developed the model. The PRRIP may also contribute funds to ongoing model updates and model support through the COHYST Sponsors Group.

¹⁴ This line item includes budget previously allocated to WP-5.



PROGRAM TASK & ID: WPSA-1. EDO Special Advisors – Water Plan

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$50,000		

Task Description

The EDO may rely on Special Advisors to assist in Water Plan-related issues beyond staff expertise or to assist with short-term schedule challenges. These areas may include but are not limited to water infrastructure and design, structural, and hydrogeology/ground water.¹⁵ Estimated WPSA-1 costs are summarized by item below.

Item	Cost
Hydrogeology and Ground Water	\$ 40,000
Civil Infrastructure	\$ 10,000
BUDGET	\$ 50,000

Notes on Cost

Hydrogeology and Ground Water

Several projects include hydrogeologic elements that may require further expertise, including ground water recharge projects, ground water recapture pumping projects and other projects with a ground water component. Projects may include the Elwood Reservoir recharge project, the Phelps, CPNRD, and NPPD canal recharge projects, the proposed recapture well network, and any COHYST or other groundwater model scenario runs. Bill Hahn (Hahn Water Resources) is contracted as the Program’s Special Advisor for hydrogeology and ground water. Cost estimates are based on approximately 228 hours at a billing rate of \$175/hour, for a total of \$40,000. Billing rates are based on previous contracts awarded in a competitive process and are assumed to be fair and reasonable.

Civil Infrastructure

Anderson Consulting Engineers (ACE) will continue to serve as Special Advisor for civil infrastructure. ACE has extensive experience with civil design and construction engineering for water-related projects as well as planning and economic analysis of irrigation system infrastructure rehabilitation.

The table below summarizes costs by advisor.

Area of Expertise	Name	Estimated Range of Expenditures
Hydrogeology and Groundwater	Bill Hahn	\$40,000
Civil Infrastructure	Anderson Consulting Engineers	\$10,000
BUDGET		\$50,000

¹⁵ This line item includes budget previously allocated to WP-8.



General note on all Special Advisor budget line items: Please refer to the third paragraph in the Exceptions: section of the Procurement Policy adopted by the GC in June 2016, “Retention of special advisors to the ED of a technical or legal nature is exempt from the procedures provided in this directive.”

Consequently, Special Advisors are not selected through a competitive process involving advertised RFQs or RFPs. Special Advisors are selected by the Executive Director (ED) based on qualifications – education, relevant experience, expertise and skills, reliability, credibility, and ability to work effectively with the ED and the staff of the ED Office. Special Advisors and the firms they are associated with cannot do any other work for the Program, individually or as part of a team. This is a critical restriction and generally orients special advisor selection to individuals who are sole proprietors or part of small firms that would not likely be doing significant levels of work for the Program on other specific, larger projects.

The billing rates are negotiated with the special advisors by the ED and are kept within the industry standard of practice based on each individual’s qualifications. While industry standard of practice may not be precisely defined, anyone who is a practicing member of that professional community understands the limits of reasonableness associated with those boundaries. Appropriate expertise to make this assessment resides with the ED or ED Office staff. The industry standard of practice rates guidelines used in this process is established based on an on-going market survey process comparing labor rates of similarly qualified professionals in the field.

In the case of Special Advisors, individuals with similar experience and qualifications have been part of consultant teams selected through the Program’s competitive procurement process over an eight-plus-year period. Comparison of the Special Advisor rates to the rates charged by comparable individuals through the competitive procurement process provides an indisputable basis for comparison. In all cases the Special Advisor rates are not only within the range of rates seen on the consultant teams which have been selected competitively, but typically at the middle to lower end of the range. As rates charged by Special Advisors are at the middle to low end of the range of rates for similar work acquired through the Program’s competitive procurement process, the estimate for Special Advisors is considered fair and reasonable.

The anticipated level of effort for the upcoming year is also discussed with the special advisors by the ED and members of the EDO staff, but all work is assigned on an as-needed basis with no guarantee of any minimum level of assignments. During the budgeting process, the Special Advisors anticipated to be needed and roughly the level of effort expected to accomplish the work plan for the budget year is scrutinized by and discussed with the appropriate advisory committees, the Finance Committee, and the GC. Input is received and taken under advisement from all these sources as to the appropriateness of the budgets for these line items with appropriate adjustments made prior to budget finalization.



PROGRAM TASK & ID: LP-2. Habitat Restoration and Management Actions on Program Lands

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$336,000		

Task Description

Implementation of target species habitat restoration and maintenance activities at Program habitat complexes and non-complex properties. Activities generally include creation and maintenance of tern and plover on and off-channel nesting habitats and creation and maintenance of on and off-channel whooping crane roosting habitat. Some of the specific management actions are tree clearing, nesting island maintenance, channel diking, herbicide application, and seeding. See **Appendix A** for a detailed breakdown of LP-2 management actions by habitat complex.

Notes on Cost

Appendix A contains more details, but the general breakdown of estimated costs for proposed AMP-related management actions in 2022 is as follows:

Location	Estimated FY21 Cost
Non-complex	\$51,500
Plum Creek Complex	\$39,200
Cottonwood Ranch Complex	\$32,150
Elm Creek Complex	\$12,323
Pawnee Complex	\$39,357
Fort Kearny Complex	\$49,480
Audubon Rowe Complex	\$5,000
Clark Island Complex	\$53,440
Shoemaker Island Complex	\$12,759
Chapman Complex	\$40,100
TOTAL	\$335,309 Round up to \$336,000



PROGRAM TASK & ID: LP2-P. Trapping Projects

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$89,000		

Task Description

Mammalian predator trapping will be conducted under the existing agreement between the Program and USDA-APHIS. Mammalian predator trapping occurs at all managed tern and plover nesting sites to increase productivity within the AHR and beaver trapping occurs along the State Channel at the North Platte Choke Point maintain flow through the State Channel improvements.

Notes on Cost

Based on the current agreement with the USDA within the AHR, including two newly acquired or reformed sites (Lexington OSG and Alda-Folmer) for FY21, and additional trapping needs at the North Platte Choke Point, trapping costs are expected to increase slightly and are itemized as follows:

Category	Estimated FY22 Cost
Salary/Benefits	\$50,496.41
Vehicle/Transportation	\$13,998.80
Travel Cost	\$1,000.00
Equipment/Supplies	\$4,500.00
Subtotal	\$69,995.21
Pooled Costs (11%)	\$ 7,699.47
Overhead (16.15%)	\$ 11,304.23
Total	\$88,998.91 Round up to \$89,000

Products

- Increased tern and plover productivity from the AHR.
- Maintain flow conveyance at the North Platte Choke Point.
- Predator trapping data that will be summarized and included in the annual tern and plover monitoring report.



PROGRAM TASK & ID: PD-22. Sediment Augmentation Implementation

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$150,000		

Task Description

Implementation of full-scale sediment augmentation, monitoring, data analysis, and reporting. Implementation will occur in the south channel of the Platte River along Jeffrey Island (the J-2 Return channel) in an attempt to arrest continued channel incision.

Notes on Cost

The FY22 tasks and estimated costs for sediment augmentation are as follows:

Task Description	Estimated FY22 Cost
80,000 tons of sediment augmentation in the south channel above the Overton bridge	\$150,000
Total	\$150,000

Project oversight, including project planning and design, development of bid package to secure augmentation contractor, and final project evaluation and reporting will be conducted by the EDO. This estimate assumes basic implementation of mechanical manipulation (not sand pumping) and monitoring and cost estimates based on pilot study experience. As the budget estimate is developed by using rates and the level of effort for similar work acquired for the Program through the competitive procurement process, final negotiation and award of the augmentation and monitoring contracts will be acquired through competition and the estimate for this work is considered fair and reasonable.



PROGRAM TASK & ID: WP-1 (b). Phragmites Control

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$200,000		

Task Description

The objective of the Active Channel Capacity Improvements task is to fund management actions (primarily herbicide application) to prevent invasive vegetation infestation of the channel and maintain flow capacity and target species habitat. Channel capacity improvements will assist the Program in maintaining suitable on-channel roosting habitat for whooping cranes as well as make it easier to deliver Program water to and through the AHR.

Notes on Costs

The Platte Valley and West Central Weed Management Areas estimates it will cost on the order of \$600,000 annually to control phragmites within the Platte River Basin into perpetuity. It is estimated that \$200,000/year will be requested of and likely required by the Program for phragmites control to maintain or improve flow conveyance throughout the Platte River Basin to allow the Program to test FWS target flows and other Program flow management activities.

Annual cost breakdowns for allocation of the budget shown in Table below are based on control expenditures made by the Platte Valley Weed Management Area in previous years. The actual distribution of expenditures in any given year varies among categories and may include other categories associated with channel maintenance and enhancement such as river tillage operations for vegetation control in addition to herbicide-based control efforts.

Category	Amount	Approximate Unit Cost	Total Cost
Control (helicopter)	4,800 acres	\$70/acre	\$336,000
Control (Airboat)	600 hrs	\$150/hr	\$90,000
Herbicide	2,325 gals	\$75/gal	\$174,375
Total (Rounded)			\$600,000

Annual work activities will consist of control, removal, and monitoring of invasive vegetation within Platte River channels and its tributaries in Keith, Lincoln, Deuel, Dawson, Buffalo, Phelps, Hall, Merrick, and Polk counties. The activities will promote channel conveyance and desired vegetation communities by controlling invasive vegetation within the Platte River. By focusing on the entire system, the project will maximize resources through a collaborative partnership focused on rehabilitation of the active channel, promoting long-term maintenance, and developing an early detection and rapid response protocol to prevent re-infestations.

An endowment is currently being established to provide long-term funding for this effort. Once the endowment is fully funded, phragmites and other noxious weed control within Platte River Channels would be perpetually funded. The Program supports this concept. It is anticipated that the Program will spend \$2.6 million on phragmites control during the Extension. Once an endowment is in place, the GC supports the concept of pledging these funds and contributing them to the endowment.



PROGRAM TASK & ID: G-1. Remote Sensing Data Collection

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$306,000		

Task Description

Bathymetric LiDAR and aerial photography data collection for all Platte River channels within the Associated Habitat Reach (AHR) during the summer and fall. Field data collection and data reduction and analyses will be performed by the EDO.

Notes on Cost

Budget estimates are based on an existing 4-year contract which expires at the end of 2023. The FY22 tasks and contracted costs for data collection are as follows:

Task Description	Estimated FY22 Cost
Summer aerial imagery	\$68,500
Fall aerial imagery and full reach bathymetric LiDAR	\$236,700
Total	\$305,200 Round to \$306,000

Products

Processed LiDAR point data, three digital elevation models including topo-bathymetric bare earth, hydro-flattened bare earth, and highest hit, and 6-inch resolution 4-band (CIR and true-color) aerial photography. Collection specifications are identical for summer and fall acquisitions. Summer imagery acquisition coverage encompasses entire AHR within 3.5 miles of the channel. Fall imagery acquisition limited to channel areas. LiDAR coverage for all channels within the entire AHR.



PROGRAM TASK & ID: TP-1. Tern & Plover Monitoring and Research

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$20,000		

Task Description

The EDO will implement the PRRIP tern and plover monitoring protocol during the 2022 nesting season. Monitoring efforts will be similar to 2021 and will include implementation of the monitoring protocol through outside monitoring efforts. Additional track surveys and camera monitoring of nests, shorelines, and predator fencing will be implemented to document predator presence and nest and/or brood predation. The research protocol for predator management, including enclosure fencing and predator deterrent lights will continue in 2022 to increase tern and plover nest and chick survival within the AHR. The funding included in this line item provides the seasonal personnel and equipment required to assess the performance of actions the Program takes to improve productivity of terns and plovers.

Notes on Cost

FY22 funding in this line item includes two seasonal employees to assist with tern and plover monitoring and implementing the predator management research protocol at off-channel sites, with 2 additional sites (Lexington and Alda) being reformed for use as habitat in 2021. Direct costs are largely based on cost estimates for replacing cameras and predator deterrent lighting that were damaged during the 2021 season. Materials to perform seasonal maintenance at off-channel nesting sites also included.

Expense Category	Estimated FY22 Cost
Personnel	\$12,800
Direct Costs	
Nest, shoreline, site-level camera replacement	\$1,200
Video camera monitoring (data and protection plan, batteries)	\$2,550
Camera supplies (SD cards, batteries, posts, avian spikes, zip ties)	\$100
Predator deterrent lights	\$700
Seasonal site and fence maintenance supplies	\$2,000
Direct Cost Subtotal	\$6,550
Total	\$19,350 Round to \$20,000

Products

- Annual report detailing nest activity, bird activity, and habitat conditions; data for long-term analysis of effects of Program actions.
- Data quantifying predator presence and impact on tern and plover productivity at off-channel sites within the AHR.
- Data on efficacy of enclosure fencing and predator deterrent lights for reducing predator presence on off-channel nesting sites and improving reproductive success of terns and plovers within the AHR.
- Data will be summarized in annual reports and final results will be published during the First Increment Extension.



PROGRAM TASK & ID: WC-1. Whooping Crane Monitoring and Research

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$135,000		

Task Description

Spring and Fall 2022 implementation of the whooping crane monitoring protocol, data analyses, and reporting will be conducted by the EDO.

Notes on Cost

The EDO will implement the whooping crane monitoring protocol and perform data analyses and reporting for the spring and fall 2022 monitoring seasons. Costs are based on past technician rates and aerial flight services contracted through a competitive selection process. The budget for spring and fall 2022 field work to be completed by the EDO is as follows:

Expense Category	Estimated FY22 Cost
FY22 Spring Whooping Crane Monitoring	
Personnel	\$17,000
Direct Costs (aircraft rental, mileage, GPS unit rental, radios, equipment, liability insurance, etc.)	\$62,000
Subtotal	\$79,000
FY22 Fall Whooping Crane Monitoring	
Personnel	\$13,000
Direct Costs (aircraft rental, mileage, equipment, liability insurance, etc.)	\$43,000
Subtotal	\$56,000
Total	\$135,000

Products

- Spring and Fall 2022 Whooping Crane Reports detailing monitoring effort, whooping crane use locations, numbers of individuals sighted, and habitat conditions associated with sightings; data for long-term analysis of effects of Program actions.



PROGRAM TASK & ID: PS-1. Pallid Sturgeon Monitoring and Research

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$747,000		

Task Description

The EDO will coordinate two research efforts dedicated to filling Program information gaps for pallid sturgeon. Genetics research by Dr. Ed Heist at Southern Illinois University, Carbondale, is designed to address issues with pallid sturgeon identification, hybridization, population structure and dynamics. Habitat and spawning research by Dr. Mark Pegg, Dr. Jonathan Spurgeon, and Kirk Steffensen at the University of Nebraska, Lincoln, is expected to provide data on the contribution of the lower Platte River to pallid spawning habitat, reproduction, recruitment, and population dynamics. This research will also provide information on seasonal pallid movements in and out of the lower Platte River and help quantify the environmental patterns (flow, temperature, turbidity) associated with these movements.

The current PRRIP remote sensing contractor will collect bathymetric LiDAR on the lower Platte River (LPR) to be used by the EDO to develop a 2D hydrodynamic river model for the LPR. This cost estimate was developed by the Program’s current remote sensing contractor. These data and the subsequent model will be paired with data from the ongoing pallid sturgeon research on the LPR to help match LPR flow, Program flow management, and pallid sturgeon habitat/use in the LPR for the PRRIP Water Management Study as described in the Pallid Sturgeon Agreement Framing Document, as approved by the GC in June 2021.

Notes on Cost

Genetics research in 2022 includes costs associated with genetic sequencing of 1,000 samples, supplies, and a graduate student research assistantship.

Habitat and spawning research in 2022 includes costs associated with two graduate student research assistantships, two field technicians, and a research associate as necessary to provide sampling support during spawning season. Equipment, travel, supplies, boat storage rental space, facilities and administration costs are also included.

We anticipate the LiDAR data acquisition flight on the LPR will be conducted by the current PRRIP remote sensing contractor during the summer of 2022. That assumes conditions (low flow, high water clarity, etc.) will be warranted at that time. If conditions do not warrant, this item will be pushed to FY2023 or beyond during the Extension to ensure data are collected under the appropriate river conditions.



The budget for 2022 is as follows:

Expense Category	Estimated FY22 Cost
Genetic research (SIU)	
Supplies & labor at \$45/sample for 1000 samples	\$45,000
Habitat & spawning research (UNL)	
Personnel, Support, Facilities & Administration	\$137,534
Equipment, Travel, Supplies, Facilities & Administration	\$253,962
Remote sensing data collection on the lower Platte River	
Additional LiDAR data acquisition flight on lower Platte River by existing remote sensing contractor	\$310,000
Total	\$746,496 Round up to \$747,000

Products

- Research products will include annual report and presentation of results, accomplishments, and interpretations. Presentations at regional pallid sturgeon meetings and American Fisheries Society meetings are also expected.
- The genetics research is expected to focus field efforts on tracking and collection of habitat and spawning information for genetically identified pallid sturgeon. It will also address important issues related to species identification, hybridization, population structure and population demographics. Results will be widely applicable to the conservation stocking program, wider field efforts to characterize pallid sturgeon habitat, and population viability assessments. As such, we expect this research to contribute to a more focused and efficient management plan for this species.
- Habitat and spawning research is expected to fill knowledge gaps about lower Platte River contribution to pallid spawning habitat, reproduction, recruitment, and population dynamics, including the documentation of successful spawning on the Platte River (in conjunction with genetics research) and identification and description of pallid spawning habitat. An extensive passive telemetry network is expected to provide information on seasonal pallid movements in and out of the lower Platte River and help quantify the environmental patterns (flow, temperature, turbidity) associated with these movements.
- LiDAR data set for the lower Platte River for use in future development by the EDO of a 2D hydrodynamic river model. That model will then be used in the future for development of the PRRIP Water Management Study as outlined in the June 2021 Pallid Sturgeon Agreement Framing Document.



PROGRAM TASK & ID: G-5. Geomorphology & Vegetation Monitoring and Research

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$74,000		

Task Description

Time-lapse camera data will be collected annually to monitor the efficacy of natural flows, target flows, and all AMP-related flow management activities at reducing vegetation establishment or removing vegetation from the channel to maintain or improve whooping crane roosting habitat suitability throughout the AHR. Data collection and analyses will be performed by the EDO. Surveys of vegetation composition and succession within PRRIP managed grasslands has occurred every three years since 2013, providing a long-term dataset from which land management strategies can be assessed. FY2022 is the next sequential survey period. Expenditure of funds for a 2022 grassland vegetation survey is contingent upon discussions with the TAC, LAC and GC regarding the benefits and costs associated with this effort.

Notes on Cost

The FY22 estimated cost for acquiring and installing time-lapse cameras on the bank line of Program Habitat Complexes is estimated to be \$4,000. The FY22 cost estimate for the grassland vegetation survey is based upon continuation with previous survey design and effort. Discussions with the TAC, LAC, and GC during the first quarter of 2022 will determine final costs.

Expense Category	Estimated FY22 Cost
Channel bank line vegetation monitoring	\$4,000
Grassland vegetation survey	\$70,000
Total	\$74,000

Products

- Products will include time-lapse imagery of channel inundation flows and vegetative response.
- Products for grassland vegetation surveying include a 2022 vegetation composition dataset for each property surveyed and an annual report of results with comparison to previous surveys and interpretation of these results.



PROGRAM TASK & ID: PD-15. Environmental Permitting

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$50,000		

Task Description

Contract services to secure or maintain environmental permits associated with adaptive management and/or water projects.

Notes on Cost

HDR was awarded a sole source contract for permitting services in 2018 that expires on 12/31/2021. The multi-year contract amount was \$150,000 and specific dollar amounts were developed for specific services, as needed. For 2022, the Program EDO will develop an RFP for a similar multi-year contract for competitive bidding on this service. Estimated annual costs for 2022 remain at \$50,000 based on previous permitting work for the Program and are high enough to ensure enough budget is available to account for unforeseen eventualities in the permitting process that could slow down permit acquisition.



PROGRAM TASK & ID: PD-18. Science Plan-related Equipment

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$93,000		

Task Description

Headwaters Corporation owns equipment and will charge the Program a use rate for Program-related activities.

Notes on Cost

Equipment charges are calculated on an annual basis and then converted into monthly rates. The basic methodology was described in detail in a memo to the Finance Committee/Governance Committee dated 11/02/11. The categories and associated calculation methods are summarized, and the corresponding values tabulated below.

Equipment	Use & Maintenance (\$)	Fuel (\$)	License & Insurance (\$)	Monthly Total (\$)	Comments	Miles/Year
4 - 4WD Pickup trucks	2000	1200	960	4160	Owned by Headwaters Corp.	64,000
4WD SUV	500	280	175	955	Owned by Headwaters Corp.	16,000
Airboat & Trailer	1000	125	320	1445	Owned by Headwaters Corp.	
Argo & Trailer	350	20	160	530	Owned by Headwaters Corp.	
ATV & Trailer	100	20	110	230	Owned by Headwaters Corp.	
Side-by-Side	200	30	100	330	Owned by Headwaters Corp.	
Drone	100			100	Owned by Headwaters Corp.	
TOTAL	\$4,250.00	\$1,675.00	\$1,825.00	\$7,750.00	\$93,000.00 (monthly total of \$7,750 x 12 months)	

The cost categories used, and the calculation methodologies are as follows:

- Use & Maintenance – the use portion is calculated on an annualized replacement cost for the equipment and the maintenance portion is calculated based on experience data and known periodic



significant maintenance items (e.g., replacement of the bottom shield or engine of the airboat) that are annualized to stabilize equipment costs between years.

- Fuel – the anticipated fuel costs based on anticipated miles, known miles per gallon rates, and anticipated cost of gasoline in Kearney, NE (weighted toward summer prices because that is the season of heaviest equipment use). A rate of \$3.10/gallon is used in developing these costs. The cost of fuel is a significant piece of the equipment costs (about 22% of the total), and the unit cost of gasoline is the most uncertain of all factors used in the development of these costs.
- License/Insurance – the cost of licensing (trucks, airboats, and trailers all require licenses) and insuring the equipment, including liability insurance, is included in this cost.



PROGRAM TASK & ID: IMRP-3. EDO Special Advisors – Science Plan

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$50,000		

Task Description

- Climate Change** – A Special Advisor to the EDO on Science Plan-related specialty topic of climate change and its impacts on water operations, water availability and forecasting, river processes, and/or target species ecology will be retained to review Program documents, research/monitoring design, modeling, and data analysis as well as attend and provide feedback at workshops and meetings. It is anticipated this Special Advisor will be retained in the second half of 2022 after consultation with ISAC members, TAC members, and/or others with recommendations for individuals to consider.

Notes on Cost

This FY22 budget line item is for expert assistance for the Executive Director’s Office (EDO) on key topics for the Program. The budget breakdown for this line item is as follows:

Name	Area of Expertise	Hourly Rate	Estimated 8-hour Days	FY22 Total
<i>TBD</i>	Climate change impacts on water operations, water ecology, and/or migratory bird ecology.	\$225	25	\$45,000
Other Direct Costs (i.e., travel and per diem for AMP Reporting Session, trips to Kearney, NE, etc.)				\$5,000
Total not to exceed				\$50,000

General note on all Special Advisor budget line items: Please refer to the third paragraph in the Exceptions: section of the Procurement Policy adopted by the Governance Committee in June 2016, “Retention of special advisors to the ED of a technical or legal nature is exempt from the procedures provided in this directive.”

Consequently, special advisors are not selected through a competitive process involving advertised RFQs or RFPs. Special advisors are selected by the Executive Director based on qualifications – education, relevant experience, expertise and skills, reliability, credibility, and ability to work effectively with the ED and the staff of the EDO. Special Advisors and the firms they are associated with cannot do any other work for the Program, individually or as part of a team. This is a critical restriction and generally orients special advisor selection to individuals who are sole proprietors or part of small firms that would not likely be doing significant levels of work for the Program on other specific, larger projects.

The billing rates are negotiated with the special advisors by the ED and are kept within the industry standard of practice based on each individual’s qualifications. While industry standard of practice may not be precisely defined, anyone who is a practicing member of that professional community understands the limits of reasonableness associated with those boundaries. Appropriate expertise to make this assessment



resides with the ED or EDO staff. The industry standard of practice rates guidelines used in this process is established based on an on-going market survey process comparing labor rates of similarly qualified professionals in the field.

In the case of Special Advisors, individuals with similar experience and qualifications have been part of consultant teams selected through the Program’s competitive procurement process over an eight-plus-year period. Comparison of the Special Advisor rates to the rates charged by comparable individuals through the competitive procurement process provides an indisputable basis for comparison. In all cases the Special Advisor rates are not only within the range of rates seen on the consultant teams which have been selected competitively, but typically at the middle to lower end of the range. As rates charged by Special Advisors are at the middle to low end of the range of rates for similar work acquired through the Program’s competitive procurement process, the estimate for Special Advisors is considered fair and reasonable.

The anticipated level of effort for the upcoming year is also discussed with the special advisors by the ED and members of the EDO staff, but all work is assigned on an as-needed basis with no guarantee of any minimum level of assignments. During the budgeting process, the special advisors anticipated to be needed and roughly the level of effort expected to accomplish the work plan for the budget year is scrutinized by and discussed with the appropriate advisory committees, the Finance Committee, and the Governance Committee. Input is received and taken under advisement from all these sources as to the appropriateness of the budgets for these line items with appropriate adjustments made prior to budget approval.

Products

Review of Program documents, advice on specific actions related to Science Plan and Water Plan implementation, participation in requested Program meetings (TAC meetings, ISAC meetings, annual Science Plan Reporting Session, etc.).



PROGRAM TASK & ID: ISAC-1. ISAC Stipends & Expenses

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$261,000		

Task Description

The EDO proposes the following 2022 ISAC activities:

- 1) 2022 PRRIP Science Plan Reporting Session in Omaha, NE (in-person); February 2022
- 2) ISAC participation in March 2022 GC Quarterly Meeting (virtual)
- 3) 2022 PRRIP ISAC Fall Meeting in Kearney, NE (in person); in conjunction with September 2022 GC Quarterly Meeting
- 4) Additional document review and/or specific ISAC member input as directed by the GC and EDO (virtual meetings/discussion as necessary)

Notes on Cost

The budget for work to be completed by the ISAC during 2022 is detailed below:

ISAC Cost Item	Estimated FY22 Cost
<p>2022 PRRIP Science Plan Reporting Session (in-person meeting in February 2022)</p> <ul style="list-style-type: none"> • In-person meeting in Omaha, NE to discuss status of Science Plan implementation and annual State of the Platte Report • 4-day meeting (3 days meeting, 1 day travel) = \$200/hour x 8-hour day x 4 days x 6 ISAC members = \$38,400 • Meeting prep & post-meeting discussion = \$200/hour x 8-hour day x 2 days x 6 ISAC members = \$19,200 • Travel expenses = \$1,000 flight + \$700 additional (hotel, meals, airport parking, ground transportation) = \$1,700 x 6 ISAC members = \$10,200 	\$67,800
<p>March 2022 PRRIP GC Quarterly Meeting</p> <ul style="list-style-type: none"> • ISAC members attend GC Quarterly Meeting virtually to discuss recommendations and guidance from Science Plan Reporting Session; Chair and Vice Chair make presentation to GC on behalf of ISAC • 1-day meeting = \$200/hour x 8-hour day x 6 ISAC members = \$9,600 	\$9,600
<p>2022 ISAC Fall Meeting (in-person meeting in September 2022 in conjunction with GC Quarterly Meeting)</p> <ul style="list-style-type: none"> • In-person meeting in Kearney, NE to discuss status of Science Plan implementation and to support ISAC member field trips to PRRIP management and science activities on the ground • 4-day meeting (1.5 day GC meeting, 1.5 day ISAC meeting, 1 day travel) = \$225/hour x 8-hour day x 4 days x 6 ISAC members = \$43,200 • Additional ISAC members (three members cycling off in 2022) = \$225/hour x 8-hour day x 4 days x 3 ISAC members = \$21,600 • Meeting prep & post-meeting discussion = \$225/hour x 8-hour day x 2 days x 9 ISAC members = \$32,400 • Travel expenses = \$1,000 flight + \$1,000 additional (hotel, meals, airport parking, ground transportation, baggage) = \$2,000 x 9 ISAC members = \$18,000 	\$115,200



<p>Additional Document Review, Specific ISAC Member Input, and/or Additional Virtual Meetings</p> <ul style="list-style-type: none"> Review Program documents/products and provide specific guidance as requested by GC, TAC, and EDO 5 days x \$225/hour x 8-hour day x 6 ISAC members = \$54,000 	\$54,000
<p>ISAC Chair and Vice Chair</p> <ul style="list-style-type: none"> Additional time to work with PRRIP EDO between ISAC meetings to coordinate ISAC discussion and prepare presentations/documents for the GC 4 days of review time x \$225/hour x 8-hour day x 2 ISAC members = \$14,400 	\$14,400
TOTAL	\$261,000

The daily service rate for ISAC members is based on industry standard rates for individuals of the caliber and stature required for the ISAC. A review of standard rates for Ph.D. senior level scientists revealed rates routinely in the range of \$150 to \$300 on an hourly basis. The EDO proposes a rate of \$225/hour for 2022, an increase over the FY21 rate but in the low middle of that range and in line with the rate paid to EDO Special Advisors. *NOTE: a billing rate of \$200/hour was used in the FY22 ISAC budget estimate for the 2022 Science Plan Reporting Session and for ISAC participation in the March 2022 GC Quarterly Meeting because that rate is included in current ISAC member contracts that do not expire until March 31, 2022.*

Labor rates for ISAC members is compared against individuals of similar qualifications and experience that are part of consultant teams that are awarded contracts with the Program through competitive processes in conformance with the PRRIP Procurement Policy. The level of effort is established by comparison of level of effort for similar tasks contained in contracts with consultants for the Program that were awarded through competitive processes in conformance with the PRRIP Procurement Policy.

It is anticipated the 2022 Science Plan Reporting Session in Omaha, NE and the 2022 ISAC Fall Meeting in Kearney, NE will be conducted in-person but a final decision on the meeting format will be made based on local and national health conditions, travel restrictions, and ISAC member willingness and ability to travel. Additional ISAC meetings and discussions will be held virtually in Teams.



2022 ISAC Members

As per GC direction during the September 2021 GC Quarterly Meeting, the following table describes the planned ISAC rotation schedule for the remainder of the Extension:

Area of Expertise	Extension ISAC Membership
Ecological statistics	April 2022-March 2025: Jennifer Hoeting, Ph.D. April 2025-March 2028: Jennifer Hoeting, Ph.D. April 2028-March 2032: new member
Adaptive management and decision-making	April 2022-March 2025: Dave Marmorek, M.SC. April 2025-March 2028: new member April 2028-March 2032: renew member
Fish ecology (pallid sturgeon focus)	April 2022-March 2024: David Galat, Ph.D. April 2024-March 2027: new member April 2027-March 2032: renew member
Avian ecology (whooping crane focus)	April 2022-March 2025: new member April 2025-March 2028: renew member April 2028-March 2032: renew member
Fluvial geomorphology (vegetation focus)	April 2022-March 2025: new member April 2025-March 2028: renew member April 2028-March 2032: new member
River restoration (engineering focus)	April 2022-March 2025: new member April 2025-March 2028: renew member April 2028-March 2032: renew member

Jennifer Hoeting and David Marmorek of the current ISAC will be retained via new three-year contracts to be made effective April 1, 2022. David Galat of the current ISAC will be retained via a new two-year contract to be made effective April 1, 2022. Ned Andrews, Brian Bledsoe, and Adrian Farmer of the current ISAC will be rotated off when their current contracts expire on March 31, 2022. However, all three will be asked to participate in the 2022 ISAC Fall Meeting in Kearney, NE as a means to facilitate on-boarding three new ISAC members in 2022. The GC appointed a Selection Panel to work with the EDO to identify and recommend new ISAC members throughout the remainder of the Extension. It is anticipated the Selection Panel will recommend three new ISAC members for GC consideration and appointment during the March 2022 GC Quarterly Meeting.

Products

ISAC review of the Extension Science Plan and implementation of that plan, experimental design, monitoring, data analysis and synthesis, and other Program science products and activities; work will culminate in reports and presentations to the GC.



PROGRAM TASK & ID: PD-3. PRRIP Peer Review & Publications

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$9,000		

Task Description

Publication of three (3) Program manuscripts.

Products

Three publications in refereed journals.

Notes on Cost

Publication estimate of \$3,000 per manuscript for open-access publication based on professional publication experience of EDO staff; costs could be higher or lower depending on the journal. The EDO expects to seek GC approval to:

- Prepare Cross-section Volume Change Analysis manuscript; will seek GC approval to publish.
- Prepare manuscript on Wet Meadows Hydrology based on Program research; will seek GC approval to publish.
- Prepare manuscript on Camera Monitoring of Predator Presence and Impacts on Interior Least Tern and Piping Plover Productivity; will seek GC approval to publish.

For FY22, estimated publication expenses are:

Potential Manuscript	Author	Manuscript Type	Target Journal	FY21 Cost
Cross-section Volume Change Analysis	EDO	Geomorphology	<i>Geomorphology</i>	\$3,000
Wet Meadows Hydrology	EDO	Hydrology, Groundwater Modeling	<i>TBD</i>	\$3,000
Camera Monitoring of Predator Presence and Impacts on Interior Least Tern and Piping Plover Productivity	EDO	Ecology	<i>TBD</i>	\$3,000
Total				\$9,000



PROGRAM TASK & ID: PD-11. Science Plan-related Workshops

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2022	\$10,000		

Task Description

In-person Science Plan Reporting Session in Omaha, NE, in February of 2022 to discuss status of Science Plan implementation and annual State of the Platte Report. In-person ISAC fall meeting in conjunction with September GC meeting in Kearney, NE, to discuss status of Science Plan implementation and to support ISAC member field trips to PRRIP management and science activities on the ground.

Notes on Cost

EDO facilitation of all meetings with *in-person* and *virtual* options for participation. Estimated FY22 costs include:

Expense Category	Estimated FY22 Cost
Science Plan Reporting Session	
1 meeting over 3 days @ \$2650/day (room rental, projector & screen rental, phone charges, refreshments, evening meals, etc.), Omaha, NE	\$8,000
ISAC Fall Meeting	
1 meeting over 2 days @ \$1000/day (field visits, refreshments, meals, etc.), Kearney, NE	\$2,000
Total	\$10,000

General Notes on Meeting Costs

It is anticipated the 2022 Science Plan Reporting Session in Omaha, NE and the 2022 ISAC Fall Meeting in Kearney, NE will be conducted in-person but a final decision on the meeting format will be made based on local and national health conditions, travel restrictions, and ISAC member willingness and ability to travel.

Because each meeting may be held in a different location (different cities and different hotels) a range of meeting room costs are possible. The typical range of room rental package rates is \$2000-2500/day. The typical rate for providing refreshments (coffee, sodas, juices), morning or afternoon break foods (rolls, fruit, cookies), and box lunches (if the agenda calls for a working lunch) can vary considerably by location, the range of options selected, and the number of people attending. For planning purposes, a refreshments rate range of \$250 to \$500 per meeting is used. Equipment costs for projector, screens and polycom conference phones vary considerably depending on location. Projector/screen costs can range from \$50 to \$250 per day. Polycom conference phones with microphone extension costs can range from \$50 to \$100 per day. Conference call costs are based upon rate, number and duration of calls; estimated at \$500 per day based upon experience.

Products

- Extension Science Plan



APPENDIX A

PRRIP FY2022 Annual Land Work Plan

2022 Land Budget Overview

10/28/2021

Platte River Recovery Implementation Program

For More Information Contact: Jason Farnsworth, farnsworthj@headwaterscorp.com (308) 237-5728

Land Budget Overview By Budget Line Item

Budget Line Item	Description	Estimated Expenditure*
LP-2	Adaptive Management Species Habitat Actions	\$335,309
LP-3	New Land Acquisitions, LHIE Fees, & Property Taxes	\$850,150
LP-4	Property Maintenance & Agricultural Operations	\$165,000
LP-6	Land Plan Special Advisors	\$20,000
LP-7	Public Access Management	\$40,000
WPLW-1	Property Taxes & Maintenance for Water Properties	\$16,850

* The budget items have been reviewed and approved by the LAC on October 27, 2021.

Budget Overview By Complex

Complex	Estimated Expenditure	Estimated Income
Non-Complex Tracts	\$59,700	\$21,770
Plum Creek "Complex"	\$53,800	\$8,550
Cottonwood Ranch Complex	\$62,650	\$8,360
Elm Creek Complex	\$25,823	\$15,925
Pawnee Complex	\$46,857	\$3,773
Fort Kearny Complex	\$68,480	\$44,645
Minden-Gibbon Complex	\$5,000	\$0
Clark Island Complex	\$89,440	\$33,340
Shoemaker Island Complex	\$17,459	\$43,000
Chapman Complex	\$71,100	\$37,998
Water Properties	\$16,850	\$9,125
Total	\$517,159	\$226,486

Budget Priority Areas by Budget Line Item

LP-2 – Adaptive Management Species Habitat Actions: Species habitat priorities are focused on creation and maintenance of suitable complex and non-complex habitat for Program target species. Includes Habitat Enhancement at Tract 2020002 & Chapman Complex

LP-3 – New Land Acquisitions: Land acquisition priorities include identification and acquisition of lands for construction of an additional 60 acres of off-channel sand and water habitat for least tern and piping plover nesting habitat and identification and acquisition of lands that could count towards the First Increment Extension habitat land "plus up" of 1,500 acres.

LP-4 – Property Maintenance & Agricultural Operations: Priorities include maintenance of basic land infrastructure such as facilities, roads, and fences as well as fulfilling basic ownership obligations like noxious weed control and ROW mowing.

LP-6 – Land Plan Special Advisors: Priorities for special advisors include administration of agricultural leases and associated FSA obligations, crop management and marketing, and assistance in cropland conversions.

LP-7 – Public Access Management: Nebraska Game and Parks Commission will manage public access to Program lands.

WPLW-1 – Property Maintenance for Water Properties: Priorities include maintenance of basic land infrastructure such as facilities, roads, and fences as well as fulfilling basic ownership obligations like noxious weed control and ROW mowing.

Property Identification Key:

2008001 – PRRIP Wyoming Property
2008002 - NPPD Cottonwood Ranch
2009001 – PRRIP Fox Tract
2009002 – PRRIP Bartels Tract
2009003 - PRRIP Dyer Tract
2009004 – PRRIP Hostetler Tract
2009005 – PRRIP McCormick Tract
2009006 - PRRIP Stall Tract
2009007 - PRRIP Cook Tract
2009008 - PRRIP Broadfoot Newark Tract
2010001 - PRRIP Morse Tract
2010002 - Broadfoot Kearney South Tract
2010003 – PRRIP Sherrerd/Clark Easement
2010004 – PRRIP Binfield Tract
2011001 - PRRIP East Leaman Tract
2011002 - PRRIP Follmer Alda Tract
2012001 – PRRIP Sullwold Tract
2012002 – PRRIP Johns Tract
2012003 – PRRIP Blessing Tract
2012004 - PRRIP DeBore Tract
2013001 - PRRIP Liehs Tract
2014002 - PRRIP Volentine Tract
2015001 – PRRIP Speidell Tract
2015002 - PRRIP BELF Tract
2015003 – PRRIP Blue Hole East
2018001 – PRRIP Dippel Tract
2019001 – PRRIP Robinson Tract
2020001 – PRRIP Bergren Tract
2020002 - PRRIP Lex Pit Tract
2021001 – PRRIP Meyer Tract

W201602 – PRRIP Lindstrum Tract
W201701 – PRRIP Edlund Tract
W201702 - PRRIP Albrecht Tract
W201703 - PRRIP Lakeside Tract

Personnel Responsibility Key

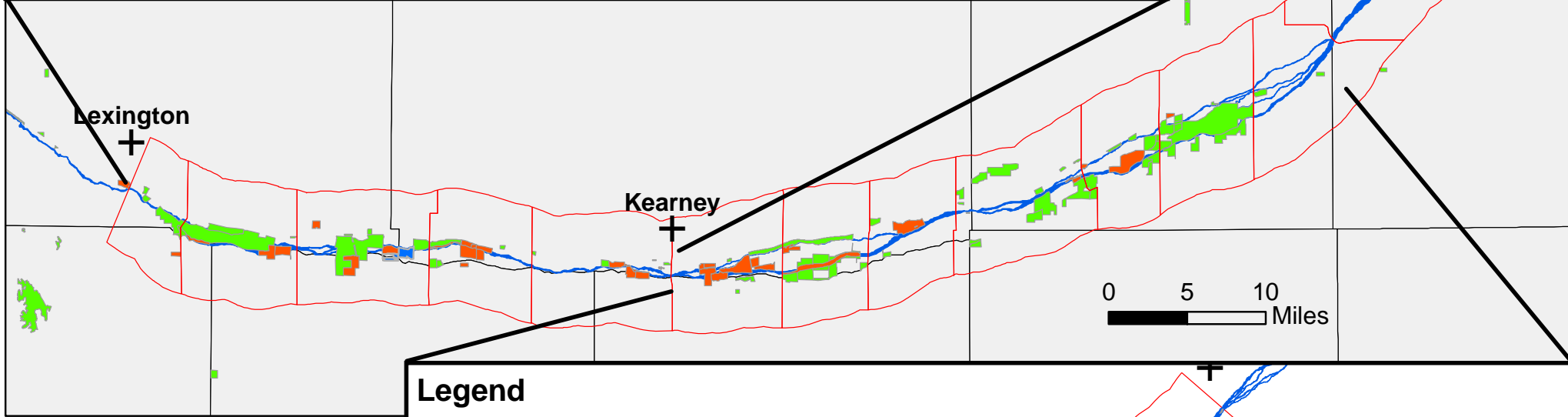
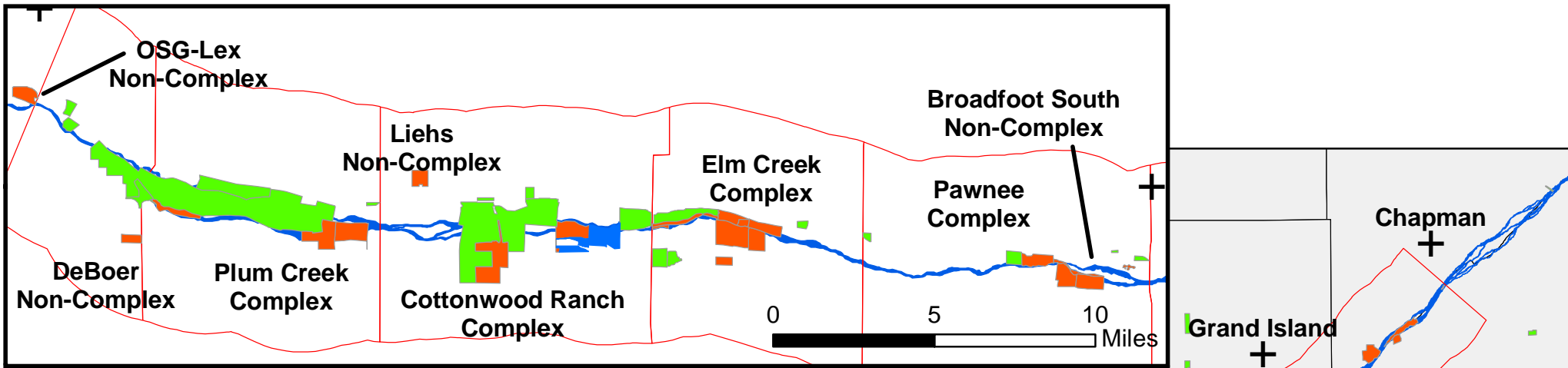
MH – Malinda Henry (Director of Biological and Ecological Services)
JJ – Jim Jenniges (NPPD)
TT – Tim Tunnell (Senior Land Manager)
ST – Seth Turner (Senior Water Resources Engineer)

LP-2	Priority Area: Species Habitat		Total	%
	Item(s): Maintain Suitable In- and Off-Channel Sand & Water Habitat	Herbicide applications on OCSW peninsulas to maintain bare sand nesting habitat	\$38,500	11%
		Maintenance of Predator Exclusion Fencing	\$15,000	4%
		Remove Blow Sand from Predator Fences	\$4,000	1%
	Item(s): Improve Target Species Sand and Water Habitat	Remove large cottonwood trees south of OCSW area	\$25,000	7%
		In-channel tree. Cattail, herbicide spraying	\$12,000	4%
		Herbicide treatment on south bank to kill vegetation prior to disking	\$21,800	7%
		Disking if necessary to provide in-channel vegetation control	\$21,900	7%
		Clear downed trees from northern riparian area	\$25,000	7%
		Clear Trees, burn & bury pending Mgmt. Agreement	\$30,000	9%
	Item(s): Maintain Suitable Palustrine Wetland Habitat	Irrigation Well Pumping	\$7,000	2%
		Brush, tree, cattail herbicide spraying	\$38,500	11%
	Item(s): Whooping Crane Grassland / Wet Meadow Habitat	Prescribed Burning	\$70,609	21%
		Purchase & installation of native violet plugs	\$6,000	2%
		Aboveground Tree Removal in meadow	\$20,000	6%
		Total	\$335,309	100%

LP-3	Priority Area: Land Acquisitions , LHIE Fees, & Property Taxes		Total	%
	Item(s): Land Acquisition, Property Taxes and Associated Fees	Land interest holding entity (LIHE)	\$65,000	8%
		Property Taxes	\$151,400	18%
		Land Acquisition Associated Costs	\$16,750	2%
		Cottonwood Ranch Sponsorship Agreement	\$17,000	2%
		Buy, Lease or Easement (~40 acres)	\$600,000	71%
		Total	\$850,150	100%

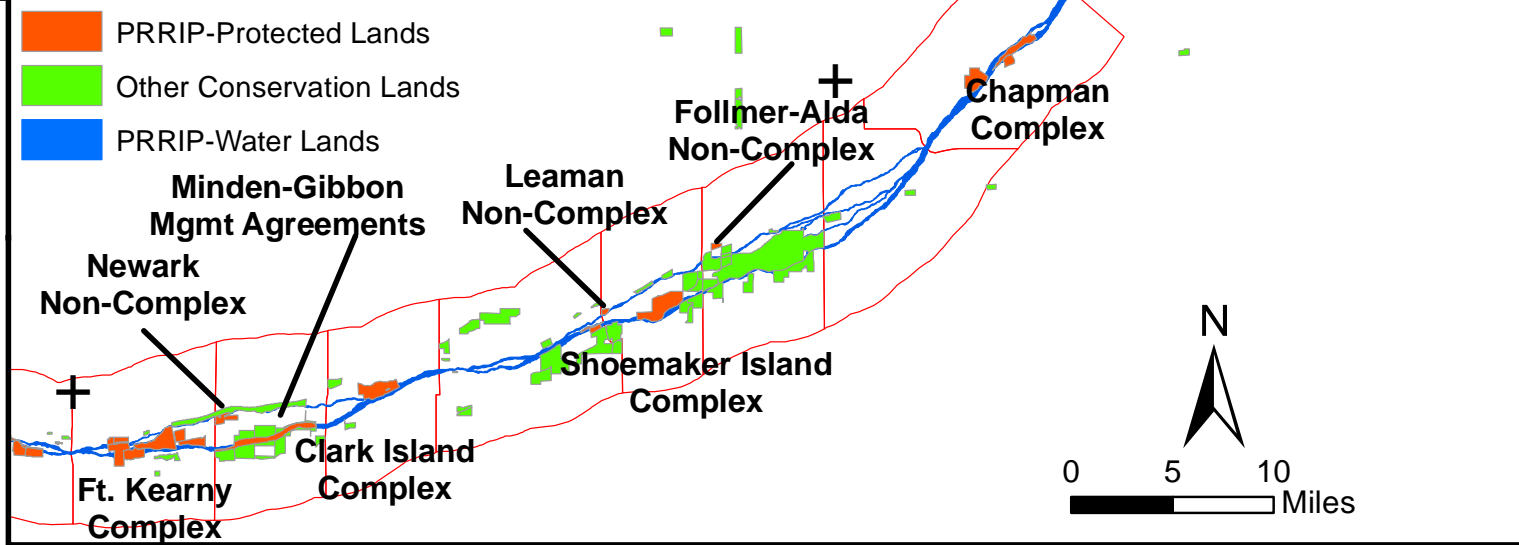
LP-4	Priority Area: Operations and Maintenance		Total	%
	<i>Item(s): Basic Property Maintenance Obligations and Needs</i>	Fence & Road Maintenance	\$53,000	32%
		Noxious Weed Control	\$60,500	37%
		Mowing	\$19,500	12%
		Lodge & Quonset Utilites & maintenance	\$5,600	3%
		Cabin Utilites & maintenance	\$3,000	2%
		Fenceline Tree Clearing	\$20,000	12%
		Electricity for Livestock wells	\$3,400	2%
		Total	\$165,000	100%

WPLW-1	Priority Area: Water Tract Operations and Maintenance		Total	%
	<i>Item(s): Basic Property Maintenance Obligations and Needs</i>	Fence & Road Maintenance	\$1,000	6%
		Noxious Weed Control	\$5,000	30%
		Mowing	\$1,000	6%
		Electricity for Livestock wells	\$100	1%
		Property Taxes	\$9,750	58%
		Total	\$16,850	100%



Legend

- PRRIP-Protected Lands
- Other Conservation Lands
- PRRIP-Water Lands



2022 Non-Complex Properties Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of non-complex palustrine wetlands and least tern and piping plover use and productivity at off-channel sand and water nesting sites.

Species Habitat Priorities

- * **Maintain Suitable Off-Channel Sand and Water Nesting Habitat** – Apply pre-emergent herbicide on Tracts 2009008, 2010002, 2011001, 2011002 and 2020002 OCSW nesting habitat to prevent vegetation encroachment into nesting areas.
- * **Maintain Suitable Palustrine Wetland Roosting Habitat** – Manage vegetation height in the palustrine wetland areas of Tracts 2012004 and 2013001 to maintain suitable unobstructed view widths for whooping crane roosting.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs including boundary fence signage, road maintenance, and noxious weed control.
- * **Agricultural Operations** – Oversight of crop leases on Tracts 2009008, 2012004 and 2013001 and hay lease on Tract 2011001.
- * **Sand and Gravel Mining Operations** – Monitor sand and gravel mining operations on Tracts 2009008 and 2011002.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: *General*

Item(s): *Land Interest and Tract-Level Restoration and Maintenance Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: *Species Habitat*

Item(s): *Maintain Suitable In- and Off-Channel Sand & Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 2	Herbicide applications on OCSW peninsulas to maintain bare sand nesting habitat (79 ac)	4/1 & 9/1	TT	\$30,000	LP-2
NC 3	Maintenance of Predator Exclusion Fencing	1/1 - 4/15	TT	\$15,000	LP-2

Priority Area: *Species Habitat*

Item(s): *Maintain Suitable Palustrine Wetland Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 4	Irrigation well pumping to augment water level in wetland area of Tract 2013001	3/1 - 4/15 & 10/1-11/15	TT	\$3,000	LP-2
NC5	Brush, tree, cattail herbicide spraying	8/15-11/1	TT	\$3,500	LP-2

Priority Area: *Species Habitat*

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 6	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
NC 7	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	Annual	MH	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 8	Fence and road maintenance	1/1–12/31	TT	\$2,500	LP-4
NC 9	Noxious weed control	6/1 – 8/31	TT	\$3,000	LP-4
NC 10	Mowing	7/15 - 10/15	TT	\$1,500	LP-4
NC 11	Tract 2012004 Electricity	Annual	TT	\$1,200	LP-4

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
NC 12	Oversight of grazing and cropland	5/15 – 10/15	TT	N/A	N/A
NC 13	Oversight of sand and gravel mining	5/15 – 10/15	TT	N/A	N/A

2022 Non-Complex Tracts Budget Summary

Expenditures by Program Budget Line Item

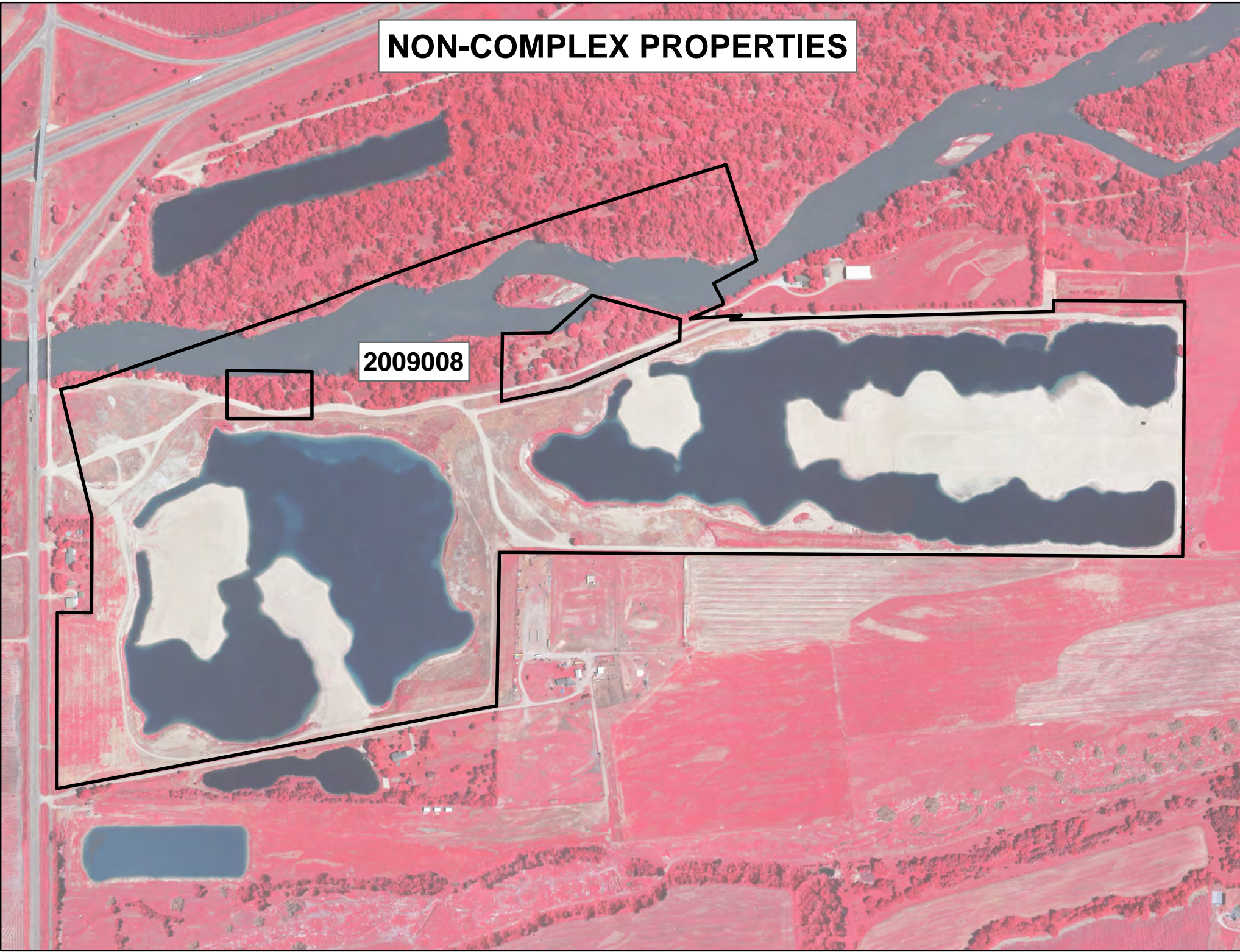
Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Maintain Off-Channel Sand & Water Habitat	LP-2	\$45,000
Species Habitat	Create & Maintain Palustrine Wetland Habitat	LP-2	\$6,500
		Subtotal	\$51,500
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$8,200
		Total	\$59,700

Income

Tract	Item	Estimated Income	
Tract 2009008	Hay Income	\$400	
Tract 2011001	Hay Income	\$500	
Tract 2011002	Sand & Gravel Royalties	\$2,000	
Tract 2011002	Cropland Cash Rent Income	\$1,800	
Tract 2012004	Cropland Cash Rent Income	\$3,600	
Tract 2012004	Grazing Income	\$3,150	
Tract 2013001	Irr. Cropland Cash Rent Income	\$6,600	
Tract 2013001	Dry Cropland Cash Rent Income	\$3,720	
		Total	\$21,770

NON-COMPLEX PROPERTIES

2009008





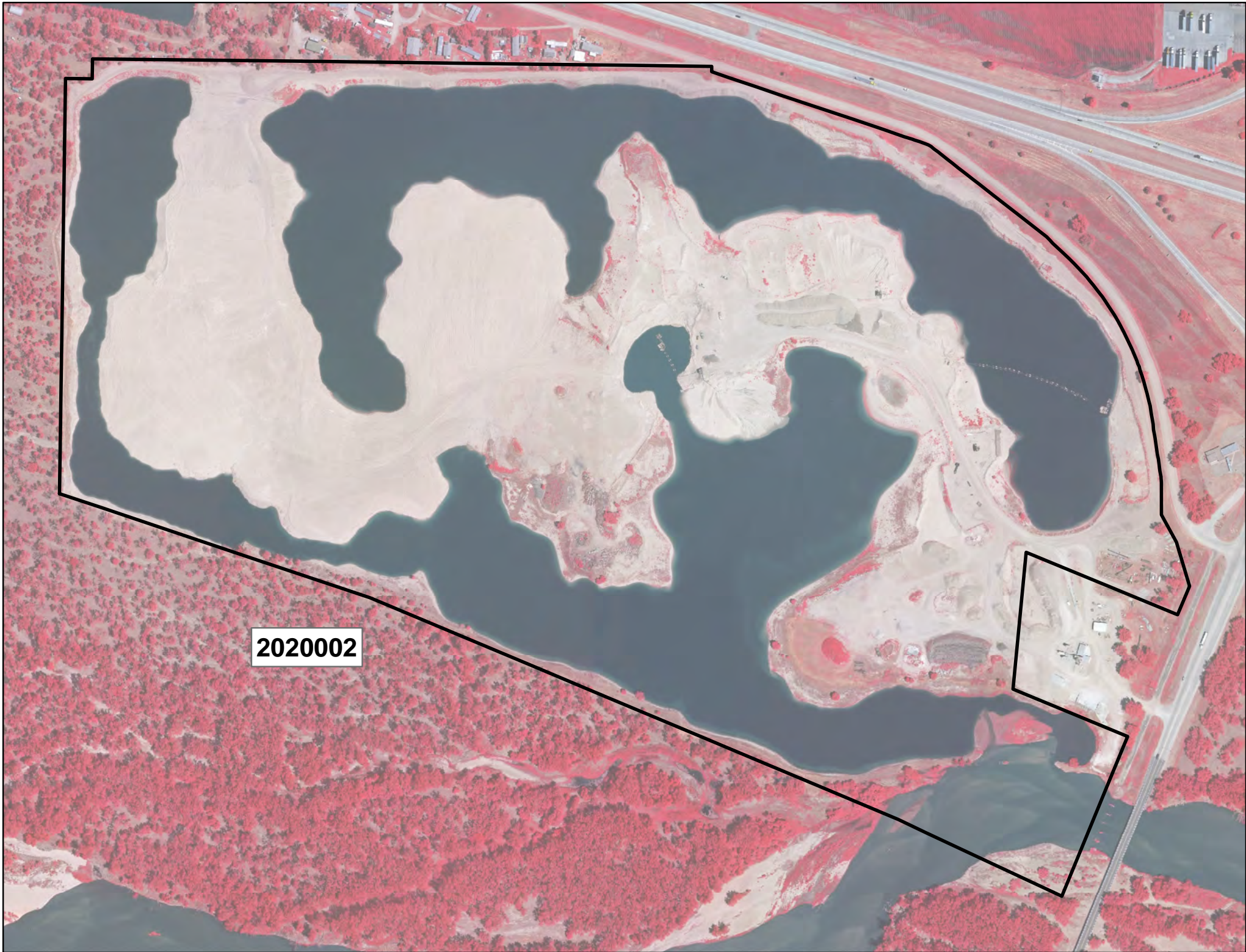
2010002



2011001



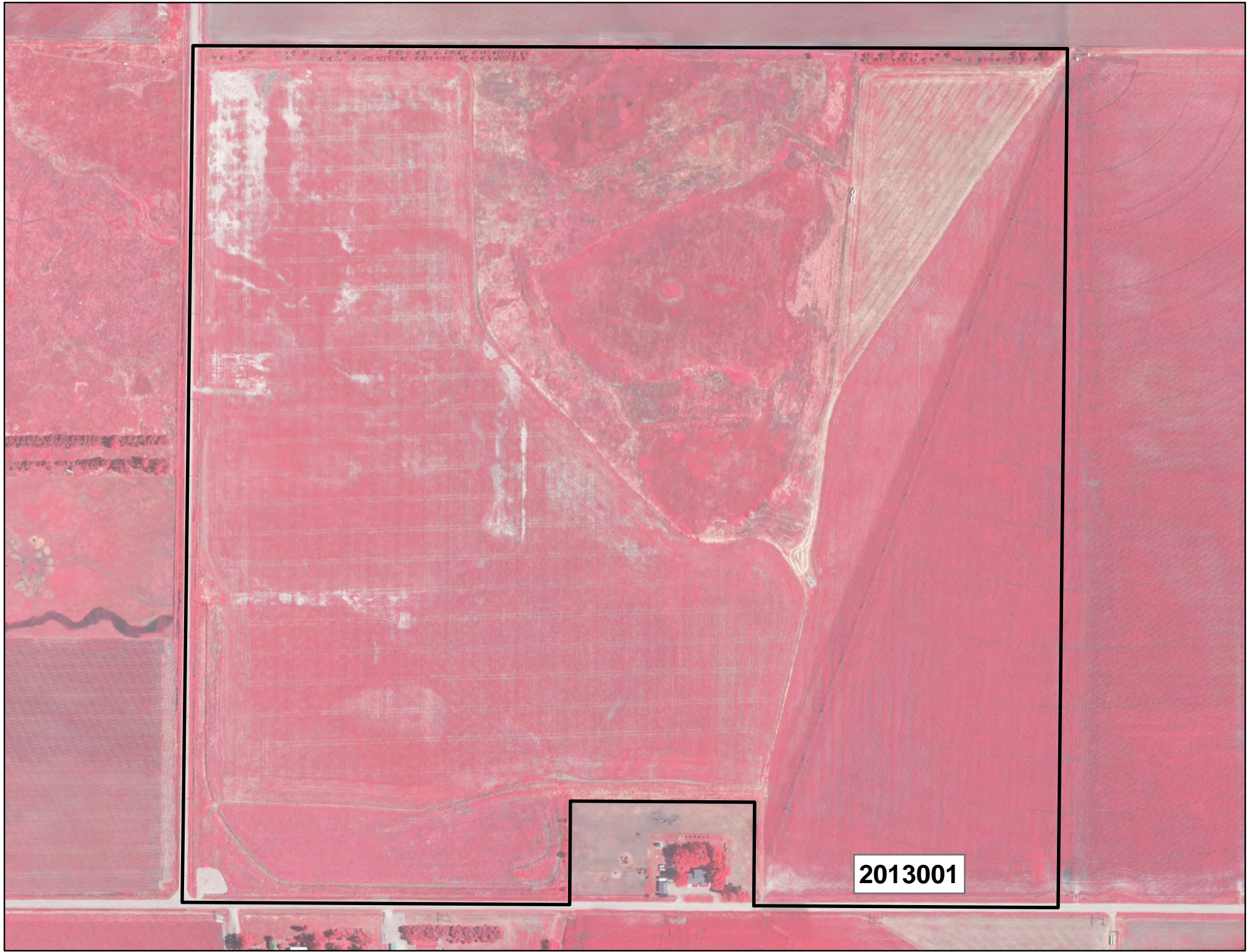
2011002



2020002



2012004



2013001

2022 Plum Creek "Complex" Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Implementation of full scale sediment augmentation** - Augment 60,000 cubic yards of sediment through mechanical augmentation. Augmentation will occur upstream of the Plum Creek Complex near the J-2 Return.
- * **Species Monitoring** – Monitor whooping crane use of riverine roosting habitat and least tern and piping plover use and productivity at off-channel sand and water nesting sites.

Species Habitat Priorities

- * **Improve Target Species Sand and Water Habitat** – Application of pre-emergent herbicide on OCSW peninsulas to maintain tern and plover nesting habitat. Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs including boundary fence signage, road maintenance, and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing lease on Tract 2009003. Oversight of cropland/hay leases on Tract 2009007.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Maintain Suitable In- and Off-Channel Sand & Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC2	Herbicide applications on OCSW peninsulas to maintain bare sand nesting habitat (21 ac)	4/15 & 9/1	TT	\$4,500	LP-2
PC 3	Maintain blow sand from predator fences	2/1 – 4/1	TT	\$4,000	LP-2

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 4	Remove all large Cottonwood trees along the southern edge of the OCSW	1/1 – 7/1	TT	\$25,000	LP-2

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 5	Tract 2009003 Prescribed burn (139 ac)	3/15 – 5/15	TT	\$5,700	LP-2

Priority Area: *Species Habitat*

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 6	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
PC 7	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	1/1 – 4/1	MH	N/A	N/A

Priority Area: *Operations and Maintenance*

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 8	Lodge & Quonset utilities and maintenance	Annual	TT	\$5,600	LP-4
PC 9	Fence and road maintenance	1/1–12/31	TT	\$1,500	LP-4
PC 10	Noxious weed control	6/1 – 8/31	TT	\$2,500	LP-4
PC 11	Mowing	7/15-10/15	TT	\$5,000	LP-4

Priority Area: *Operations and Maintenance*

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PC 12	Oversight of grazing and cropland leases	5/15 – 10/15	TT	N/A	N/A

2022 Plum Creek Complex Budget Summary

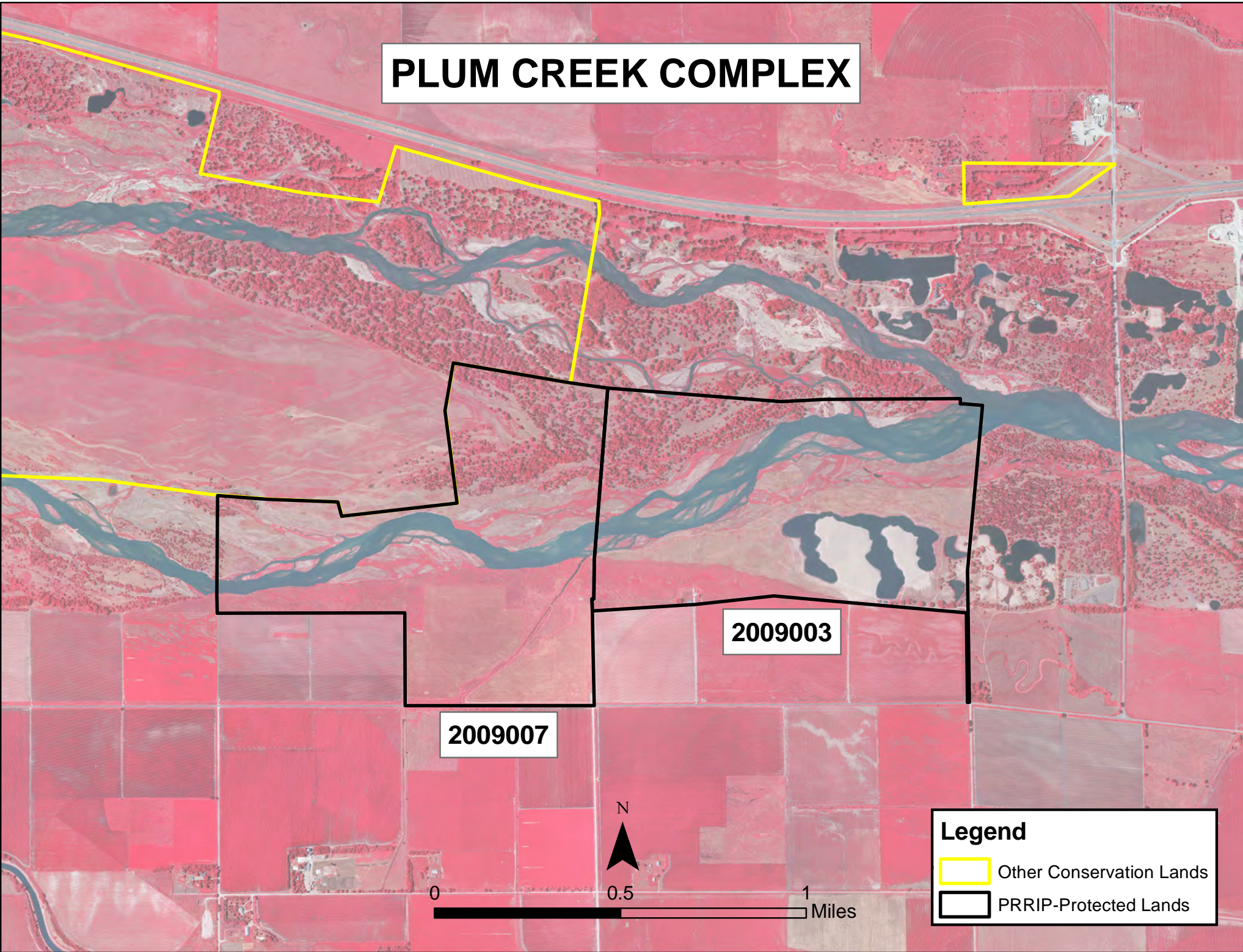
Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Maintain Suitable In- and Off-Channel Sand & Water Habitat	LP-2	\$8,500
Species Habitat	Target Species Sand and Water Habitat	LP-2	\$25,000
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$5,700
Subtotal			\$39,200
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$14,600
Total			\$53,800

Income

Tract	Item	Estimated Income
Tract 2009003	Grazing Income	\$0
Tract 2009007	Haying Income	\$3,000
Tract 2009007	Cropland Income	\$5,550
Total		\$8,550

PLUM CREEK COMPLEX



2022 Cottonwood Ranch Complex Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - *Conduct all actions in accordance with Program's good neighbor policy.*

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of riverine and off-channel palustrine wetland roosting habitat and least tern and piping plover use and productivity at off-channel sand and water nesting sites.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Application of pre-emergent herbicide on OCSW peninsula to maintain tern and plover nesting habitat. Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.
- * **Broad-Scale Recharge Water Supply and Whooping Crane Habitat Project** – *Operation of the broad-scale recharge project will occur in 2022 with targeted fills during the fall and spring whooping crane migrations, and during other times of excess flows in the Platte River.*
- * **Management of grassland/wet meadow habitat for whooping cranes and sandhill cranes** – *Grazing will be deferred on Lloyd Island for the 2022 grazing season. Wet meadow areas in Section 16 T8N R19W (Tracts 2008002 and 2010001) will be grazed/hayed during the 2022 due to the completion of the Broad -Scale Recharge Water Supply and Whooping Crane Habitat Project construction.*
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tracts 2008002, 2009006, and 2010001 including fence and road maintenance and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing/ haying leases on Tracts 2009006 and 2010001.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 2	Tract 2008002 Pre-emergent herbicide application on plover nesting island (2 ac) and OCSW area (17 ac).	4/1 – 4/30	TT	\$4,000	LP-2
CR 3	In channel tree, cattail herbicide spraying	8/15-11/1	TT	\$12,000	LP-2

Priority Area: Species Habitat**Item(s):** *Whooping Crane Grassland / Wet Meadow Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 4	Brush, tree, cattail herbicide spraying	8/15-11/1	TT	\$10,000	LP-2
CR 5	Tract 2010001 Prescribed burn (135 ac)	3/15 – 5/15	TT	\$5,535	LP-2
CR 6	Tract 2010001 Prescribed burn (15 ac)	3/15 – 5/15	TT	\$615	LP-2

Item(s): Other Species of Concern

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 7	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
CR 8	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance**Item(s):** *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 9	Fence and road maintenance	1/1–12/31	TT	\$10,000	LP-4
CR 10	Noxious weed control	6/1 – 8/31	TT	\$14,500	LP-4
CR 11	Mowing	7/15 - 10/15	TT	\$5,000	LP-4
CR 12	Tract 2010001 Electricity	Annual	TT	\$1,000	LP-4

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CR 13	Tract 2009006 grazing lease oversight	5/15 – 10/15	TT	N/A	N/A
CR 14	Tract 2010001 grazing lease oversight	5/15 – 10/15	TT	N/A	N/A
CR 15	Tract 2010001 haying lease oversight	5/15 – 10/15	TT	N/A	N/A
CR 16	Tract 20008002 grazing & haying lease planning & oversight	5/15 – 10/15	TT,JJ	N/A	N/A

2022 Cottonwood Ranch Complex Budget Summary

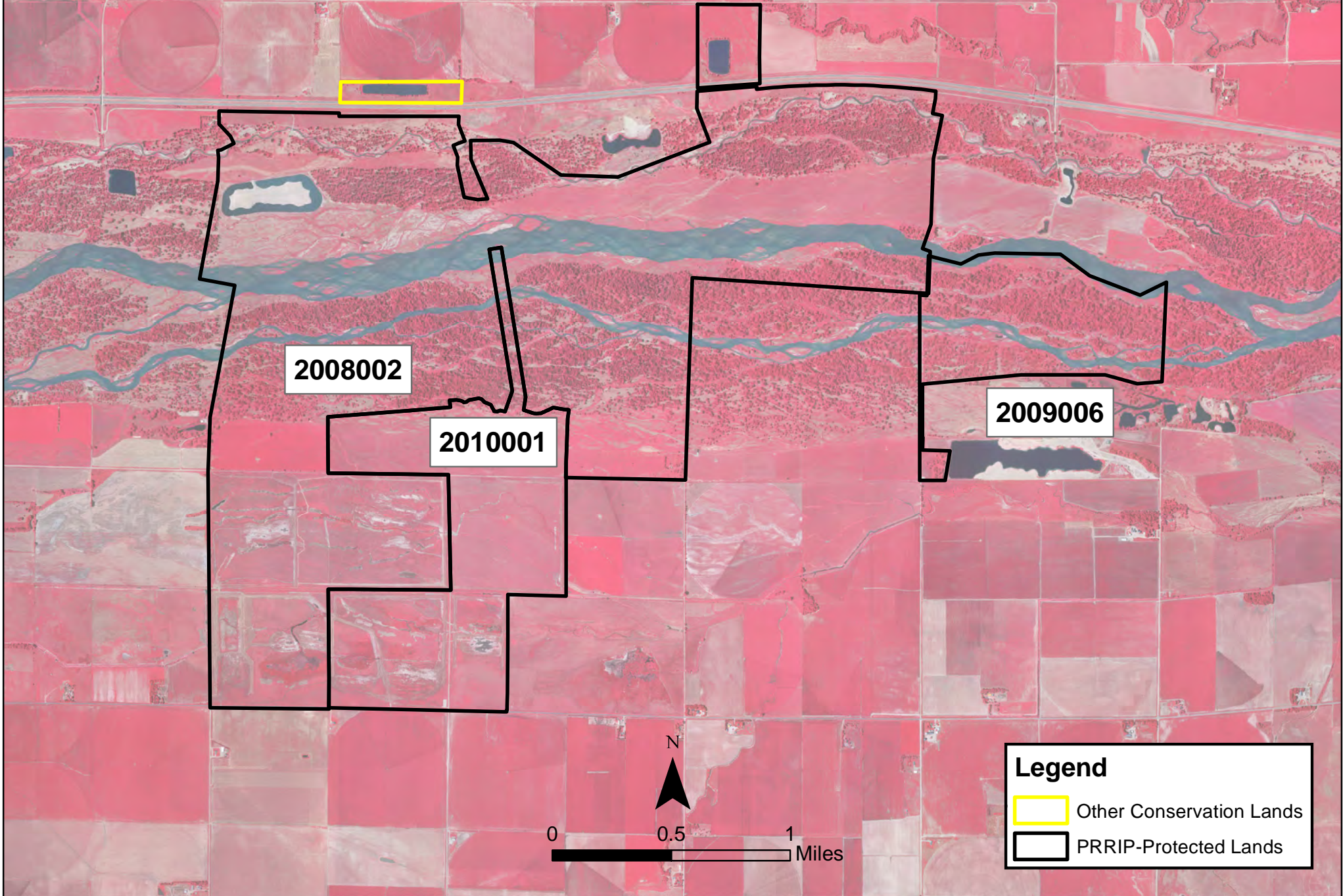
Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Target Species Sand and Water Habitat	LP-2	\$16,000
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$16,150
Subtotal			\$32,150
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$30,500
Total			\$62,650

Income

Tract	Item	Estimated Income
Tract 2009006	Grazing Income	\$2,000
Tract 2010001	Grazing Income	\$0
Tract 2010001 SE 1/4	Grazing Income	\$3,360
Tract 2010001	Haying Income	\$3,000
Total		\$8,360

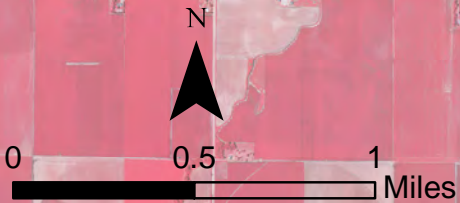
COTTONWOOD RANCH COMPLEX





2008002

2010001

2009006



Legend

-  Other Conservation Lands
-  PRRIP-Protected Lands

2022 Elm Creek Complex Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of in-channel roosting habitat and least tern and piping plover use and productivity at off-channel sand and water nesting sites.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tracts 2009002, 2009005, 2012001 and 2012002 including fence and road maintenance and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing/ haying leases on Tracts 2009005, 2012001 and 2012002.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 2	No items	N/A	N/A	N/A	N/A

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 3	Brush, tree, cattail herbicide spraying	8/15-11/1	TT	\$5,000	LP-2
EC 4	Tract 2009002 Prescribed burn (35 ac)	3/15 – 5/15	TT	\$1,440	LP-2
EC 5	Tract 2012002 Prescribed burn (143 ac)	3/15 – 5/15	TT	\$5,883	LP-2

Priority Area: Species Habitat

Item(s): Other Species of Concern

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 6	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
EC 7	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): Basic Property Maintenance Obligations and Needs

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 8	Tract 2009002 building utilities and maintenance	Annual	TT	\$3,000	LP-4
EC 9	Fence and road maintenance	1/1-12/31	TT	\$2,000	LP-4
EC 10	Mowing	7/15 - 10/15	TT	\$3,000	LP-4
EC 11	Noxious weed control	6/1 - 8/31	TT	\$5,500	LP-4

Priority Area: Operations and Maintenance

Item(s): Agricultural Operations

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
EC 12	Tract 2009002 crop lease oversight	5/15 - 10/15	TT	N/A	N/A
EC 13	Tract 2009005 grazing lease oversight	5/15 - 10/15	TT	N/A	N/A
EC 14	Tract 2012001 haying lease oversight	5/15 - 10/15	TT	N/A	N/A
EC 15	Tract 2012002 grazing lease oversight	5/15 - 10/15	TT	N/A	N/A

2022 Elm Creek Complex Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Target Species Sand and Water Habitat	LP-2	\$0
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$12,323
		Subtotal	\$12,323
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$13,500
		Total	\$25,823

Income

Tract	Item	Estimated Income
Tract 2009002	Crop Income	\$4,350
Tract 2009005	Grazing Income	\$3,500
Tract 2012001	Haying Income	\$2,000
Tract 2012002	Grazing Income	\$6,075
		Total
		\$15,925

ELM CREEK COMPLEX

Mgmt06

2009002

2015003



2012001

Mgmt01

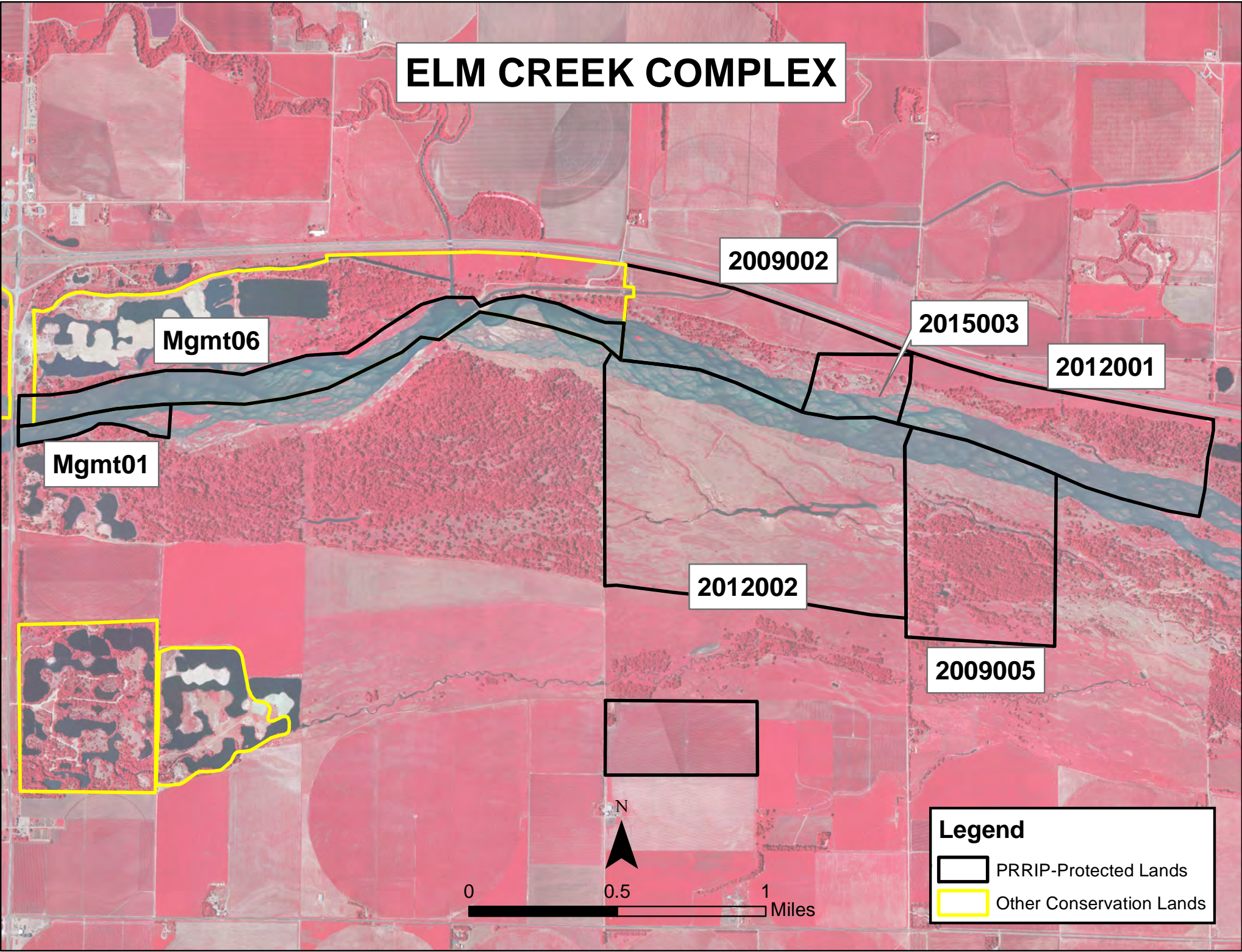
2012002

2009005

Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands

0 0.5 1 Miles



2022 Jerry F. Kenny Pawnee Complex Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of in-channel roosting habitat.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes. Remove vegetation from overbank areas adjacent to the channel to promote channel widening through lateral erosion.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tracts 2014002 and 2015002.
- * **Agricultural Operations** – Oversight of grazing/ haying leases on Tracts 2014002 and 2015002.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Good Neighbor Policy*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Adaptive Management & Target Species Habitat

Item(s): *Tern, Plover and Whooping Crane Riverine Habitat Experiments*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 2	Herbicide treatment on south bank to kill vegetation prior to disking (28 ac)	4/15 – 5/15	TT	\$6,200	LP-2
PAW 3	In-channel island cross disking to facilitate erosion (20 ac)	9/1 – 10/1	TT	\$6,100	LP-2
PAW 4	Remove trees along the northern edge of riparian area	1/1 – 7/1	TT	\$25,000	LP-2

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 5	Tract 2014002 Prescribed burn (42 ac)	3/15 – 5/15	TT	\$1,728	LP-2
PAW 6	Tract 2015002 Prescribed burn (8 ac)	3/15 – 5/15	TT	\$329	LP-2

Priority Area: Species Habitat*Item(s): Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 7	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
PAW 8	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance*Item(s): Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 9	Noxious weed control	6/1 – 8/31	TT	\$2,500	LP-4
PAW 10	Fence and road maintenance	1/1–12/31	TT	\$4,000	LP-4
PAW 11	Mowing	7/15-10/15	TT	\$1,000	LP-4

Priority Area: Operations and Maintenance*Item(s): Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
PAW 12	Tract 2014002 grazing lease oversight	5/15–10/15	TT	N/A	N/A
PAW 13	Tract 2015002 grazing lease oversight	5/15–10/15	TT	N/A	N/A
PAW 14	Tract 2015002 haying lease oversight	5/15–10/15	TT	N/A	N/A

2022 Jerry F. Kenny Pawnee Complex Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Adaptive Management & Species Habitat	Target Species Sand and Water Habitat	LP-2	\$37,300
Species Habitat	Whooping Crane Grassland / Wet Meadow Habitat	LP-2	\$2,057
Subtotal			\$39,357
Total			\$46,857
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$7,500
Total			\$46,857

Income

Tract	Item	Estimated Income
Tract 2015002	Haying Income	\$585
Tract 2014002 & 2015002	Grazing Income	\$3,188
Total		\$3,773

JERRY F. KENNY PAWNEE COMPLEX

Agreement # 10 (1605)

Agreement # 11 (1008)

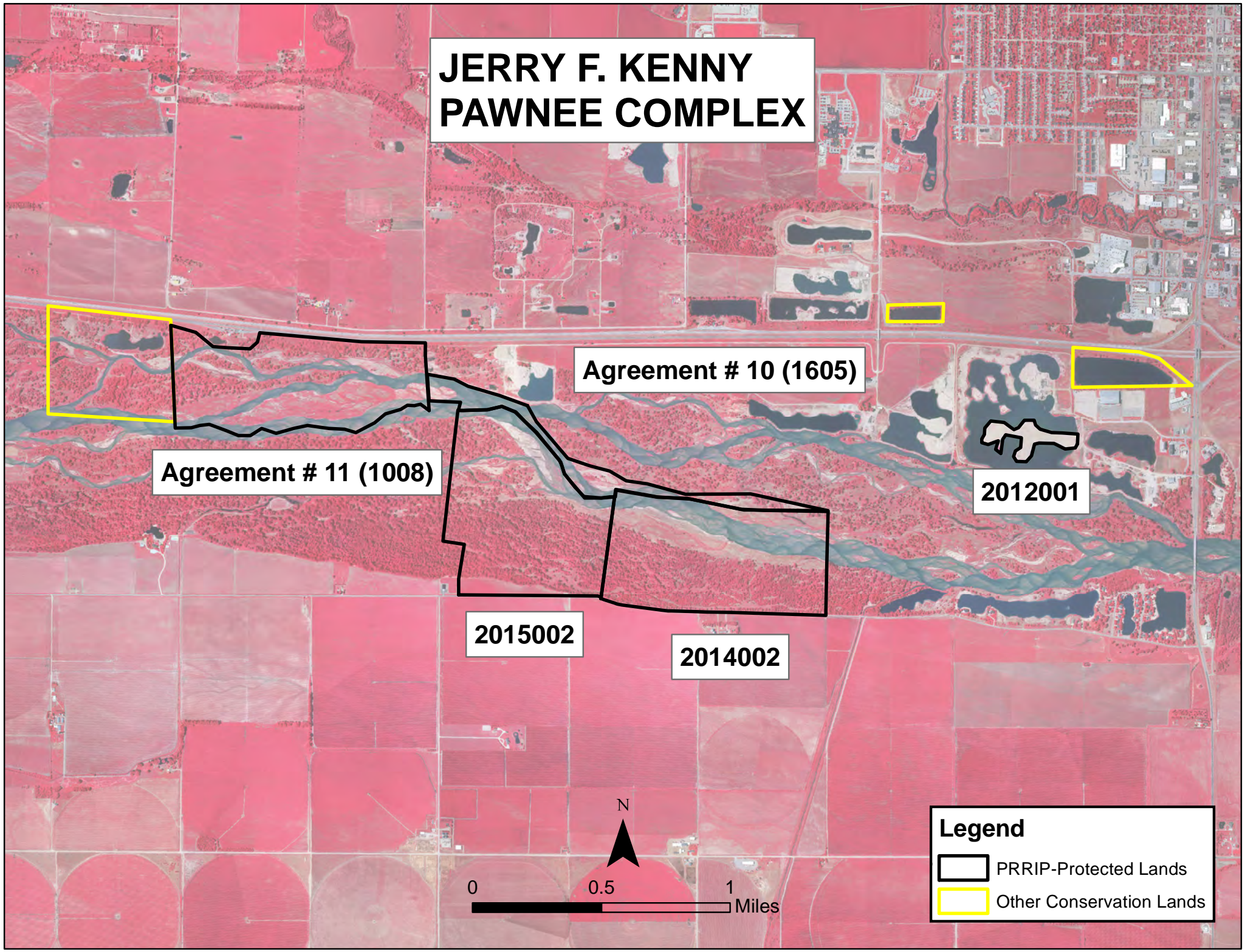
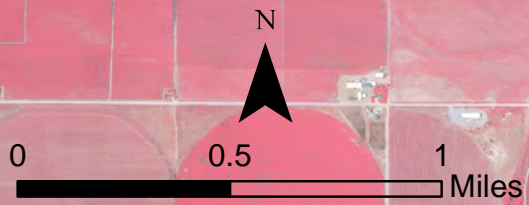
2012001

2015002

2014002

Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands



2022 Fort Kearny Complex Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of off-channel palustrine wetlands and in-channel roosting habitat.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes. Remove vegetation from overbank areas adjacent to the channel to promote channel widening through lateral erosion.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tracts 2008001, 2009001, 2009004, 2010003, 2012003 and 2015001 including fence and road maintenance and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing/haying leases on Tracts 2008001, 2012003, 2009001, 2009004, and 2015001.

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General**Item(s):** *Complex Land Interest and Good Neighbor Policy*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat**Item(s):** *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 2	Herbicide treatment on perimeter of cleared islands to kill vegetation prior to disking (6 ac)	4/15 – 5/15	TT	\$1,500	LP-2
FK 3	In-channel island cross disking to facilitate erosion (7 ac)	9/1 – 10/1	TT	\$1,700	LP-2

Priority Area: Species Habitat**Item(s):** *Whooping Crane Grassland / Wet Meadow Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 4	Tract 2009001 Annual electrical service fee at irrigation well to supplement water to wetland	3/1 - 4/15 & 10/1-11/15	TT	\$4,000	LP-2
FK 5	Brush, tree, cattail herbicide spraying	8/15-11/1	TT	\$10,000	LP-2
FK 6	Tract 2008001- Prescribe burn (103 ac)	3/15 – 5/15	TT	\$4,223	LP-2
FK 7	Tract 2009004- Prescribe burn (225 ac)	3/15 – 5/15	TT	\$9,257	LP-2
FK 8	Tract 2010003- Prescribe burn (77 ac)	3/15 – 5/15	TT	\$3,157	LP-2

FK 9	Tract 2015001 NE unit Prescribe burn (55 ac)	3/15 – 5/15	TT	\$2,263	LP-2
FK 10	Tract 2015001 South unit Prescribe burn (180 ac)	3/15 – 5/15	TT	\$7,380	LP-2

Priority Area: Species Habitat

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 11	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
FK 12	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A
FK 13	Purchase and Installation of Violet plugs on Tract 2015001	Spring	MH	\$6,000	LP-2

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 14	Tract 2009004 & 2015001 Electricity	Annual	TT	\$1,000	LP-4
FK 15	Noxious weed control	6/1 – 8/31	TT	\$15,000	LP-4
FK 16	Fence and road maintenance	1/1–12/31	TT	\$2,000	LP-4
FK 17	Mowing	7/15 - 10/15	TT	\$1,000	LP-4

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
FK 18	Tract 2008001 grazing lease oversight	5/15 – 10/15	TT	N/A	N/A
FK 19	Tract 2012003 grazing lease oversight	5/15 – 10/15	TT	N/A	N/A
FK 20	Tract 2015001 grazing lease oversight	5/15 – 10/15	TT	N/A	N/A

2022 Ft Kearny Complex Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Improve Sand and Water Habitat	LP-2	\$3,200
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$40,280
Species Habitat	Other Species of Concern	LP-2	\$6,000
Subtotal			\$49,480
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$19,000
Total			\$68,480

Income

Tract	Item	Estimated Income
Tract 2008001 N & 2012003	Grazing Income	\$6,500
Tract 2008001 S	Haying Income	\$7,000
Tract 2009001	Grazing Income	\$6,820
Tract 2009004	Grazing Income	\$11,275
Tract 2012003	Cropland Income	\$1,800
Tract 2015001	Grazing Income	\$11,250
Total		\$44,645

FORT KEARNY COMPLEX

2012003

2009001

2009004

2015001

2010003

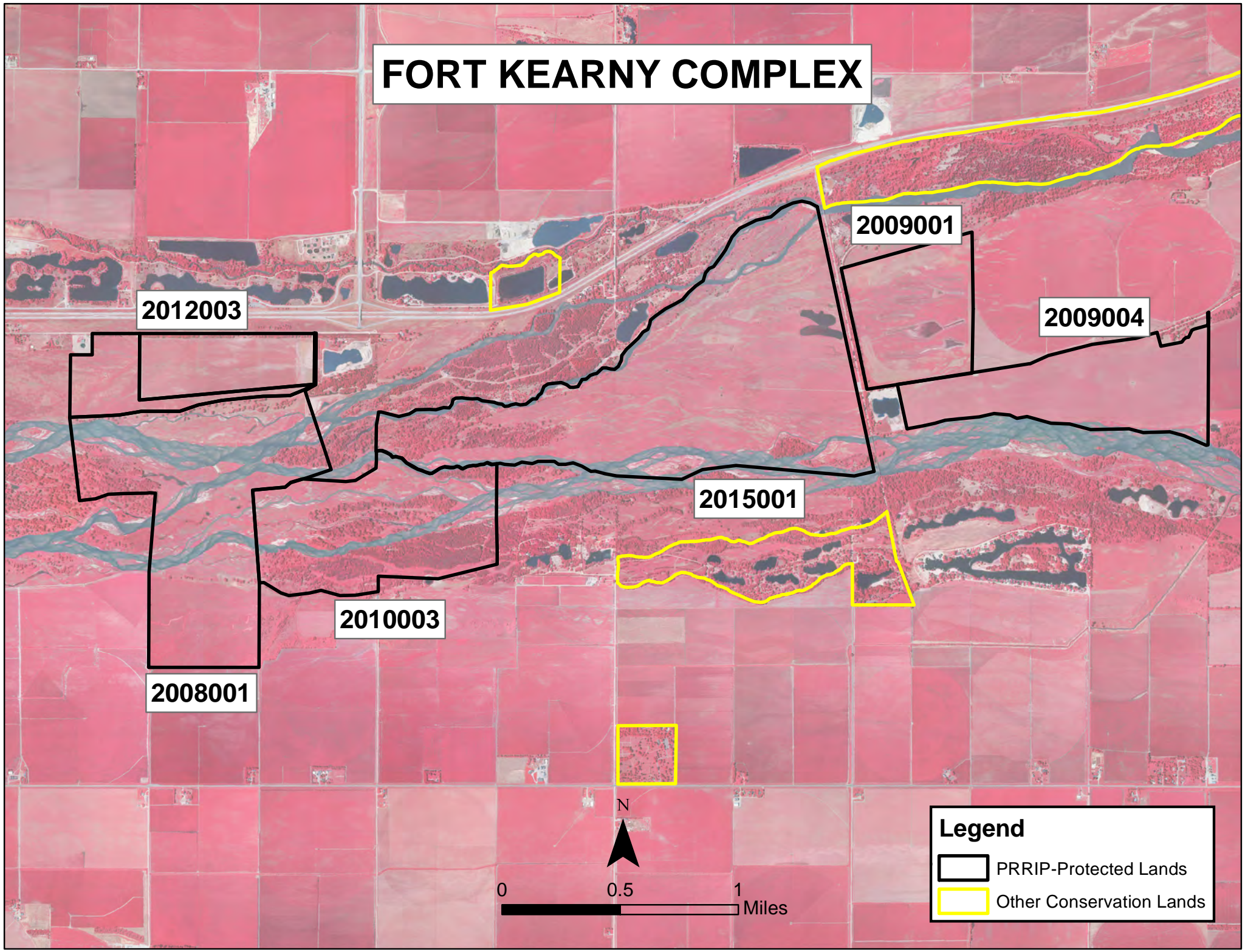
2008001

N

0 0.5 1 Miles

Legend

- PRRIP-Protected Lands
- Other Conservation Lands



2022 Minden – Gibbon Management Agreement Annual Work Plan

Adaptive Management Priorities

- * *Species Monitoring* – Monitor whooping crane use of in-channel roosting habitat.

Species Habitat Priorities

- * *Maintain Target Species Sand and Water Habitat* – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
M-G 1	Brush, tree, cattail herbicide spraying	8/15 - 11/1	TT	\$5,000	LP-2

2022 Minden-Gibbon Management Agreement Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Improve Target Species Sand and Water Habitat	LP-2	\$5,000
		Total	\$5,000

MINDEN - GIBBON MANAGEMENT AGREEMENT



2009008

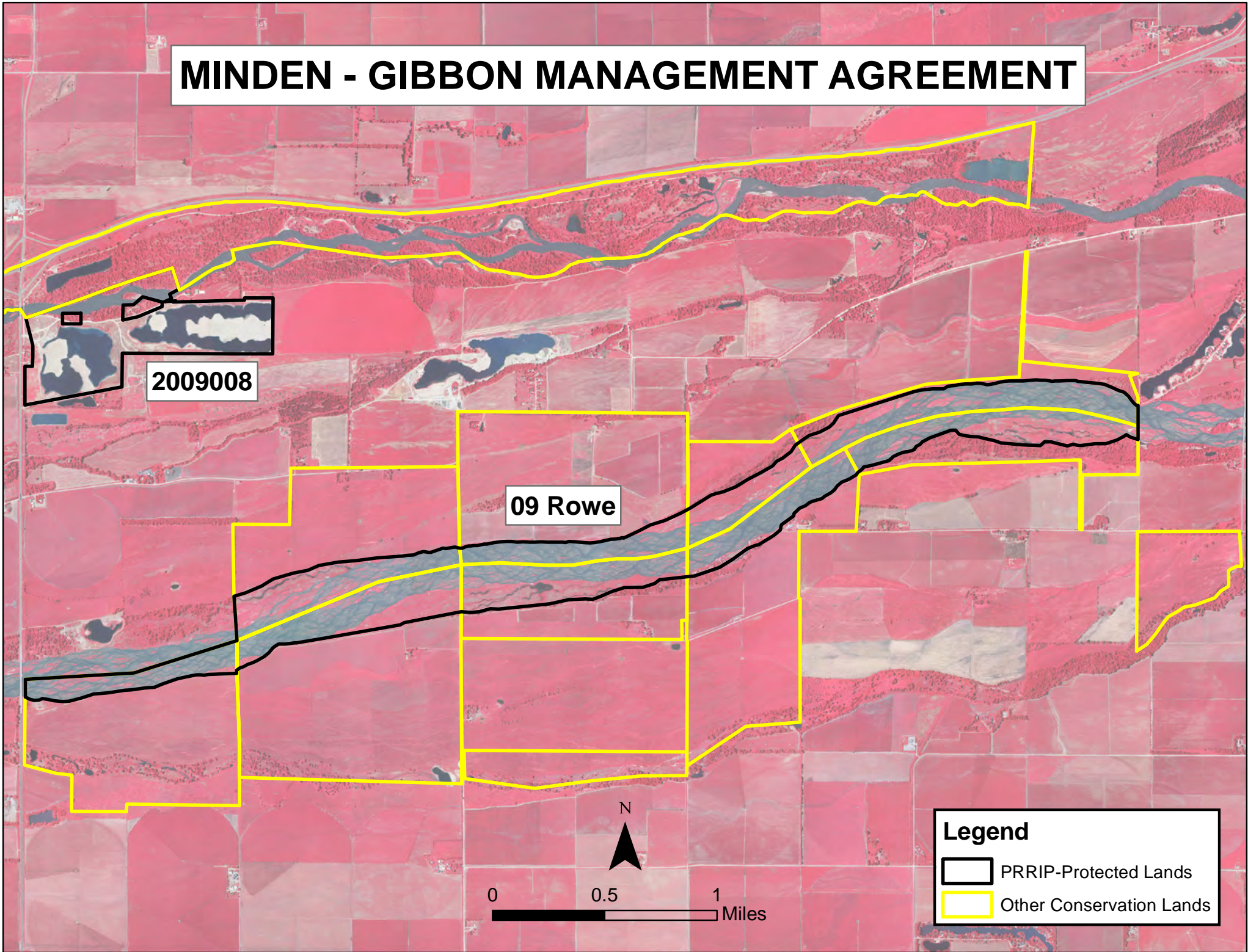
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0 0.5 1 Miles

Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands



2022 Clark Island Complex Annual Work Plan

General Priorities

- * **Complex Land Interest** - Execute management agreements with conservation and private landowners that will allow the Program to implement necessary construction, maintenance and research/monitoring activities.
- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Whooping Crane Riverine Habitat** – Design and implement vegetation clearing to provide a range of unobstructed view widths above the Programs minimums
- * **Species Monitoring** – Monitor whooping crane use of palustrine wetlands and in-channel roosting habitat.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tract 2010004 including fence and road maintenance and noxious weed control.
- * **Agricultural Operations** – Oversight of cropland, grazing/ haying leases on Tract 2010004

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CI 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CI 2	Herbicide treatment on south bank to kill vegetation prior to disking (18 ac)	4/15 – 5/15	TT	\$4,000	LP-2
CI 3	In-channel island cross disking to facilitate erosion (18 ac)	9/1 – 10/1	TT	\$4,100	LP-2
CI 4	Clear Trees & Burn, Bury on Islands of neighboring properties pending mgmt	7/15 – 12/15	TT	\$30,000	LP-2

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

CR 5	Brush, tree, cattail herbicide spraying	8/15-11/1	TT	\$5,000	LP-2
CI 6	Tract 2018001 Prescribe burn (252 ac)	3/15 – 5/15	TT	\$10,340	LP-2

Priority Area: Species Habitat

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CI 7	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
CI 8	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CI 9	Clear trees for east boundary fenceline through trees	8/1 – 12/31	TT	\$20,000	LP-4
CI 10	Fence and road maintenance	1/1–12/31	TT	\$10,000	LP-4
CI 11	Noxious weed control	6/1 – 8/31	TT	\$5,000	LP-4
CI 12	Mowing	7/15- 10/15	TT	\$1,000	LP-4

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CI 13	Grazing & Haying lease oversight	5/15 – 10/15	TT	N/A	N/A

2022 Clark Island Complex Budget Summary

Expenditures by Program Budget Line Item

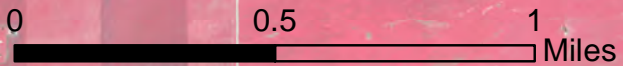
Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Improve Target Species Sand and Water Habitat	LP-2	\$38,100
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$15,340
Subtotal			\$53,440
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$36,000
Total			\$89,440

Income



Tract	Item	Estimated Income
Tract 2018001	Meadow Grazing Income	\$7,150
Tract 2018001	Accretion Grazing Income	\$0
Tract 2018001	Cropland Cash Rent Income	\$26,190
Total		\$33,340

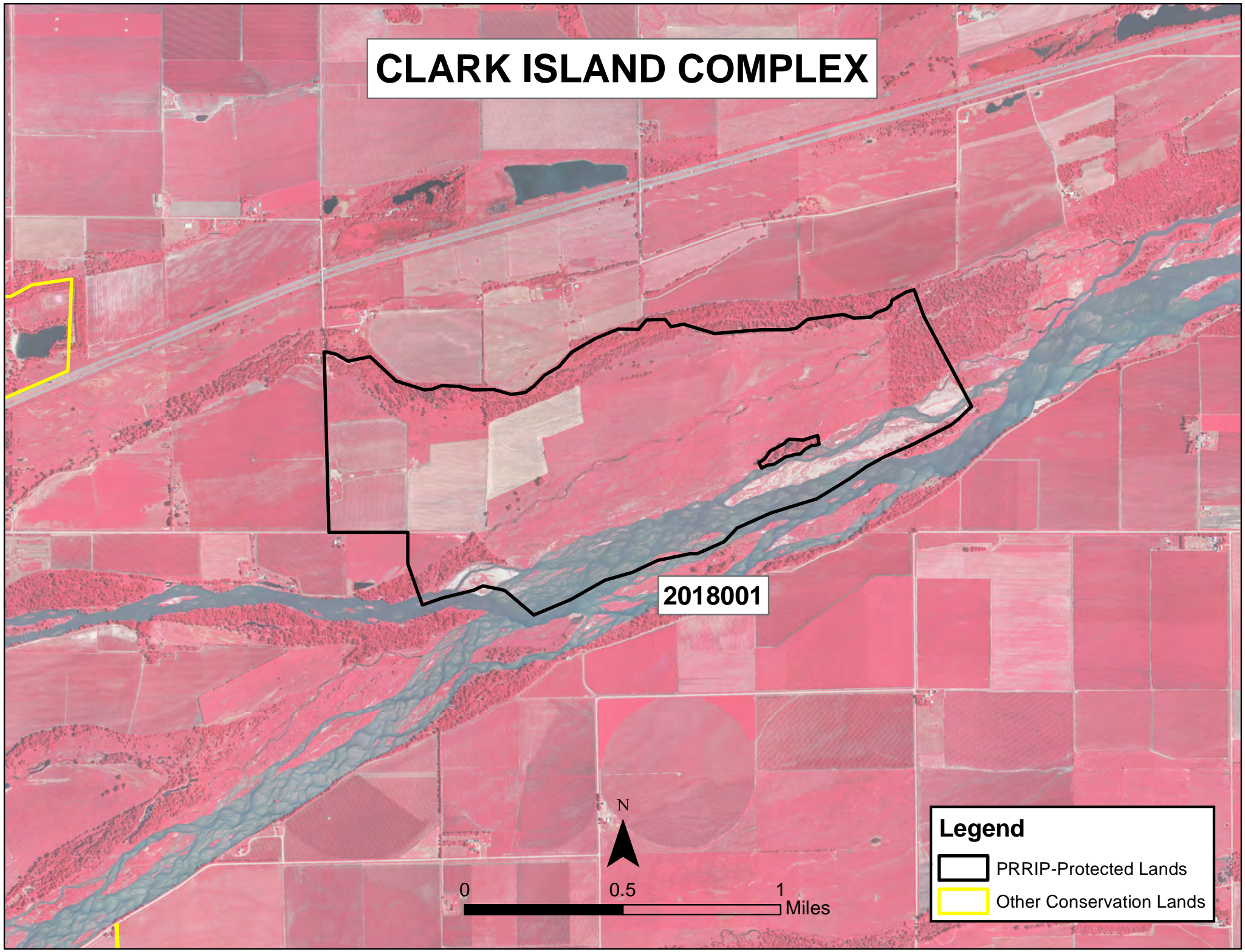
CLARK ISLAND COMPLEX

2018001



Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands



2022 Shoemaker Island Complex Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Adaptive Management Priorities

- * **Species Monitoring** – Monitor whooping crane use of palustrine wetlands and in-channel roosting habitat.

Species Habitat Priorities

- * **Maintain Target Species Sand and Water Habitat** – Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.
- * **Protecting Other Species of Concern** – Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tract 2010004 including fence and road maintenance and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing/ haying leases on Tract 2010004

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
SI 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
SI 2	No items	N/A	N/A	\$0	N/A

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

SI 3	Tract 2010004-North 1/2 West Unit Prescribe burn (171 ac)	3/15 – 5/15	TT	\$7,011	LP-2
SI 4	Tract 2010004-North 1/2 East Unit Prescribe burn (83 ac)	3/15 – 5/15	TT	\$3,403	LP-2
SI 5	Tract 2010004-South Meadow Prescribe burn (57 ac)	3/15 – 5/15	TT	\$2,345	LP-2

Priority Area: Species Habitat

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
SI 6	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
SI 7	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
SI 8	Fence and road maintenance	1/1–12/31	TT	\$1,000	LP-4
SI 9	Noxious weed control	6/1– 8/31	TT	\$2,500	LP-4
SI 10	Mowing	7/15- 10/15	TT	\$1,000	LP-4
SI 11	Tract2010004 Electricity	5/15 – 10/15	TT	\$200	LP-4

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
SI 12	Grazing & Haying lease oversight	5/15 – 10/15	TT	N/A	N/A

2022 Shoemaker Island Complex Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Improve Target Species Sand and Water Habitat	LP-2	\$0
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$12,759
Subtotal			\$12,759

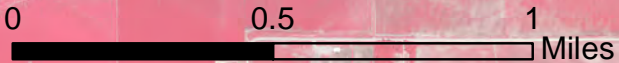
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$4,700
Total			\$17,459

Income



Tract	Item	Estimated Income
Tract 2010004	Grazing & Haying Income	\$43,000
Total		\$43,000

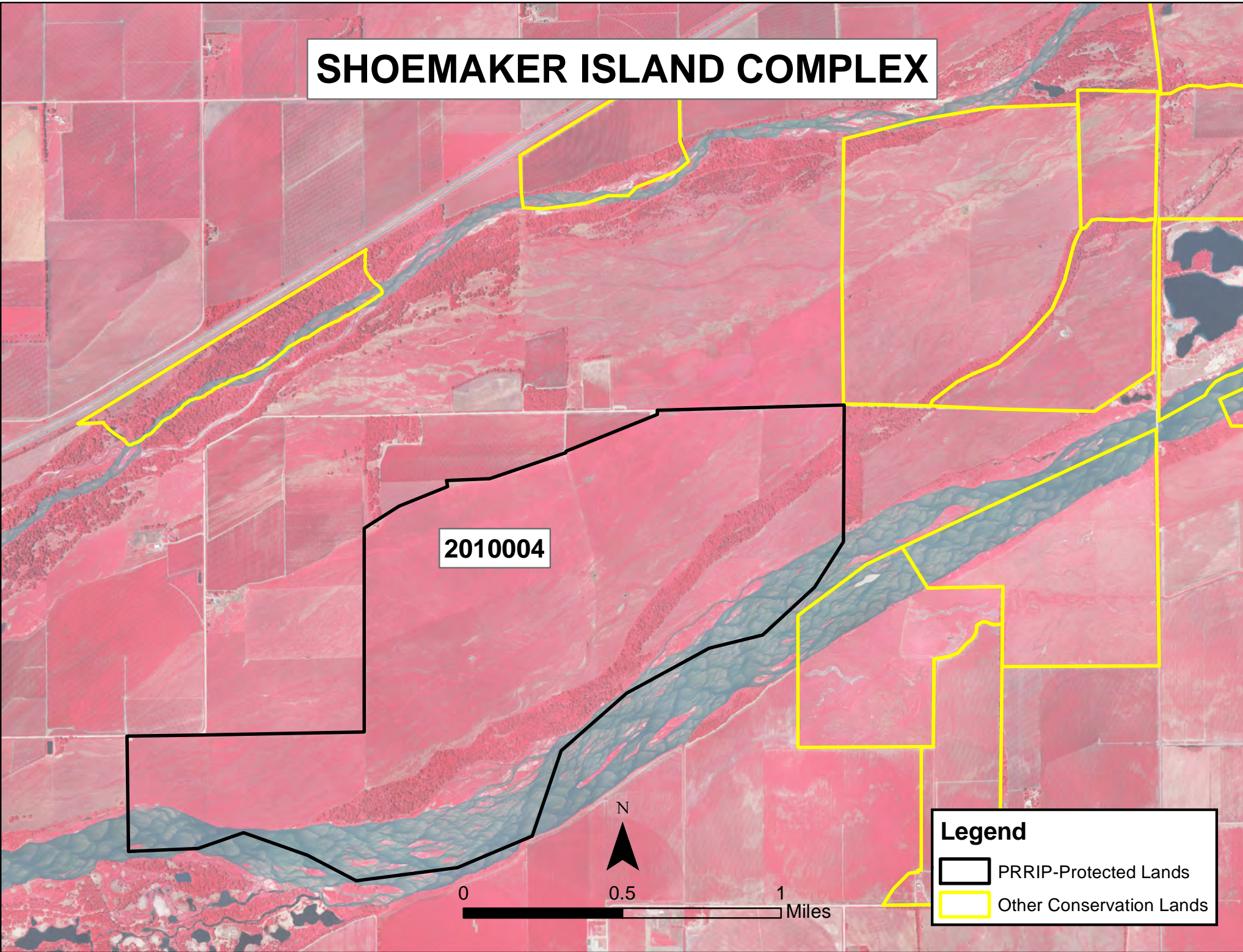
SHOEMAKER ISLAND COMPLEX

2010004



Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands



2022 Chapman Complex Annual Work Plan

General Priorities

- * **Restoration and Management Planning** – Development of restoration and management plan for Tract 2021001.
- * **Good Neighbor Policy** - *Conduct all actions in accordance with Program's good neighbor policy.*

Adaptive Management Priorities

- * **Whooping Crane Riverine Habitat** – *Design and implement vegetation clearing to provide a range of unobstructed view widths above the Programs minimums*
- * **Species Monitoring** – *Monitor whooping crane use of palustrine wetlands and in-channel roosting habitat.*

Species Habitat Priorities

- * **Improve Target Species Sand and Water Habitat** – *Control in-channel vegetation to maintain suitable unobstructed view widths for whooping cranes.*
- * **Protecting Other Species of Concern** – *Identify presence of and determine methods to protect other species of concern during implementation of land-related activities.*

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – *Fulfill basic property ownership obligations and needs on Tracts including fence and road maintenance and noxious weed control.*
- * **Agricultural Operations** – *Oversight of grazing/ haying leases*

NOTE: The budget section of this work plan only contains information for work items that are specific to these tracts. As such, tract-specific research and monitoring actions are presented but system-scale actions like target species and geomorphology/vegetation monitoring are not.

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CC 1	Restoration and Management Planning for Tract 2021001	1/1 - 10/1	TT	N/A	N/A
CC 2	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Species Habitat

Item(s): *Improve Target Species Sand and Water Habitat*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CC 3	Herbicide treatment on south bank to kill vegetation prior to disking (46 ac)	4/15 – 5/15	TT	\$10,100	LP-2
CC 4	In-channel island cross disking to facilitate erosion (46 ac)	9/1 – 10/1	TT	\$10,000	LP-2

Priority Area: Species Habitat

Item(s): *Whooping Crane Grassland / Wet Meadow Habitat*

CI 5	Aboveground tree removal in meadow	3/15 – 5/15	TT	\$20,000	LP-2
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Priority Area: Species Habitat

Item(s): *Other Species of Concern*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CC 6	Habitat and species surveys on properties where work will occur	As Needed	MH	N/A	N/A
CC 7	Coordination with USFWS and NGPC to identify and mitigate potential impacts associated with land activities	As Needed	MH	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CC 8	Fence and road maintenance	1/1–12/31	TT	\$20,000	LP-4
CC 9	Noxious weed control	6/1– 8/31	TT	\$10,000	LP-4
CC 10	Mowing	7/15- 10/15	TT	\$1,000	LP-4

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
CC 11	Tract 2019001 grazing lease oversight	5/15– 10/15	TT	N/A	N/A
CC 12	Tract 2021001 grazing lease oversight	5/15– 10/15	TT	N/A	N/A
CC 13	Tract 2021001 crop lease oversight	5/15– 10/15	TT	N/A	N/A

2022 Chapman Complex Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Species Habitat	Improve Target Species Sand & Water Habitat	LP-2	\$20,100
Species Habitat	Whooping Crane Wet Meadow/ Grassland Habitat	LP-2	\$20,000
		Subtotal	\$40,100
Operations and Maintenance	Property Maintenance and Agricultural Operations	LP-4	\$31,000
		Total	\$71,100

Income

Tract	Item	Estimated Income
Tract 2019001	Grazing lease	\$3,640
Tract 2021001	Grazing lease-estimate	\$4,000
Tract 2021001	Irrigated Crop lease-estimate	\$30,358
		Total
		\$37,998

CHAPMAN COMPLEX

2021001



2020001

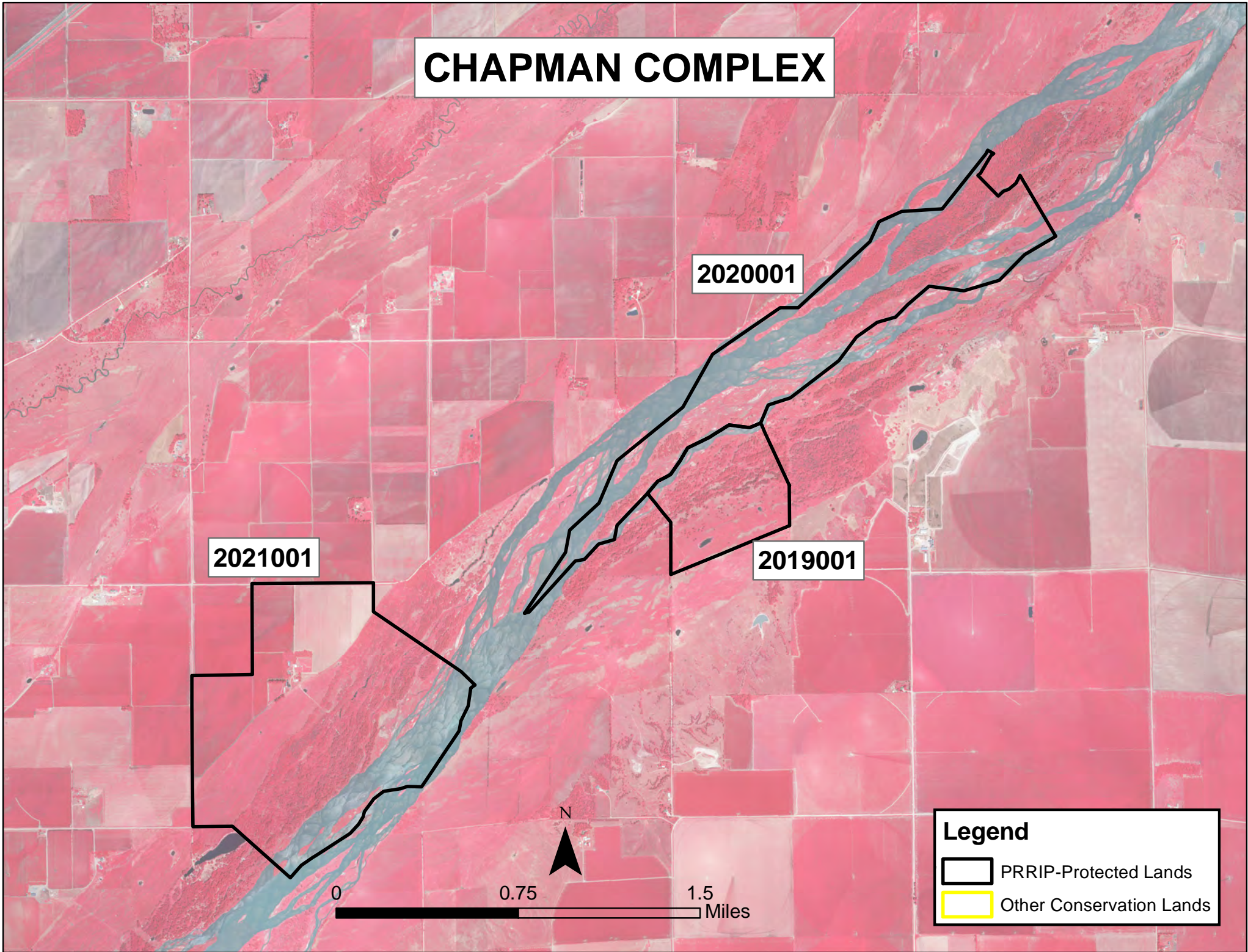
2019001

N

0 0.75 1.5 Miles

Legend

-  PRRIP-Protected Lands
-  Other Conservation Lands



2022 Water Properties Annual Work Plan

General Priorities

- * **Good Neighbor Policy** - Conduct all actions in accordance with Program's good neighbor policy.

Operations and Maintenance Priorities

- * **Basic Property Maintenance Obligations and Needs** – Fulfill basic property ownership obligations and needs on Tracts W2016002, W2017001, W2017002 & W201703 including fence and road maintenance, irrigation management and noxious weed control.
- * **Agricultural Operations** – Oversight of grazing/ haying lease on Tract W2016002

Priority Area: General

Item(s): *Complex Land Interest and Complex-Level Planning*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
WP 1	Coordination of Program land actions with neighboring landowners	Annual	TT	N/A	N/A

Priority Area: Operations and Maintenance

Item(s): *Basic Property Maintenance Obligations and Needs*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
WP 2	Fence and road maintenance	1/1–12/31	TT	\$1,000	WPLW-1
WP 3	Noxious weed control	6/1 – 8/31	TT	\$5,000	WPLW-1
WP 4	Mowing	7/15-10/15	TT	\$1,000	WPLW-1
WP 5	Tracts W2016002 Electricity	5/15– 12/15	TT	\$100	WPLW-1
WP 6	Taxes	5/15–10/15	TT	\$9,750	WPLW-1

Priority Area: Operations and Maintenance

Item(s): *Agricultural Operations*

No.	Management Activities	Target Dates	Person Responsible	Cost (Estimated)	Budget Line Item
WP 7	Tract W201602 Lease Oversight	5/15 – 10/15	TT	N/A	WPLW-1

2022 Water Properties Budget Summary

Expenditures by Program Budget Line Item

Priority Area	Item	Budget Line Item	Estimated Expenditure
Operations and Maintenance	Property Maintenance and Agricultural Operations	WPLW-1	\$16,850
		Total	\$16,850

Income

Tract	Item	Estimated Income
Tract W201602	Crop Income	\$9,125
	Total	\$9,125

W201701

WATER PROPERTIES

Dawson County

W201703

Phelps County

W201602

Buffalo County

W201702

Lincoln County

