



PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

FISCAL YEAR 2024 DRAFT SCIENCE BUDGET AND ANNUAL WORK PLAN

Prepared by:

Executive Director's Office (EDO)

Platte River Recovery Implementation Program (PRRIP or Program)

Kearney, Nebraska

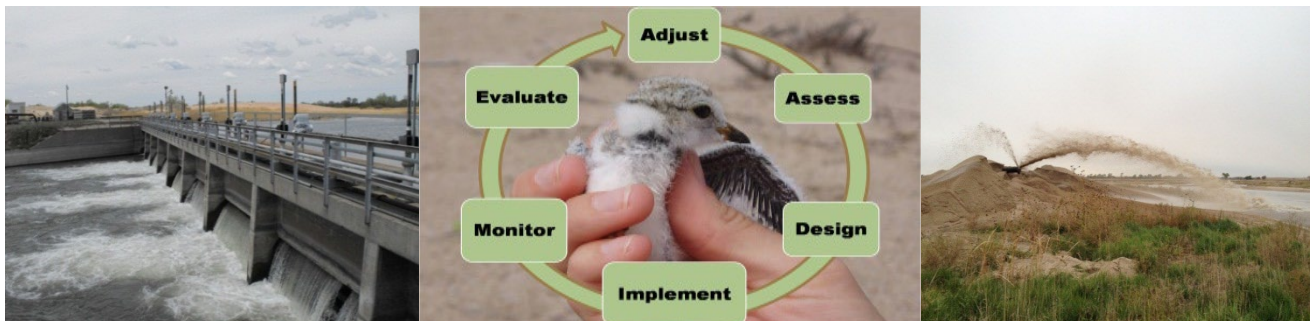
Prepared for:

PRRIP Governance Committee (GC)

Tom Riley, Nebraska Department of Natural Resources, 2023 GC Chair

Draft Budget and Work Plan Reviewed by Technical Advisory 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 2024 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 FY24 Program Budget Spreadsheet (which is a separate document that is incorporated by reference) and the FY24 Program Annual Work Plan.





Table 1. Quick-reference snapshot of the FY 2024 PRRIP Budget Spreadsheet, including a Table of Contents reference page number corresponding to the beginning page location for each budget line item in this FY2024 Work Plan.

PRRIP Budget ID	PRRIP Line-Item Description	FY 2024 Estimated New Money	FY 2024 Work Plan Page #
SCIENCE PLAN			
LP-2	Habitat Restoration and Management Actions on Program Lands	\$ 336,900	4
LP-2-P	Trapping Projects	\$ 108,400	5
PD-22	Sediment Augmentation Implementation	\$ 250,000	6
WP-1(b)	<i>Phragmites</i> Control	\$ 200,000	7
G-1	Remote Sensing Data Collection	\$ 305,200	8
TP-1	Tern and Plover Monitoring & Research	\$ 4,600	9
WC-1	Whooping Crane Monitoring & Research	\$ 98,500	11
PS-1	Pallid Sturgeon Monitoring & Research	\$ 511,700	12
G-5	Geomorphology & Vegetation Monitoring and Research	\$ 258,900	14
PD-15	Environmental Permitting	\$ 50,000	16
IMRP-3	EDO Special Advisors - Science Plan	\$ 120,000	17
ISAC-1	ISAC Stipends & Expenses	\$ 232,800	20
PD-3	PRRIP Peer Review and Publications	\$ 93,000	23
PD-11	Science Plan-related Workshops	\$ 45,000	26
Science Plan Sub-Total		\$ 2,615,000	

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

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$336,900		

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. Specific management actions include tree clearing, nesting island maintenance, channel disking, herbicide application, and seeding.

Notes on Cost

The general breakdown of estimated costs for proposed Science Plan related management actions in 2024 is as follows:

Location	Estimated FY24 Cost
Non-complex	\$65,074
Plum Creek Complex	\$40,883
Cottonwood Ranch Complex	\$30,703
Elm Creek Complex	\$16,969
Pawnee Complex	\$18,000
Fort Kearny Complex	\$48,522
Audubon Rowe Complex	\$15,000
Clark Island Complex	\$44,521
Shoemaker Island Complex	\$36,659
Chapman Complex	\$20,500
TOTAL	\$336,831 Round up to \$336,900

**PROGRAM TASK & ID: LP2-P. Trapping Projects**

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$108,400		

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 estimated costs for FY24 under a 5-year Cooperative Agreement with the USDA within the AHR, including seven off-channel sand and water nesting sites for FY24, and additional trapping needs at the North Platte Choke Point. Trapping costs are itemized as follows:

Category	Estimated FY24 Cost
Salary/Benefits	\$63,516.19
Vehicle/Transportation	\$15,201.00
Travel Cost	\$1,500.00
Equipment/Supplies	\$5,000.00
Subtotal	\$85,217.19
Pooled Costs (11%)	\$ 9,373.89
Overhead (16.15%)	\$ 13,762.58
Total	\$108,353.66 Round up to \$108,400

Products

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

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

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$250,000		

Task Description

In June of 2022, the GC directed a halt to sediment augmentation beginning in 2023 and directed the EDO to hire an independent contractor to examine viability of modifications to the Jeffrey Island sand dam to pass sediment to the south channel during high flows.

Notes on Cost

The FY24 tasks and estimated costs for a sand dam modification viability study are as follows:

Task Description	Estimated FY24 Cost
Sand dam modification study performed by independent contractor	\$250,000
Total	\$250,000

The Program will advertise a new technical study of the ability for transport of sediment from the north channel to the J2 Return channel through a retrofitted sand dam or other means. An RFP for the study will be released at the end of 2023 and a contractor will be selected in January 2024. The study period is one year. The study will examine the following questions.

- What alignment, type of structure, and operation rules would maximize sediment capture and delivery to the J2 Return Channel?
- What volume of sediment would be delivered?
- How must the structure be designed and constructed to limit the risk of channel avulsion and to maintain owner access to Jeffrey Island?
- What maintenance issues or upstream/downstream changes might we expect?
- How will sediment movement into the J-2 Return channel affect the morphology of the north channel between Lexington and Overton bridges? How will sediment balance at the Overton bridge (after the confluence of the North and J-2 Return channels) be affected?

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

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$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 Weed Management Area estimates it will cost on the order of \$600,000 annually to control approximately 2,000 acres of 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)	160 hrs.	\$2100/hr.	\$336,000
Control (Airboat)	450 hrs.	\$200/hr.	\$90,000
Herbicide	2,051 gals	\$85/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
2024	\$305,200		

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. A remote sensing RFP will be put out for competitive selection in early 2024. The FY24 tasks and estimated costs for data collection based upon the current contract are as follows:

Task Description	Estimated FY24 Cost
Summer aerial imagery	\$68,500
Fall aerial imagery and full reach bathymetric LiDAR	\$236,700
Total	\$305,200

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
2024	\$4,600		

Task Description

The EDO will implement the PRRIP tern and plover monitoring protocol during the 2024 nesting season. Monitoring efforts will be similar to 2023 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 predator enclosure fencing and predator deterrent lights will continue in 2024 to increase tern and plover nest and chick survival within the AHR. The funding included in this line item provides the equipment required to assess the performance of actions the Program takes to improve productivity of terns and plovers. In addition to implementation of the tern and plover monitoring protocol, the EDO will also perform data analyses and annual reporting.

Notes on Cost

FY24 funding in this line item includes direct costs based on estimates for support of video monitoring and replacing and maintaining cameras and predator deterrent lighting that were damaged during the 2023 season. Materials to perform seasonal maintenance at off-channel nesting sites are included. Costs for miner safety training and MSHA certification as required for all staff monitoring terns and plovers at active mining sites are also included. Costs associated with personnel and vehicles are included in the ED-1 budget.

Expense Category	Estimated FY24 Cost
Direct Costs	
Nest, shoreline, site-level camera replacement	\$1600
Video camera monitoring (data and protection plan, batteries)	\$ 300
Camera supplies (SD cards, batteries, posts, avian spikes, zip ties)	\$1350
Predator deterrent lights	\$ 200
Seasonal site and fence maintenance supplies	\$ 200
MSHA certification	\$ 900
Total	\$4,550 Round to \$4,600

Products

- Annual report detailing nest and brood 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 predator exclosure fencing and predator deterrent lights for reducing predator presence on off-channel nesting sites and improving reproductive success of terns and plovers in 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
2024	\$98,500		

Task Description

The EDO will implement the PRRIP whooping crane monitoring protocol, perform data analyses and reporting for the spring and fall 2024 monitoring seasons. The GC approved a change in PRRIP's monitoring dates at their June 2023 meeting. Beginning in 2024, the spring monitoring period will run from March 5 through April 19, shortening this monitoring period from 55 to 46 days. The fall monitoring period will run from October 15 through November 18, shortening this monitoring period from 38 to 35 days. Within these shorter survey windows monitoring efforts will be similar to 2023 and will include implementation of the monitoring protocol through systematic aerial monitoring efforts with ground confirmations as necessary.

Notes on Cost

FY24 funding in this line item includes direct costs associated with aircraft rental and pilot services. Costs are based on past aerial flight services contracted through a competitive selection process. The shorter monitoring periods were accounted for in estimating 2024 costs. Costs associated with personnel (other than the pilot) and vehicles are included in the ED-1 budget. The budget for spring and fall 2024 aerial flight surveys is as follows:

Expense Category	Estimated FY24 Cost
FY24 Spring Whooping Crane Monitoring	
Direct Costs (aircraft rental with pilot, equipment, etc.)	\$56,000
FY24 Fall Whooping Crane Monitoring	
Direct Costs (aircraft rental with pilot, equipment, etc.)	\$42,500
Total	\$98,500

Products

- Spring and fall 2024 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
2024	\$511,700		

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.

In fall 2022 the current PRRIP remote sensing contractor collected bathymetric LiDAR on the lower Platte River (LPR) to be used by an independent contractor to develop a 2D hydrodynamic river model for the LPR. These data and the subsequent model will be used to help inform ongoing pallid sturgeon habitat research on the LPR and 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 2024 includes costs associated with genetic sequencing of 1,000 samples, supplies, and a graduate student research assistantship.

Habitat and spawning research in 2024 include 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.

An independent contractor was selected in 2023 to develop a 2D hydrodynamic river model for the LPR during 2024.



The budget for 2024 is as follows:

Expense Category	Estimated FY24Cost
Genetic research (SIU)	
Supplies & labor at \$45/sample for 1000 samples	\$45,000
Habitat & spawning research (UNL)	
Personnel, Support, Facilities & Administration	\$147,686
Equipment, Travel, Supplies, Facilities & Administration	\$69,014
Habitat Modeling	
2D Hydraulic Modeling using LPR LiDAR data	\$250,000
Total	\$511,700

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.
- Development by an independent contractor of a 2D hydrodynamic river model using lower Platte River LiDAR data acquired in fall 2022. That model will be used to inform UNL habitat research and 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
2024	\$258,900		

Task Description

Monitoring and mapping of *Phragmites* patches over the growing season to document changes in *Phragmites* patch size in response to natural flows, target flows, and all AMP-related flow management activities. Stage gages will be installed at *Phragmites* monitoring field sites to monitor water surface elevations and validate modeled water surface elevations used to quantify inundation of *Phragmites* patches. Time-lapse camera data will be collected 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. Together, these efforts are designed to measure efficacy of Program management to reduce vegetation expansion into the river channel and maintain or improve whooping crane roosting habitat suitability throughout the AHR. The *Phragmites* research will be conducted by an independent contractor in 2024. All other vegetation-related data collection and analyses will be performed by the EDO.

Recent evaluations of effectiveness of sediment augmentation identified a breakthrough channel connecting the north channel to the south channel of the Platte River between the J2 Return channel and the Overton bridge. This breakthrough channel has served as a source of flow and sediment under conditions of high flow and is suspected to have played a role in channel degradation a station 7000 in the J2 Return reach. In 2023, this breakthrough channel also conveyed water and sediment between these reaches. To better understand the role of this channel in flow and sediment conveyance, stage gages will be installed in the breakthrough channel to document flow through this channel. This information can be combined with LiDAR to monitor the evolution of this channel and further evaluate the conditions under which it serves as a source of flow and sediment for the J2 Return channel.

Notes on Cost

An RFP and Scope of Work will be developed and advertised for *Phragmites* research in early 2024, for work to begin in April of 2024. The estimated cost is based upon a senior level spatial data analyst and two field technicians for sequential *Phragmites* patch mapping over the growing season in three study reaches. Estimated costs also include equipment (RTK, field laptop, software, distance wheel, measuring and marking tape, etc.), vehicle costs, housing, and meal expenses. Total annual *Phragmites* project cost is estimated to be approximately \$250,000. FY24 estimated cost for acquiring, installing, and maintaining five stage gages to monitor the breakthrough channel connecting the N channel to the J2 Return channel and collect data on water surface elevation at *Phragmites* field sites is estimated at \$8,100. The FY24 estimated cost for acquiring, maintaining, and installing time-lapse cameras on the bank line of Program Habitat Complexes is estimated to be \$800.



Expense Category	Estimated FY24 Cost
Phragmites Research Project	
Senior level spatial analyst	\$90,000
Field technicians (2)	\$110,000
Equipment (RTK, laptop, software, measuring and marking tapes)	\$10,000
Vehicle	\$25,000
Housing	\$10,000
Meals	\$5,000
Phragmites Research Subtotal	\$250,000
Geomorphology and Vegetation Response to Flow	
Stage gages at Phragmites field sites (3)	\$8,100
Time-lapse camera supplies (SD cards, batteries, posts, zip ties)	\$800
Geomorphology and Vegetation Response to Flow Subtotal	\$8,900
Total	\$258,900

Products

- Products will include a spatially explicit dataset including shapefiles of monitored *Phragmites* patches through time, patch characteristics such as area, height, density, composition, phenological stage, and plant health as response variables associated with data collected on elevation, river flow and stage, patch inundation, distance to water, herbicide application, and mechanical management.
- Products will include flow and stage data at the breakthrough channel to be integrated into ongoing evaluations of channel geomorphology within the J2 Return reach.
- Products will include time-lapse imagery of channel inundation flows and vegetative response.
- Data will be assessed annually to produce an annual report of results in addition to providing data for long-term analysis of effects of Program actions.

**PROGRAM TASK & ID: PD-15. Environmental Permitting**

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$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 contract for permitting services in 2022 that expires on 12/31/2025. The multi-year contract amount was \$200,000 and specific dollar amounts were developed for specific services, as needed. Estimated annual costs for 2024 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: IMRP-3. EDO Special Advisors – Science Plan**

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$120,000		

Task Description

- **Terrestrial Animal Movement Ecology/Telemetry (TBD)** – A Special Advisor to the EDO on Science Plan-related specialty topic of animal movement ecology (with emphasis on movement through terrestrial landscapes, migration, and analysis of telemetry data) 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. This special advisor will be retained to specifically address Extension Big Questions 4-6 on the factors important for whooping crane stopovers, stay length, and to address differences in seasonal patterns of movement.
- **Aquatic Animal Movement Ecology/Telemetry (TBD)** – A Special Advisor to the EDO on Science Plan-related specialty topic of animal movement ecology (with emphasis on movement through aquatic landscapes and analysis of telemetry data) 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. This special advisor will be retained to specifically address Extension Big Question 7 on the factors important for pallid sturgeon movement into, within, and out of the lower Platte River and its tributaries.
- **Structured Decision-Making (SDM) (TBD)** – A Special Advisor to the EDO to work toward early SDM process and tool development in preparation for Second Increment Negotiations. Early planning and tool development will help ensure the Science Plan is addressing data needs to assess priorities, tradeoffs, and consequences related to learning from the Extension and its relevance to Second Increment negotiations.

It is anticipated that Special Advisors will be retained in the first or second quarter of 2024 after consultation with the ISAC, the TAC, and/or others with recommendations for individuals to consider.

Notes on Cost

This FY24 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	FY24 Total
TBD	Terrestrial focus - Animal movement ecology; telemetry; factors influencing animal movement through terrestrial landscapes	\$225	20	\$36,000
TBD	Aquatic focus - Animal movement ecology; telemetry; factors influencing animal movement through aquatic landscapes	\$225	20	\$36,000
TBD	Structured Decision-Making	\$225	20	\$36,000



Other Direct Costs (i.e., travel and expenses for 2024 Science Plan Reporting Session, trips to Kearney, NE, etc.)	\$12,000
Total not to exceed	\$120,000

General note on all Special Advisor budget line items: Please refer to the third paragraph in the “Exceptions” section of the revised PRRIP Procurement Policy (effective July 1, 2021) – “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, while retained as a Special Advisor. 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. 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 discussed with the appropriate Advisory Committees, the Finance Committee, and the Governance Committee. Input is 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
2024	\$232,800		

Task Description

The EDO proposes the following 2024 ISAC activities:

- 1) 2024 PRRIP Science Plan Reporting Session in Omaha, NE (in-person); February 20-22, 2024
- 2) ISAC participation in March 2024 GC Quarterly Meeting (virtual)
- 3) 2024 PRRIP Summer ISAC Meeting in Kearney, NE (in person); July 2024
- 4) Additional meeting participation, 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 2024 is detailed below:

ISAC Cost Item	Estimated FY24 Cost
2024 PRRIP Science Plan Reporting Session (Omaha, NE; February 20-22, 2024): <ul style="list-style-type: none">• In-person meeting to discuss status of Science Plan implementation and annual State of the Platte Report• 4-day meeting (3 days meeting, 1 day travel) = \$225/hour x 8-hour day x 4 days x 6 ISAC members = \$43,200• Meeting prep & post-meeting discussion = \$225/hour x 8-hour day x 2 days x 6 ISAC members = \$21,600• Travel expenses = \$1,300 flight + \$700 additional (hotel, meals, airport parking, ground transportation) = \$2,000 x 6 ISAC members = \$12,000	\$76,800
March 2024 PRRIP GC Quarterly Meeting: <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 = \$225/hour x 8-hour day x 6 ISAC members = \$10,800	\$10,800
2024 Summer ISAC Meeting (Kearney, NE; July 2024): <ul style="list-style-type: none">• In-person meeting to discuss status of Science Plan implementation and to support ISAC member field trips to PRRIP implementation and science activities on the ground• 4-day meeting (3 days meeting, 1 day travel) = \$225/hour x 8-hour day x 4 days x 6 ISAC members = \$43,200• Meeting prep & post-meeting discussion = \$225/hour x 8-hour day x 2 days x 6 ISAC members = \$21,600• Travel expenses = \$1,300 flight + \$700 additional (hotel, meals, airport parking, ground transportation) = \$2,000 x 6 ISAC members = \$12,000	\$76,800
Additional Document Review, Specific ISAC Member Input, and/or Additional Virtual Meetings: <ul style="list-style-type: none">• Review Program documents/products and provide specific guidance as requested by GC, TAC, and EDO• \$225/hour x 8-hour day x 5 days x 6 ISAC members = \$54,000	\$54,000



ISAC Chair and Vice Chair: <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 \$225/hour x 8-hour day x 4 days x 2 ISAC members = \$14,400 	\$14,400
TOTAL	\$232,800

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 or more on an hourly basis. The EDO proposes keeping the approved FY2023 rate of \$225/hour for FY2024. 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 2024 Science Plan Reporting Session in Omaha, NE and the 2024 Summer ISAC 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.

Extension ISAC Membership

The following table describes an updated ISAC membership and rotation schedule for the remainder of the Extension:

Area of Expertise	Extension ISAC Membership
<u>ISAC Seat #1:</u> Ecological statistics	July 2022-June 2025: Jennifer Hoeting, Ph.D. July 2025-June 2028: new member July 2028-June 2031/2032: new or renew member
<u>ISAC Seat #2:</u> Adaptive management & decision-making	July 2022-June 2025: Dave Marmorek, M.SC. July 2025-June 2028: new member July 2028-June 2031/2032: new or renew member
<u>ISAC Seat #3:</u> Big river/fish ecology (pallid sturgeon focus)	July 2022-June 2024: David Galat, Ph.D. July 2024-June 2027: new member July 2027-June 2030: new or renew member July 2030-June 2032: new or renew member
<u>ISAC Seat #4:</u> Avian ecology (whooping crane focus)	July 2022-June 2025: Aaron Pearse, Ph.D. July 2025-June 2028: new or renew member July 2028-June 2031/2032: new or renew member
<u>ISAC Seat #5:</u> Fluvial geomorphology (vegetation focus)	July 2022-June 2025: Michal Tal, Ph.D. July 2025-June 2028: new or renew member July 2028-June 2031/2032: new or renew member
<u>ISAC Seat #6:</u>	July 2023-June 2026: Alan Kasprak, Ph.D. July 2026-June 2029: new or new member



Area of Expertise	Extension ISAC Membership
Fluvial geomorphology (sediment/morphology focus)	July 2029-June 2032: new or renew member

The rotation described above include the following structural and procedural considerations:

- Dr. David Galat will cycle off the ISAC as of June 2024. Dr. Chadwin Smith of the EDO will work with the ISAC Selection Panel (Merrill, Riley, Freeman, Lawrence, Hoeting) to identify, evaluate, interview, and recommend for appointment a new ISAC member to replace Dr. Galat. The intended area of expertise to be sought will be pallid sturgeon ecology, with particular experience or expertise related to pallid sturgeon use of and behavior in Missouri River tributaries including the lower Platte River in Nebraska and the Yellowstone River in Montana and North Dakota.
- The ISAC membership rotation approach described above reflects all current ISAC members completing their contracted terms of service and then appointing new (or in some cases, possibly re-appointing existing) ISAC members for one (1) three-year term. Term length and appointment/re-appointment is solely at the discretion of the GC.
- The area of expertise represented by each ISAC seat is subject to change throughout the remainder of the Extension based on Program science priorities and guidance from the EDO, TAC, and GC.

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
2024	\$93,000		

Task Description

- Three (3) PRRIP peer reviews – Wet Meadow Hydrology Report, Sediment Augmentation Data Synthesis Compilation, 5-yr update on Whooping Crane Roost Site Selection
- Publication of four (4) Program manuscripts.

Products

- Three (3) PRRIP peer review reports.
- Four (4) publications in refereed journals.

Notes on Cost – Peer Review

This budget item includes two parts: carryover budgeting for two peer processes that begin in late 2023 and that will not be complete (and thus peer reviewers will not be paid) until spring or early summer 2024, and a new peer review process that will start in 2024.

Dr. Chadwin Smith of the EDO is facilitating the ongoing peer review of the Wet Meadow Hydrology Report and the Sediment Augmentation Data Synthesis Compilation. Expected peer review activities for these two documents in 2024 include:

- Manage the peer review process – provide document to be reviewed; communicate with panelists including at least one (1) virtual meeting in Teams to discuss review comments and improved the effectiveness of the final products of the Program’s peer review process.
- Summarize all comments from each peer review panel.
- Facilitate discussion with the TAC regarding each final report; work with EDO staff to incorporate changes based on peer review comments.
- Collate all information into final report for discussion with and approval by the GC.

Dr. Smith will also facilitate the new peer review of the whooping crane (WC) roost site selection analysis. This peer review is anticipated to begin in the first or second quarter of FY24 and be complete by the end of 2024: Expected peer review activities for this document in 2024 include:

- Identify peer review candidates; review peer review comments; develop responses to peer review comments; and edit reviewed documents based on peer review comments.
- Work with the Peer Reviewer Selection Panel (same as the ISAC Selection Panel) to recommend at least three (3) candidates for each peer review panel according to appropriate areas of expertise. TAC review and GC review and approval required prior to beginning any review.
- Peer review candidate recommendations will come in the form of background information for all potential candidates, clear demonstration of on-point expertise, and signed conflict of interest statements for all potential candidates.
- Secure completed and signed contracts with each peer reviewers.



- Manage the peer review process – develop Scope of Work; provide document to be reviewed; communicate with panelists including at least one (1) virtual meeting in Teams to discuss review comments and improved the effectiveness of the final products of the Program’s peer review process.
- Summarize all comments from each peer review panel.
- Facilitate discussion with the TAC regarding each final report; work with EDO staff to incorporate changes based on peer review comments.
- Collate all information into final report for discussion with and approval by the GC.

Cost estimates are based on prior years’ experience with peer review panels and with the ISAC. Peer review panel members are expected to be of the same caliber and stature as ISAC members. Thus, we used the ISAC rate of \$1,800/day for roughly a five-day period to estimate the stipend for serving as a PRRIP peer review panelist – three days to review document(s) in question and two days to compile comments, submit those comments to the Program, and discuss comments/questions with the other peer review panel members and Dr. Smith.

For FY24, estimated peer review expenses are:

Document	# Reviewers	Per Reviewer Cost (\$225/hr. x 8-hour day x 5 days)	Total Peer Review Panel Cost
Wet meadows hydrology data analysis report	3	\$9,000	\$27,000
Sediment augmentation experimental design/approach and effectiveness synthesis report	3	\$9,000	\$27,000
WC roost site selection analysis	3	\$9,000	\$27,000
FY24 Total			\$81,000

Notes on Cost – Publication

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 publish:

- Manuscript on Wet Meadows Hydrology based on Program research.
- Manuscript based on Sediment Augmentation Synthesis Report.
- Manuscript on Whooping Crane Riverine Roost Site Selection.
- Manuscript on Whooping Crane Diurnal Use Site Selection (Rerunning WEST Report analysis with refined landcover dataset from Baasch et al. 2022 Ecotope article).



For FY24, estimated publication expenses are:

Potential Manuscript	Author	Manuscript Type	Target Journal	FY24 Cost
Wet Meadows Hydrology	EDO	Hydrology, Groundwater Modeling	<i>TBD</i>	\$3,000
Sediment Augmentation Synthesis Report	EDO	Geomorphology	<i>Geomorphology</i>	\$3,000
Whooping Crane Riverine Roost Site Selection	EDO	Ecology	<i>TBD</i>	\$3,000
Whooping Crane Diurnal Use Site Selection	EDO	Ecology	<i>TBD</i>	\$3,000
Total				\$12,000

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

YEAR	BUDGET	BUDGET ADJUSTMENTS	EXPENDITURES
2024	\$45,000		

Task Description

In-person Science Plan Reporting Session in Omaha, NE, in February 2024 to discuss status of Science Plan implementation and annual State of the Platte Report. In-person ISAC summer meeting in Kearney, NE, in July 2024 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 FY24 costs include:

Expense Category	Estimated FY24 Cost
2024 Science Plan Reporting Session	
1 meeting over 3 days @ \$10,000/day (room rental, projector & screen rental, phone charges, refreshments, breakfast food, lunch food, evening meals, etc.), Omaha, NE	\$30,000
2024 ISAC Summer Meeting	
1 meeting over 3 days @ \$4,600/day (field visits, refreshments, meals, etc.), Kearney, NE	\$15,000
Total	\$45,000

General Notes on Meeting Costs

It is anticipated the 2024 Science Plan Reporting Session in Omaha, NE and the 2024 Summer ISAC 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.

These estimated costs are based on actual expenditures in FY23 for the Science Plan Reporting Session in Omaha, NE at the same location (Omaha Marriott) and for the 2023 Fall ISAC Meeting in Kearney, NE. The estimated cost for the 2024 Science Plan Reporting Session is also based on input from the contracting entity at the Omaha Marriott, who suggested an estimate of \$25,000. That estimate is based on recent price increases for food, beverages, and facilities over and above the final bill for the 2023 Science Plan Reporting Session which was \$21,000.

Products

- PRRIP responses to ISAC comments/questions via the EDO.
- Updated Science Plan implementation and evaluation approaches based on ISAC feedback.