

Water Supply Reserve Fund – Grant and Loan Program
Water Activity Summary Sheet
March 20-21, 2019
Agenda Item 24(k)

Applicant & Grantee: Ducks Unlimited

Water Activity Name: North Park Irrigated Meadows Conservation Program - Phase 2

Water Activity Purpose: Multipurpose (Env&Rec/Ag/Ed&Outreach) Implementation

County: Jackson

Drainage Basin: Gunnison

Water Source: North Platte River tributaries

Amount Requested: \$148,698 North Platte Basin Account
\$301,902 Statewide Account
\$450,000 Total Request

Matching Funds: Applicant Match & 3rd Party (cash & in-kind) = \$474,000

- 105% of the Statewide Account request (meets 10% min)

Basin Account Match = \$148,698

- 49% of the Statewide Account Match (meets 10% min)

Total Match (Applicant & Basin Account) = \$622,698

- 206% of the Statewide Account request (meets 50% min)

Staff Recommendation:
Staff recommends approval of up to \$148,698 from the North Platte Basin Account, and \$301,902 from the Statewide Account to help fund the project titled: North Park Irrigated Meadows Conservation Program - Phase 2.

Water Activity Summary: WSRF grant funds, if approved, will assist Ducks Unlimited to restore and enhance 1,000 acres of irrigated meadows in the North Platte Basin of Jackson County, Colorado. We are requesting \$450,600 to fund the rehabilitation of four irrigation ditches in North Park and to fund the assessment of the benefits our work has on irrigated lands and waterfowl populations that depend upon them.

In the first year of this project, DU will finalize plans, specifications and permits for four irrigation system rehabilitation projects. Also, DU will partner with Colorado State University and Colorado Parks and Wildlife to perform pre-project assessments on project tracts to gather baseline data on irrigated land quality and associated bird use. This assessment work will be accomplished by monitoring of vegetation quality on the irrigated lands and tracking annual bird use of those areas. In the second and third year of the project, DU will complete construction on the headgates, conveyance systems and water-control structures on the four ditches that will allow irrigators to more efficiently use North Platte Basin water supplies and avoid abandonment of irrigation water rights. Those years will also see continued assessment of the quality of irrigated lands in the Basin and the response of vegetation and birds to the rehabilitation work.

In the final year of the project, DU will work with CSU to complete the project assessment work by performing vegetation and bird surveys on the properties. A critical component of this work will be the reporting of assessment findings to the local and statewide water-user community. Based on assessment findings, we will develop and publish a set of Best Management Practices for irrigators of hayland and pasture interested in providing habitat for wildlife.

Discussion: This effort will assist the North Platte Basin Roundtable (NPBRT) achieve several of their stated goals (#3, #4, and #5) as called for in the North Platte Basin Implementation Plan, and as indicated in the NPBRT Chair's recommendation letter, as well as assisting the state achieve several of the goals as called for in Chapter 10, Section 10.3 of Colorado's Water Plan, such as; maintaining agricultural productivity; improving watershed health, environment and recreation; and promoting education, outreach and innovation.

Issues/Additional Needs: CWCB staff will work cooperatively with the applicant/grantee to finalize the Statement of Work, otherwise no issues or additional needs have been identified.

Eligibility Requirements: The application meets requirements of all eligibility components: General Eligibility, Entity Eligibility, Water Activity Eligibility, and Eligibility Based on Match Requirements.

Evaluation Criteria: This activity has undergone review and evaluation and staff has determined that it satisfies the Evaluation Criteria. Please refer to Basin Roundtable Chair's Recommendation Letter and the WSRF Grant Application for applicant's detailed response.

Funding Summary/Matching Funds:

<u>Funding Source</u>	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>	<u>Status</u>
Ducks Unlimited	\$151,000	\$0	\$151,000	Secured
Colorado State University	\$71,000	\$0	\$71,000	Secured
Colorado Parks and Wildlife	\$252,000	\$0	\$252,000	Secured
Sub-total	\$474,000	\$0	\$474,000	
WSRF North Platte Basin Account	\$148,698	\$0	\$148,698	Secured
Sub-total	\$622,698	\$0	\$622,698	
WSRF Statewide Account	\$301,902	\$0	\$301,902	
Total Project Costs	\$924,600	\$0	\$924,600	

CWCB Project Manager: Craig Godbout

NORTH PLATTE BASIN ROUNDTABLE

Wm. Kent Crowder, Chair
P.O. Box 1019
Walden, Colorado 80480

FAX (970) 723-4706
(970) 723-4660

September 27, 2018

Mr. Craig Godbout, Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1313 Sherman Street, Suite 718
Denver, CO 80203

Re: Water Supply Reserve Fund Grant Application for the North Park Irrigated Meadows Conservation Program-Phase II Project submitted by Ducks Unlimited, Inc. – Requesting \$148,698 from Basin Account Funds and \$301,902 from Statewide Account

Dear Mr. Godbout:

This letter is to advise you that the WSRF grant application submitted by Ducks Unlimited, Inc. requesting \$148,698 from Basin Account Funds and \$301,902 from Statewide Account for the North Park Irrigated Meadows Conservation Program-Phase II Project was reviewed by the North Platte Basin Roundtable and was approved by a majority vote of the voting members present at the North Platte Basin Roundtable meeting held on the 25th day of September 2018. Seven voting members of the Roundtable voted to approve funding for the project and two members voted against funding the project. Mike Allnutt, Agricultural Representative, and Carl Trick II, Jackson County Water Conservancy District Representative voted to not approve the proposed allocation of funds. Mr. Allnut felt that the conceptual improvements to the Jennie Ditch and the Lost Creek Ditch/Darcy Reservoir project could not be completed successfully and Carl Trick II felt that plans were poorly developed and that all of the projects were speculative. Mr. Trick also indicated that he did not approve of Water Supply Reserve Funds being spent on projects located on State Land Board lands or on U.S.F.W.S. refuge lands.

The North Platte Basin Roundtable voting members that voted in favor of the funding supported the project because the work outlined in the application directly addresses three (#3, #4 and #5) of the Basin Goals identified in the North Platte Basin Implementation Plan. The project also supports several measurable objectives under Section 10.3 (Critical Action Plan) of the Colorado Water Plan as described in the application. The project will also help quantify the mutual benefits of flood irrigation to duck populations in the Basin. This knowledge will be put to practical use by the publishing of Best Management Plans for waterfowl on irrigated lands.

Please feel free to call me with any questions that you may have regarding the North Platte Basin Roundtable meeting or our level of support for this project.

Sincerely,



Wm. Kent Crowder, Chair

cc: Ducks Unlimited, Inc.

Colorado Water Conservation Board
Water Supply Reserve Fund Grant Application

Instructions		
<p>All WSRF grant applications shall conform to the current 2016 WSRF Criteria and Guidelines.</p> <p>To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) AND the Colorado Water Conservation Board (CWCB). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCB meets bimonthly according to the schedule on page 2 of this application.</p> <p>If you have questions, please contact the current CWCB staff Roundtable liaison:</p>		
Arkansas Ben Wade ben.wade@state.co.us 303-866-3441 x3238	Gunnison North Platte South Platte Yampa/White Craig Godbout craig.godbout@state.co.us 303-866-3441 x3210	Colorado Metro Rio Grande Southwest Megan Holcomb megan.holcomb@state.co.us 303-866-3441 x3222

WSRF Submittal Checklist (Required)	
✓	I acknowledge this request for funding was recommended for CWCB approval by the sponsoring Basin Roundtable(s).
✓	I acknowledge I have read and understand the 2016 WSRF Criteria and Guidelines .
✓	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract . ⁽¹⁾
Exhibit A	
✓	Statement of Work ⁽²⁾ (Word – see Exhibit A Template)
✓	Budget & Schedule ⁽²⁾ (Excel Spreadsheet – see Exhibit A Template)
✓	Letters of Matching and/or Pending 3 rd Party Commitments ⁽²⁾
Exhibit C	
✓	Map ⁽²⁾
	Photos/Drawings/Reports
✓	Letters of Support
	Certificate of Insurance ⁽³⁾ (General, Auto, & Workers' Comp.)
Contracting Documents	
	Certificate of Good Standing ⁽³⁾
	W-9 ⁽³⁾
	Independent Contractor Form ⁽³⁾ (If applicant is individual, not company/organization)
	Electronic Funds Transfer (ETF) Form ⁽³⁾

(1) Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

(2) Required with application if applicable.

(3) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
July	June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	March 2019
Desired Notice to Proceed Date:	May 2019

Water Activity Summary		
Name of Applicant	Ducks Unlimited, Inc.	
Name of Water Activity	North Park Irrigated Meadows Conservation Program - Phase II	
Approving Roundtable(s)	Basin Account Request(s) ⁽¹⁾	
North Platte Basin Roundtable	\$148,698	
Basin Account Request Subtotal	\$148,698	
Statewide Account Request ⁽¹⁾	\$301,902	
Total WSRF Funds Requested (Basin & Statewide)	\$450,600	
Total Project Costs	\$924,600	

(1) Please indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information	
Name of Grantee(s)	Ducks Unlimited, Inc.
Mailing Address	1825 Sharp Point Drive, Suite 118, Fort Collins, Colorado, 80525
FEIN	13-5643799
Grantee's Organization Contact ⁽¹⁾	Jason A. Roudebush
Position/Title	Water Resource Specialist
Email	jroudebush@ducks.org
Phone	970.231.8317
Grant Management Contact ⁽²⁾	<u>Nancy Jensen</u>
Position/Title	Project Coordinator

Grantee and Applicant Information	
Email	njensen@ducks.org
Phone	701.355.3514
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

(1) Person with signatory authority

(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee	
Provide a brief description of the grantee's organization (100 words or less).	
<p>Ducks Unlimited, Inc. is a member organization structured under section 501(c)(3). The organization was created in 1937 for the conservation of North America's waterfowl and its habitat. Ducks Unlimited conserves, restores, and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. DU is the world's leader in wetland conservation, having conserved more than 14 million acres across the continent. DU's Colorado Field Office in Fort Collins employs experts in biology, engineering, hydrology, water law, agricultural economics, and land protection. Our experience in the region, network of landowners and partners, fundraising capabilities, and diverse skillsets position enable DU to effectively deliver multi-beneficial projects in this important focus landscape.</p>	
Type of Eligible Entity (check one)	
<input type="checkbox"/>	Public (Government): municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
<input type="checkbox"/>	Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
<input type="checkbox"/>	Private Incorporated: mutual ditch companies, homeowners associations, corporations
<input type="checkbox"/>	Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
<input checked="" type="checkbox"/>	Non-governmental organizations: broadly, any organization that is not part of the government
<input type="checkbox"/>	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
<input type="checkbox"/>	Study
<input checked="" type="checkbox"/>	Implementation

Category of Water Activity (check all that apply)

✓	Nonconsumptive (Environmental)	
✓	Nonconsumptive (Recreational)	
✓	Agricultural	
	Municipal/Industrial	
	Needs Assessment	
✓	Education & Outreach	
	Other	Explain:

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Jackson County, Colorado
Latitude	40.666459
Longitude	-106.342744

Water Activity Overview
<p>Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain. The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.</p>
<p>DU proposes the second phase of its irrigated meadows conservation program in the North Platte Basin of Colorado. We continue our work of rehabilitating irrigated lands in North Park that provide habitat to waterfowl. Four ditches in the Basin that need infrastructure repair have been identified. Upon completion of the construction work we will have conserved over 1,000 acres of irrigated meadow and wetlands that provide habitat for ducks. Project outcomes will be evaluated by DU, CSU and CPW to determine the impact of the work on irrigated land quality and waterfowl use. Project assessments will be used to guide future multi-benefit projects in the Basin and elsewhere in Colorado, provide Best Management Practices for waterfowl on irrigated lands, and to provide evidentiary proof of habitat gains to private, state and federal funders of conservation programs targeting irrigated lands. WSRF funds will be used to pay for DU staff, contractor charges for both construction and assessment tasks, and materials and equipment for both the construction and assessment tasks included in this proposal. This work directly addresses three (#3, #4 and #5) of the Basin Goals identified in the North Platte Basin Implementation Plan.</p>

Measurable Results	
To catalog measurable results achieved with WSRF funds please provide any of the following values.	
	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive

Measurable Results		
16	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
1,000	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved	
2	Other	Explain: Sets of Best Management Practices for waterfowl in irrigated lands.

Water Activity Justification
<p>Provide a description of how this water activity supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the respective Roundtable Basin Implementation Plan and Education Action Plan ⁽¹⁾. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).</p> <p>For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in 2016 WSRF Criteria and Guidelines).</p> <p>This proposal addresses three of the eight goals instituted by the North Platte Basin Implementation Plan published April 17, 2015.</p> <p>Our work will: <i>'Continue to restore, maintain and modernize critical water infrastructure to preserve current uses and increase efficiencies.'</i> (p.21) We will do this through the installation of at least four modern diversions on the Jennie Ditch, the Newport/Walker Ditch, the Sherman Ditch and the Hamilton Ditch. These headgates will be fish-friendly structures that will allow for the diversion of the full decreed amounts of water under prior appropriation and the maintenance of irrigated meadows flooded by these ditch systems. We will also install water-control structures and improved conveyance (ditches, culverts and pipeline) on these systems as well as the water infrastructure serving the Lost Creek Ditch and Darcy Reservoir. Through this work we will rehabilitate and maintain irrigation on at least 1,000 acres of pasture and hayland in the Park.</p> <p>Our work will: <i>'Maintain healthy rivers and wetlands through the strategic implementation of projects that meet prioritized environmental and recreational needs.'</i> (p.21-22) These same irrigated meadows provide habitat to one of the most important waterfowl populations in the State of Colorado. The Irrigated Meadow Conservation Program continued under this proposal is specifically identified in the BIP as addressing this goal. Our work will conserve these habitats for the 30-year term of our Site Conservation Agreements with landowners. Moreover, the assessment work included in this proposal will provide powerful evidence as to the relationship between waterfowl populations and irrigated lands in the Park. This information will inform future conservation work, environmental planning and recreational opportunity in North Park. This will address the consumptive and nonconsumptive users targeted by the NPBIP.</p> <p>Our work will: <i>'Describe and quantify the environmental and recreational benefits of agriculture use.'</i> (p. 23-24) The project assessment work funded under this proposal will evaluate under a powerful, quantitative research program the mutual benefits that traditional use of water by irrigators may provide to duck populations in the Basin. It will identify how and quantify how much those birds rely upon working agricultural lands and their beneficial use of water in different stages of their life cycle in North Park. This knowledge will be put to practical use by the publishing of Best Management Plans for waterfowl in irrigated lands, it will be put to financial use to further opportunities for raising</p>

Water Activity Justification

cost-share dollars for multi-benefit projects, and it will allow conservation practitioners to better administer conservation agreements targeting waterfowl.

Our work will also further the goals outlined in the 2016-2019 North Platte Basin Roundtable Education Action Plan. The outreach materials published as a result of this proposal will be used to: ‘help the roundtable outreach to potential project proponents for the new projects and methods needed to meet future water needs to determine if they are interested in being partners or the lead entity. The North Platte Basin Implementation Plan indicates the components and activities of the EAP will continue to be utilized to facilitate public outreach and education related to the North Platte Basin.’ In addition to the number of reports submitted to our project landowners and the Basin Roundtable members, we will publish at least two articles in Basin-oriented media (eg. The Jackson County Star) and at least one article in statewide media (eg. Headwaters) that summarizes the work performed here and how waterfowl populations rely upon irrigated lands to meet life cycle needs.

This project supports several measurable objectives under Section 10.3 (Critical Action Plan) of the Colorado Water Plan. Specifically, following is a description of critical action items this project will contribute toward:

10.3.D Agriculture by maintaining ‘Colorado’s agricultural productivity, support of rural economies, and food security.’ (p. 10-10). Our work specifically addresses the second and third critical agricultural action items listed in this part of the plan by providing financial and technical assistance to both planning and implementation efforts to update and improve ageing infrastructure.

10.3.E Storage by producing more information on the potential beneficial impacts additional storage projects may have on waterfowl populations in the North Platte Basin and in other similar basins with irrigated meadows in Colorado. Quantitative, research-based evaluation of the relationship between waterfowl and irrigation projects in North Park could be used to ‘Advocate for more effective and efficient permitting in which state agencies work together to complete their work...’ (p. 10-11). The Best Management Practices produced by this work will inform the permitting and mitigation processes called for in the fourth Critical Storage and Permitting action highlighted in this section.

10.3.F Watershed Health, Environment and Recreation by providing wetland and wet meadow habitat to a host of avian, mammalian and amphibian species that rely on these habitats to survive. The work we propose will have positive benefits on populations of Northern Pintail, Lesser Scaup, Sandhill Crane, Greater Sage Grouse, and Northern Leopard Frog amongst many others. These are all species identified in Colorado Parks & Wildlife’s State Wildlife Action Plan as species of conservation concern. Our work will contribute to the ‘restoration, recovery, and resiliency of endangered, threatened and imperiled aquatic and riparian dependent species...’ (p. 10-12) by rehabilitating and maintaining over 1,000 acres of wet meadow habitat for at least 30 years.

10.3.H Education, Outreach and Innovation by providing both Basin and Statewide populations with popular media relating how irrigated lands contribute to populations of waterfowl in North Park and Colorado generally. This work will enable the citizens of Colorado to better apprehend how water use in rural areas of the State like North Park may impact their recreation and enjoyment of wildlife in other parts of the state. This will ‘Inform Coloradoans about water issues to encourage engagement and innovation in determining Colorado’s water future.’ (p. 10-13)

(1) Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Matching Requirements: Basin Account Requests

Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a **letter of commitment** as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity’s letterhead). Attach additional sheet if necessary.

Matching Requirements: Basin Account Requests	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
Colorado Parks & Wildlife	\$252,000 (cash)
Colorado State University	\$71,000 (cash)
Ducks Unlimited, Inc.	\$151,000 (cash)
Total Match	\$474,000 (cash)
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
Statewide Account grant requests require a 50% match as described in the 2016 WSRF Criteria and Guidelines. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3 rd party) and shall be accompanied by a letter of commitment . Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
Colorado Parks & Wildlife	\$252,000 (cash)
Colorado State University	\$71,000 (cash)
Ducks Unlimited, Inc.	\$151,000 (cash)
North Platte Basin Roundtable	\$148,698 (cash)
Total Match	\$622,698 (cash)
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

Related Studies
Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.
<p>Arnold, T.W., A.M. Pagano, J.H. Devries, R.B. Emery, D.W. Howerter, B.L. Joynt. 2008. Social indices of breeding productivity in parkland mallards. The Journal of Wildlife Management, 72: 224-230.</p> <p>Blevins, S.C. 2015. Valuing the non-agricultural benefits of flood irrigation in the upper Green River Basin. M.S. Thesis, University of Wyoming.</p> <p>Brown, P.W. 2008. Flood vs. pivot irrigation for forage crops: What are the advantages and disadvantages? In Proceedings of the 2008 California Alfalfa & Forage Symposium and Western Seed Conference, San Diego, CA, 2-4 December, 2008. University of California, Davis, CA.</p> <p>Colorado Division of Wildlife. 1989. Colorado statewide waterfowl management plan 1989 2003. Unpublished report, Fort Collins, Colorado, USA.</p> <p>Devineau, Olivier & Kendall, William & F. Doherty, Paul & Shenk, Tanya & White, Gary & Lukacs, Paul & P. Burnham, Kenneth. (2014). Increased Flexibility for Modeling Telemetry and Nest-Survival Data Using the Multistate Framework. The Journal of Wildlife Management, 78:224-230.</p> <p>Eldeiry, A.A., R.M Waskom, A. Elhaddad. 2015. Using remote sensing to estimate evapotranspiration of irrigated crops under flood and sprinkler irrigation systems. Irrigation and Drainage, 65:85-97.</p>

Related Studies

Gilbert, D.W., D.R. Anderson, J.K. Ringelman, and M.R. Szymczak. 1996. Response of nesting ducks to habitat and management on the Monte Vista National Wildlife Refuge, Colorado. *Wildlife Monographs* 131:3-44.

Kirkman, R. L. 1956. An evaluation of waterfowl production of lakes in North Park, Colorado, 1964 and 1955. Master's thesis, Colorado A&M College, Fort Collins.

Lemly, J., and L. Gilligan. 2012. North Platte River Basin wetland profile and condition assessment. Colorado Natural Heritage Program, Colorado State University, Fort Collins, Colorado.

Petrie, M., J. Vest, D. Smith. 2013. Chapter 4: Waterfowl *in* Intermountain West Implementation Plan: Strengthening science and partnerships. Intermountain West Joint Venture, Missoula, MT.

Runge, J. P. 2011. Intermountain duck habitat management pilot study. Unpublished annual progress report, Colorado Parks and Wildlife, Fort Collins, Colorado, USA.

Sanders, R. E. 1997. Montane wetland characteristics and waterfowl use on the Routt National Forest, Colorado. Thesis, University of Missouri-Columbia, Missouri, USA.

Setash, C.M. 2018. Cinnamon Teal Breeding Ecology in the San Luis Valley of Colorado. Unpublished Master's Thesis. Colorado State University. Fort Collins, CO.

Szymczak, M.R. 1986. Characteristics of duck populations in the intermountain parks of Colorado. Colorado Division of Wildlife Technical Publication No. 35, Denver, Colorado, USA.

Previous CWCB Grants

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order

Applicant Name	Water Activity Name	Approving Roundtable	CWCB Date	Contract #
Ducks Unlimited, Inc.	Sambrito Wetlands	Southwest	3/18	CTGG1 2018-2001
Ducks Unlimited, Inc.	Narrows Feasibility Study	South Platte	12/15	CTGG1 2016-1148
Ducks Unlimited, Inc.	Water Development Feasibility - State Land Board	South Platte	12/13	OE PDA 14IBC00027
Ducks Unlimited, Inc.	Prewitt Reservoir Wetland Partnership	South Platte	9/13	POGG1 2015-145
Ducks Unlimited, Inc.	FLEX Water Market Education and Implementation	South Platte	7/13	C154227
Ducks Unlimited, Inc.	South Platte Phreatophyte Control	South Platte	7/12	OE PDA 13IBC000004
Ducks Unlimited, Inc.	Decision Support System Model for Recharge	South Platte	6/12	OE PDA 12IBC000023
Ducks Unlimited, Inc.	NP Irrigated Meadow Conservation Program	North Platte	6/10	OE PDA 10000000126
Ducks Unlimited, Inc.	Weld County School District Wetland Partnership	South Platte	2/9	OE PDA 09000000063
Ducks Unlimited, Inc.	Central South Platte Wetland Partnership	South Platte	9/9	C150454
Ducks Unlimited, Inc.	Lower South Platte Water Protection	South Platte	4/9	09 PDA 00097
Ducks Unlimited, Inc.	South Platte Recharge Project	South Platte	4/8	08 PDA 00094

Tax Payer Bill of Rights

The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

Not Applicable



Last Update: January 9, 2018

Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	9/5/2018
Water Activity Name:	North Park Irrigated Meadows II
Grant Recipient:	Ducks Unlimited, Inc.
Funding Source:	North Platte Basin Account: \$148,698, Statewide Account: \$301,902
Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for.	
<p>DU proposes the second phase of its irrigated meadows conservation program in the North Platte Basin of Colorado. We continue our work of rehabilitating irrigated lands in North Park that provide habitat to waterfowl. Four ditches in the Basin that need infrastructure repair have been identified. Upon completion of the construction work we will have conserved over 1,000 acres of irrigated meadow and wetlands that provide habitat for ducks. Project outcomes will be evaluated by CSU and CPW to determine the impact of the work on irrigated land quality and waterfowl use. Project assessments will be used to guide future conjunctive use projects in the Basin and elsewhere in Colorado, provide Best Management Practices for waterfowl on irrigated lands, and to provide evidentiary proof of habitat gains to private, state and federal funders of conservation programs targeting irrigated lands. WSRF funds will be used to pay for DU staff, contractor charges, materials and equipment for both the construction and assessment tasks included in this proposal. This work directly addresses three (#3, #4 and #5) of the Basin Goals identified in the North Platte Basin Implementation Plan.</p>	
Objectives: (List the objectives of the project)	
<ol style="list-style-type: none">1.) 1,000 acres of irrigated hay and pastureland in the North Platte Basin of Jackson County, CO will be rehabilitated and maintained for at least 30 years;2.) Breeding and non-breeding waterfowl populations in North Park will enjoy the persistence and quality of these irrigated habitats in the Basin;3.) Four landowners in the Basin will continue to enjoy the economic and ecological production these irrigated meadows provide; and4.) A four-year assessment of irrigated meadow rehabilitation will provide landowners, water resource conservationists and the general public with a powerful evaluation of waterfowl use of working irrigated lands and their response to rehabilitation work. This will lead to:<ol style="list-style-type: none">a. A better targeting of wildlife/irrigation conjunctive use projects in North Park and elsewhere in irrigated landscapes of Colorado;b. The publication of best management practices for irrigated lands and waterfowl available to landowners and practitioners working in these types of landscapes. These BMPs can be used to better craft conservation agreements on working lands in the State;c. The promotion of this work to private, state and federal funding entities that need evidentiary proof of waterfowl benefits to fund working lands projects maintaining the agricultural and economic productivity of private lands.	

Last Update: January 9, 2018

Tasks	
Provide a detailed description of each task using the following format:	
<u>Task 1 – Project Feasibility, Design, and Permitting</u>	
Description of Task:	
At least four irrigation and/or storage projects that flood irrigated pasture or hayland located within the North Platte Basin of Jackson County, Colorado will be identified for rehabilitation and/or expansion. Projects will be designed by Ducks Unlimited bioengineering teams such that the extent and quality of irrigated lands will be maintained and/or expanded (as allowed under decreed water rights). This task will complete conceptual planning on these four projects, complete the development of professional plansets stamped by our certified engineer, and the fulfillment of all required permits.	
Method/Procedure:	
DU staff will perform surveys of the identified project tracts delineating the topography of critical areas, facilities and infrastructure. Based on this surface model a plan of irrigation enhancement will be developed identifying what structures may be rehabilitated and what new structures need to be installed to achieve desired levels of function and efficiency. Using these plans, requisite local, state, and federal permits will be pulled allowing the work to proceed. Once permitted, DU staff will complete a final planset detailing project construction elements, standards and specifications. DU staff will also execute our standard 30-year Site Conservation Agreements with the landowners, ensuring benefits persist and lands are irrigated when water is physically and legally available.	
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)	
<ol style="list-style-type: none"> 1.) Four irrigation/storage conceptual plans in the North Platte Basin of Jackson County, CO; 2.) Four stamped plansets of irrigation/storage improvement projects; 3.) Four 30-year Site Conservation Agreements governing project delivery and project maintenance. 	
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)	
<ol style="list-style-type: none"> 1.) A project report summarizing the work and materials produced in this Task; 2.) A complete set of stamped plansets for identified projects; and, 3.) A copy of executed Site Conservation Agreements. 	

Tasks	
Provide a detailed description of each task using the following format:	
<u>Task 2 – Pre-project Assessments</u>	
Description of Task:	
DU, Colorado State University and Colorado Parks & Wildlife staff will perform avian surveys and, on identified project tracts with landowner permission, vegetation surveys prior to project construction to document baseline habitat condition and bird use of those areas. These surveys allow us to estimate the impact of project development on irrigated meadows and explore how waterfowl use of these habitats changes within and between seasons and with project improvements. Baseline data will greatly increase the power of any conclusions developed under our project assessments.	
Method/Procedure:	

Last Update: January 9, 2018

Tasks
<p>We will conduct counts of migrating waterfowl from early April through late May across public wetlands and private hayfields for which landowners have provided permission. We will use these counts to assess the population abundance of all waterfowl species using the North Platte Basin as a stopover location throughout the spring. Continuing these counts through May will then allow us to evaluate waterfowl abundance once migration comes to an end and only breeding birds remain.</p> <p>We will monitor duck nests and broods throughout the basin during the breeding seasons to evaluate the impacts of different water management strategies and agricultural practices on waterfowl production. We will trap ducks throughout the spring using decoy traps and baited swim-in traps in order to attach GPS sensors. GPS sensors will enable us to track birds to nesting sites across available habitat types and to monitor hen survival, nest success, and subsequent brood movements and brood survival throughout the season; all with minimal impact to vegetation on the land. We will augment this sample with other nests found randomly on public and private wetlands while traveling on foot.</p> <p>We will compare estimates of breeding duck density, nest survival, and duckling production across treatment types (i.e. fields with refurbished flooding infrastructure, control fields where infrastructure has not yet been refurbished, and other types of non-agricultural habitat) both before and after the repairs take place. If permitted by landowners, we will sample the biomass and Nitrogen content of forage dry matter in hayfields with different treatments (at very small scales) before they are cut (but we will guarantee that landowner and field-specific information associated with each sample will not be shared under any circumstances). We will additionally sample water temperatures entering fields relative to return flow temperatures (which can actually be cooler and beneficial for fisheries), seasonal changes in water table, and seasonal changes in soil moisture of fields exposed to each treatment type.</p>
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
1.) A report on pre-project avian use and vegetative condition on at least four irrigated meadow project sites where project development is occurring.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
1.) A report on pre-project avian use and vegetative condition on at least four irrigated meadow project sites where project development is occurring.

Tasks
Provide a detailed description of each task using the following format:
<u>Task 3 – Project Construction (2020)</u>
Description of Task:
<p>DU staff will put out to bid, contract, manage construction and complete work on at least two irrigated meadows projects within the North Platte Basin of Jackson County, CO. This will include the Newport/Walker Ditch Rehabilitation on Arapaho NWR and the Lost Creek Ditch/Dryer Reservoir Rehabilitation on the Parkview Ranch. The intent of this task is to secure irrigation on at least 500 acres of irrigated meadows and maintain storage of water in at least 30 acres of reservoir that also serves as breeding waterfowl habitat. Rehabilitation will proceed through the installation of fish-friendly, beaver-proof headgates, the placement of new diversion structures, and the re-building of ditch, culvert and pipeline structures such that water losses in conveyance are minimized and irrigated lands receive as much water as allowed.</p>
Method/Procedure:
<p>DU has a strict, vetted bidding process that ensures equitability, objectiveness, and cost-savings. DU engineers will be on-site to oversee the implementation and delivery of the proposed enhancements to ensure they are consistent with the final construction plan set.</p>

Last Update: January 9, 2018

Tasks
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
At least 500 acres of rehabilitated irrigated meadow and storage on two tracts in the North Platte Basin of Jackson County, CO. These acres will be managed under two 30-year Site Conservation Agreements that allow for project assessment evaluating impact on waterfowl use and vegetation condition.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Engineering plans will be made available to the CWCB. Once constructed, DU will summarize the work completed in a formal report, which will include pre-, during-, and post-construction photos. CWCB staff will also have the opportunity for a site visit at all phases of production.

Tasks
Provide a detailed description of each task using the following format:
<u>Task 4 – Post-project Assessments & Outreach (Year 1)</u>
Description of Task:
DU, CSU and CPW staff will continue avian and vegetation surveys described in Task 2 on project sites, post-construction. After this survey work is complete, CSU staff will provide landowners and the North Platte Basin Roundtable with a summary of their findings.
Method/Procedure:
Methods and procedures will follow those summarized in Task 2.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<ol style="list-style-type: none"> 1.) A general report on waterfowl use and vegetation condition in the North Platte basin; 2.) A set of at least four landowner reports summarizing findings at the project tract scale; and, 3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
<ol style="list-style-type: none"> 1.) A report on avian use and vegetation condition; 2.) A set of at least four landowner reports summarizing findings at the project tract scale; and, 3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments.

Tasks
Provide a detailed description of each task using the following format:
<u>Task 5 Project Construction (2021)</u>
Description of Task:
DU staff will put out to bid, contract, manage construction and complete work on at least two irrigated meadows projects within the North Platte Basin of Jackson County, CO. This will include the Jennie Ditch Rehabilitation on the Little Grizzly Creek Ranch and the Sherman Ditch/Hamilton Ditch Rehabilitation on the Sherman Ranch. The intent of this task is to secure irrigation on at least 500 acres of irrigated meadows. Rehabilitation will proceed through the installation of fish-friendly, beaver-proof headgates, the placement of new diversion structures, and the re-building of ditch, culvert and pipeline structures such that water losses in conveyance are minimized and irrigated lands receive as much water as allowed.
Method/Procedure:

Last Update: January 9, 2018

Tasks
DU has a strict, vetted bidding process that ensures equitability, objectiveness, and cost-savings. DU engineers will be on-site to oversee the implementation and delivery of the proposed enhancements to ensure they are consistent with the final construction plan set.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
At least 500 acres of rehabilitated irrigated meadow on two tracts in the North Platte Basin of Jackson County, CO. These acres will be managed under two 30-year Site Conservation Agreements that allow for project assessment evaluating impact on waterfowl use and vegetation condition.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Engineering plans will be made available to the CWCB. Once constructed, DU will summarize the work completed in a formal report, which will include pre-, during-, and post-construction photos. CWCB staff will also have the opportunity for a site visit at all phases of production.

Tasks
Provide a detailed description of each task using the following format:
<u>Task 6 – Post-project Assessments & Outreach (Year 2)</u>
Description of Task:
DU, CSU and CPW staff will continue avian and vegetation surveys described in Task 2 on project sites, post-construction. After this survey work is complete, CSU staff will provide landowners and the North Platte Basin Roundtable with a summary of their findings. CSU staff will also produce at least one outreach article or other item suitable for media summarizing project findings in light of the impact irrigated meadows in the North Platte Basin have on populations of waterfowl.
Method/Procedure:
Methods and procedures will follow those summarized in Task 2.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<ol style="list-style-type: none"> 1.) A general report on waterfowl use and vegetation condition in the North Platte basin; 2.) A set of at least four landowner reports summarizing findings at the project tract scale; 3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments; and, 4.) An article or other suitable media summarizing project findings regarding irrigated lands and waterfowl population dynamics.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
<ol style="list-style-type: none"> 1.) A general report on waterfowl use and vegetation condition in the North Platte basin; 2.) A set of at least four landowner reports summarizing findings at the project tract scale; 3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments; and, 4.) An article or other suitable media summarizing project findings regarding irrigated lands and waterfowl population dynamics.

Tasks
Provide a detailed description of each task using the following format:
<u>Task 7 – Post-project Assessments & Outreach (Year 3)</u>
Description of Task:



Last Update: January 9, 2018

Tasks
DU, CSU and CPW staff will continue avian and vegetation surveys described in Task 2 on project sites, post-construction. After this survey work is complete, CSU staff will provide landowners and the North Platte Basin Roundtable with a summary of their findings. CSU staff will produce at least two outreach articles or other item suitable for media summarizing project findings in light of the impact irrigated meadows in the North Platte Basin have on populations of waterfowl. At least one of these items will be targeted for media outlets within Jackson County. At least one other item will be targeted for general media outlets covering water and wildlife issues in the State of Colorado. DU and CSU staff will produce at least two sets of Best Management Practices to be distributed to landowners and conservation practitioners in the Basin and elsewhere in the state. These Best Management Practices will translate project assessment findings about waterfowl use and land productivity into prescriptions for management of irrigated lands similar to those included in the study.
Method/Procedure:
Methods and procedures will follow those summarized in Task 2.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<ol style="list-style-type: none">1.) A general report on waterfowl use and vegetation condition in the North Platte basin;2.) A set of at least four landowner reports summarizing findings at the project tract scale;3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments;4.) An article or other suitable media distributed within the North Platte Basin of Jackson County, CO summarizing project findings regarding irrigated lands and waterfowl population dynamics;5.) An article or other suitable media distributed to outlets serving the State of Colorado summarizing project findings regarding irrigated lands and waterfowl population dynamics; and,6.) Publish two sets of waterfowl management on irrigated lands Best Management Practices modules (one for pastureland and one for hayland).
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
<ol style="list-style-type: none">1.) A general report on waterfowl use and vegetation condition in the North Platte basin;2.) A set of at least four landowner reports summarizing findings at the project tract scale;3.) A report to the North Platte Basin Roundtable summarizing work completed and provisional findings of the project assessments;4.) An article or other suitable media distributed within the North Platte Basin of Jackson County, CO summarizing project findings regarding irrigated lands and waterfowl population dynamics;5.) An article or other suitable media distributed to outlets serving the State of Colorado summarizing project findings regarding irrigated lands and waterfowl population dynamics; and,6.) Publish two sets of waterfowl management on irrigated lands Best Management Practices modules (one for pastureland and one for hayland).



Last Update: January 9, 2018

Budget and Schedule

Exhibit B - Budget and Schedule: This Statement of Work shall be accompanied by a combined [Budget and Schedule](#) that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format. A separate excel formatted Budget is required for engineering costs to include rate and unit costs.

Reporting Requirements

Progress Reports: The grantee shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

Final Report: At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Performance Requirements

Performance measures for this contract shall include the following:

- (a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
- (b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.
- (c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
- (d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.



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Water Supply Reserve Fund

EXHIBIT B - BUDGET AND SCHEDULE - Direct & Indirect (Administrative) Costs

Prepared Date:	1/31/2019
Water Activity Name:	North Park Irrigated Meadows II
Grantee Name:	Ducks Unlimited, Inc.

<u>Task No.</u> ⁽¹⁾	<u>Description</u>	<u>Start Date</u> ⁽²⁾	<u>End Date</u>	<u>Matching Funds</u> (cash & in-kind) ⁽³⁾	<u>WSRF Funds</u> (Basin & Statewide Combined) ⁽³⁾	<u>Total (\$)</u>
1	Project Feasibility, Design and Permitting	5/1/2019	6/30/2020	50,000	52,000	102,000
2	Pre-project Assessments	5/1/2019	2/28/2020	81,000	85,000	166,000
3	Project Construction (2020)	1/1/2020	12/30/2020	50,000	50,000	100,000
4	Post-project Assessments & Outreach (Year 1)	3/1/2020	2/28/2021	81,000	92,000	173,000
5	Project Construction (2021)	1/1/2021	12/30/2021	50,000	50,000	100,000
6	Post-project Assessments & Outreach (Year 2)	3/1/2021	2/28/2022	81,000	92,000	173,000
7	Post-project Assessments & Outreach (Year 3)	3/1/2022	12/31/2022	81,000	22,000	103,000
8	Indirect Costs	5/1/2019	12/31/2022	-	7,600	7,600
Total				474,000	450,600	924,600

(1) The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

(2) Start Date for funding under \$100K - 45 Days from Board Approval; Start Date for funding over \$100K - 90 Days from Board Approval.

(3) Round values up to the nearest hundred dollars.

- Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

- NTP will not be accepted as a start date. Project activities may commence as soon as the grantee enters contract and receives formal signed State

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

- Additionally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution

- Standard contracting procedures dictate that the Expiration Date of the contract shall be 5 years from the Effective Date.



Colorado Water Conservation Board

**Water Supply Reserve Fund
Fair and Reasonable Bio-engineering Estimate**

Prepared Date: 1/31/2019
Water Activity Name: North Park Irrigated Meadows II
Grantee Name: Ducks Unlimited, Inc.

Bio-Engineering

Sub-task	Non-contract Personnel						Subcontracts		Project Total (\$)	Matching Funds (\$)	WSRF Funds (\$)
	Regional Engineer	Regional Biologist	Project Engineer	Surveyor	Hydrologist	Subtotal (\$)	Assessment Personnel	Subtotal (\$)			
	108	108	93	93	108		25				
	Estimated Hours						Estimated Cost per Task				
Task 1 - Project Feasibility, Design and Permitting											
Project Preliminary Reconnaissance and Scoping	80	80				17,000	80	2,000	19,000	10,000	9,000
Topographic Survey				300		28,000		-	28,000	10,000	18,000
Project Control	20	100			20	15,000		-	15,000	10,000	5,000
Project Design	64	24	14		18	13,000		-	13,000	10,000	3,000
Project Drafting	8		280			27,000		-	27,000	10,000	17,000
Task 3 - Project Construction (2020)											
Bid Package Preparation: Newport/Walker Ditch Rehabilitation	6					1,000		-	1,000	500	500
Bid Contracting: Newport/Walker Ditch Rehabilitation	6					1,000		-	1,000	500	500
Construction Management: Newport/Walker Ditch Rehabilitation	2		4	30		3,000		-	3,000	1,500	1,500
Project Evaluation: Newport/Walker Ditch Rehabilitation	4	4				1,000		-	1,000	500	500
Bid Package Preparation: Lost Creek Ditch/Dryer Reservoir Rehabilitation	6					1,000		-	1,000	500	500
Bid Contracting: Lost Creek Ditch/Dryer Reservoir Rehabilitation	6					1,000		-	1,000	500	500
Construction Management: Lost Creek Ditch/Dryer Reservoir Rehabilitation	2		4	30		3,000		-	3,000	1,500	1,500
Project Evaluation: Lost Creek Ditch/Dryer Reservoir Rehabilitation	4	4				1,000		-	1,000	500	500
Task 5 - Project Construction (2021)											
Bid Package Preparation: Sherman Ditch/Hamilton Ditch Rehabilitation	6					1,000		-	1,000	500	500
Bid Contracting: Sherman Ditch/Hamilton Ditch Rehabilitation	6					1,000		-	1,000	500	500
Construction Management: Sherman Ditch/Hamilton Ditch Rehabilitation	2		4	30		3,000		-	3,000	1,500	1,500
Project Evaluation: Sherman Ditch/Hamilton Ditch Rehabilitation	4	4				1,000		-	1,000	500	500
Bid Package Preparation: Jennie Ditch Rehabilitation	6					1,000		-	1,000	500	500
Bid Contracting: Jennie Ditch Rehabilitation	6					1,000		-	1,000	500	500
Construction Management: Jennie Ditch Rehabilitation	2		4	30		3,000		-	3,000	1,500	1,500
Project Evaluation: Jennie Ditch Rehabilitation	4	4				1,000		-	1,000	500	500
TOTAL						124,000			126,000	62,000	64,000



Colorado Water Conservation Board

**Water Supply Reserve Fund
Fair and Reasonable Construction Estimate**

Prepared Date: 1/31/2019
Water Activity Name: North Park Irrigated Meadows II
Grantee Name: Ducks Unlimited, Inc.

Construction

<i>Sub-task</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost (\$)</i>	<i>Total Cost (\$)</i>	Matching Funds (\$)	WSRF Funds (\$)
Task 3 - Project Construction (2020)						
Mobilization & Site Preparation: Newport/Walker Ditch Rehabilitation	Lump Sum	1	7,000	7,000	4,000	3,000
Earth-moving & Embankments: Newport/Walker Ditch Rehabilitation	Cubic Yards	9,500	2	19,000	4,000	15,000
Water-control Structures: Newport/Walker Ditch Rehabilitation	Each	1	7,500	7,500	4,000	3,500
Water Conveyance: Newport/Walker Ditch Rehabilitation	Linear Feet	600	12	7,200	4,000	3,200
Erosion Control: Newport/Walker Ditch Rehabilitation	Cubic Yards	30	200	6,000	4,000	2,000
Mobilization & Site Preparation: Lost Creek Ditch/Dryer Reservoir Rehabilitation	Lump Sum	1	7,000	7,000	5,000	2,000
Earth-moving & Embankments: Lost Creek Ditch/Dryer Reservoir Rehabilitation	Cubic Yards	8,000	2	16,000	7,000	9,000
Water-control Structures: Lost Creek Ditch/Dryer Reservoir Rehabilitation	Each	1	7,500	7,500	5,000	2,500
Water Conveyance: Lost Creek Ditch/Dryer Reservoir Rehabilitation	Linear Feet	400	12	4,800	2,000	2,800
Erosion Control: Lost Creek Ditch/Dryer Reservoir Rehabilitation	Cubic Yards	30	200	6,000	5,000	1,000
Task 5 - Project Construction (2021)						
Mobilization & Site Preparation: Sherman Ditch/Hamilton Ditch Rehabilitation	Lump Sum	1	7,000	7,000	4,000	3,000
Earth-moving & Embankments: Sherman Ditch/Hamilton Ditch Rehabilitation	Cubic Yards	8,750	2	17,500	4,000	13,500
Water-control Structures: Sherman Ditch/Hamilton Ditch Rehabilitation	Each	10	1,750	17,500	9,000	8,500
Water Conveyance: Sherman Ditch/Hamilton Ditch Rehabilitation	Linear Feet	180	12	2,160	1,000	1,160
Erosion Control: Sherman Ditch/Hamilton Ditch Rehabilitation	Cubic Yards	30	200	6,000	5,000	1,000
Mobilization & Site Preparation: Jennie Ditch Rehabilitation	Lump Sum	1	7,000	7,000	5,000	2,000
Earth-moving & Embankments: Jennie Ditch Rehabilitation	Cubic Yards	3,720	2	7,440	5,000	2,440
Water-control Structures: Jennie Ditch Rehabilitation	Each	2	4,500	9,000	5,000	4,000
Water Conveyance: Jennie Ditch Rehabilitation	Linear Feet	200	12	2,400	1,000	1,400
Erosion Control: Jennie Ditch Rehabilitation	Cubic Yards	60	200	12,000	5,000	7,000
TOTAL				176,000	88,000	88,000

**COLORADO**Colorado Water
Conservation Board

Department of Natural Resources

Colorado Water Conservation Board**Water Plan Grant - Detailed Budget Estimate****Fair and Reasonable Study Estimate****Prepared Date:** 1/31/2019**Water Activity Name:** North Park Irrigated Meadows II**Grantee Name:** Ducks Unlimited, Inc.**PROJECT ASSESSMENT and OUTREACH**

		Noncontract Personnel						
Sub-task	Item	Study Principal	Study Lead	Study Technicians	Sub-total (\$)	Total	Matching Funds (\$)	WSRF Funds (\$)
		100	25	10				
Estimated Hours								
Task 2 - Pre-project Assessments								
	North Park Waterfowl Breeding Pair Surveys	16	300	2,100	30,100	30,100	27,000	3,100
	Hen Survival, Occupancy and Production Surveys	43	300	2,100	32,800	32,800	27,000	5,800
	Project Habitat Assessments	43	312	2,100	33,100	33,100	27,000	6,100
Task 4 - Post-project Assessments & Outreach (Year 1)								
	North Park Waterfowl Breeding Pair Surveys	16	300	2,100	30,100	30,100	27,000	3,100
	Hen Survival, Occupancy and Production Surveys	43	300	2,100	32,800	32,800	27,000	5,800
	Project Habitat Assessments	43	312	2,100	33,100	33,100	27,000	6,100
	Community Outreach and Extension	16	216		7,000	7,000	-	7,000
Task 6 - Post-project Assessments & Outreach (Year 2)								
	North Park Waterfowl Breeding Pair Surveys	16	300	2,100	30,100	30,100	27,000	3,100
	Hen Survival, Occupancy and Production Surveys	43	300	2,100	32,800	32,800	27,000	5,800
	Project Habitat Assessments	43	312	2,100	33,100	33,100	27,000	6,100
	Community Outreach and Extension	16	216		7,000	7,000	-	7,000
Task 7 - Post-project Assessments & Outreach (Year 3)								
	North Park Waterfowl Breeding Pair Surveys	16	300	2,100	30,100	30,100	27,000	3,100
	Hen Survival, Occupancy and Production Surveys	43	300	2,100	32,800	32,800	27,000	5,800
	Project Habitat Assessments	43	312	2,100	33,100	33,100	27,000	6,100
	Community Outreach and Extension	16	216		7,000	7,000	-	7,000
TOTAL					405,000	405,000	324,000	81,000
Other Direct Costs (see below)						210,000	-	210,000
OVERALL TOTAL						615,000	324,000	291,000

Other Direct Costs

	Item:	Travel and Other Payables	GPS Survey Receiver	GPS Survey Radios	Miscellaneous Field Costs			
	Units:	Days	Each	Each	Lump Sum			
	Unit Cost (\$):	50	600	1,300	1,200	Total	Matching Funds(\$)	WSRF Funds (\$)
Task 2 - Pre-project Assessments		40	3	50	1	70,000	-	70,000
Task 4 - Post-project Assessments & Outreach (Year 1)		76		50	1	70,000	-	70,000
Task 6 - Post-project Assessments & Outreach (Year 2)		76		50	1	70,000	-	70,000
Total Units:		192	3	150	3			
Total Cost (\$):		9,600	1,800	195,000	3,600	210,000	-	210,000



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Water Supply Reserve Fund

Exhibit B - BUDGET AND SCHEDULE - Indirect Costs (Grant Administration)

Date:	1/31/2019				
Water Activity Name:	North Park Irrigated Meadows II				
Grantee Name:	Ducks Unlimited, Inc.				
Task No. ⁽¹⁾	Title	Description (Grant Administration)	\$/hour	Hours	Total (\$)
8	Senior Professional	Grant Administration - Construction Costs	108	70	7,600
Total					7,600
Total WSRF Grant Amount ⁽²⁾					450,600
Indirect Costs as a percent of Total WSRF Grant amount					1.7%
(1) Grant Administration costs must be submitted as a single task and may not exceed 15% of the Total WSRF					
(2) Total WSRF Grant amount equals all Basin Account requests and all Statewide Account requests.					

North Park Irrigated Meadows II: project location map

map features



Jennie Ditch



Newport/Walker Ditch



Lost Creek Ditch/Darcy Reservoir

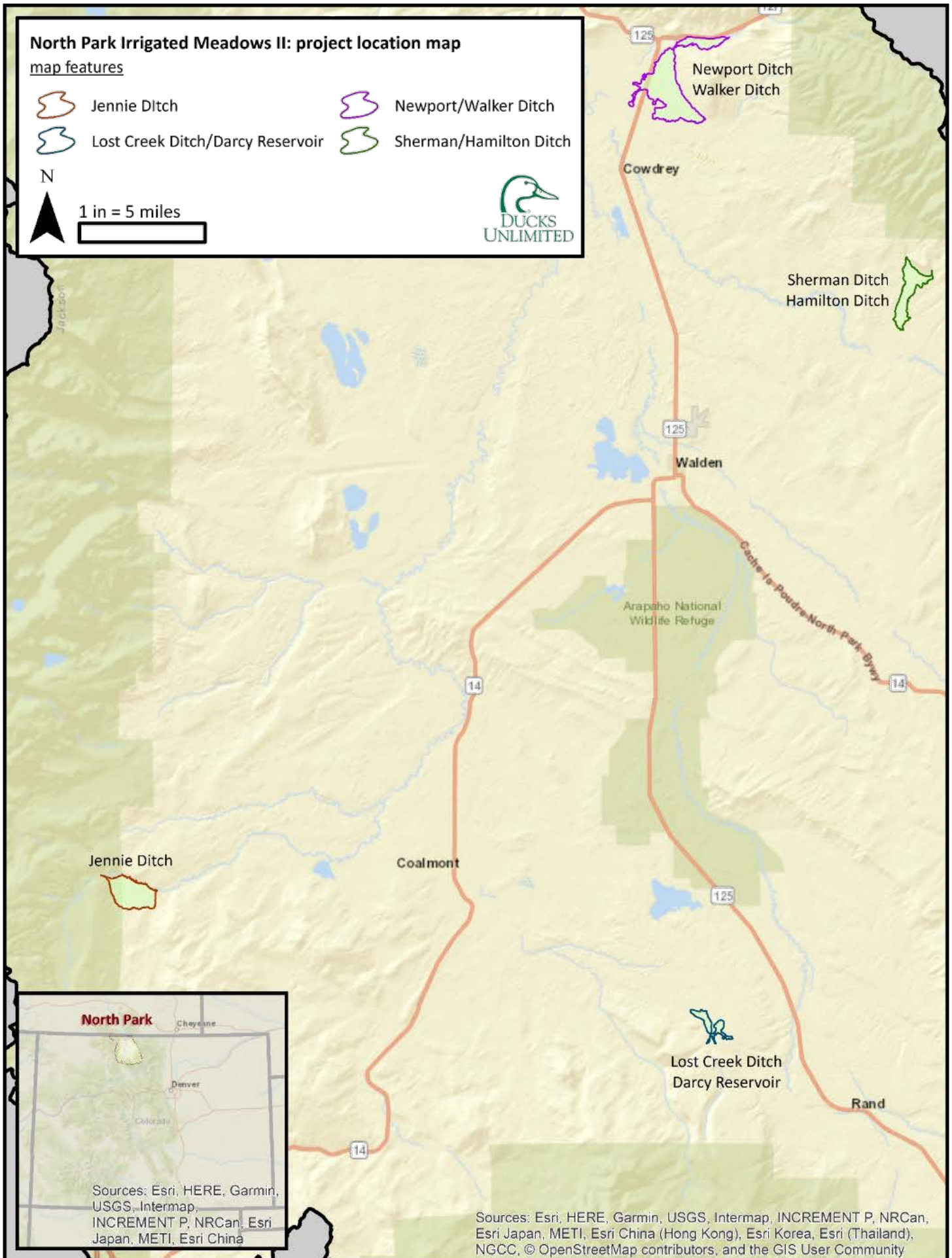


Sherman/Hamilton Ditch

N



1 in = 5 miles



North Park

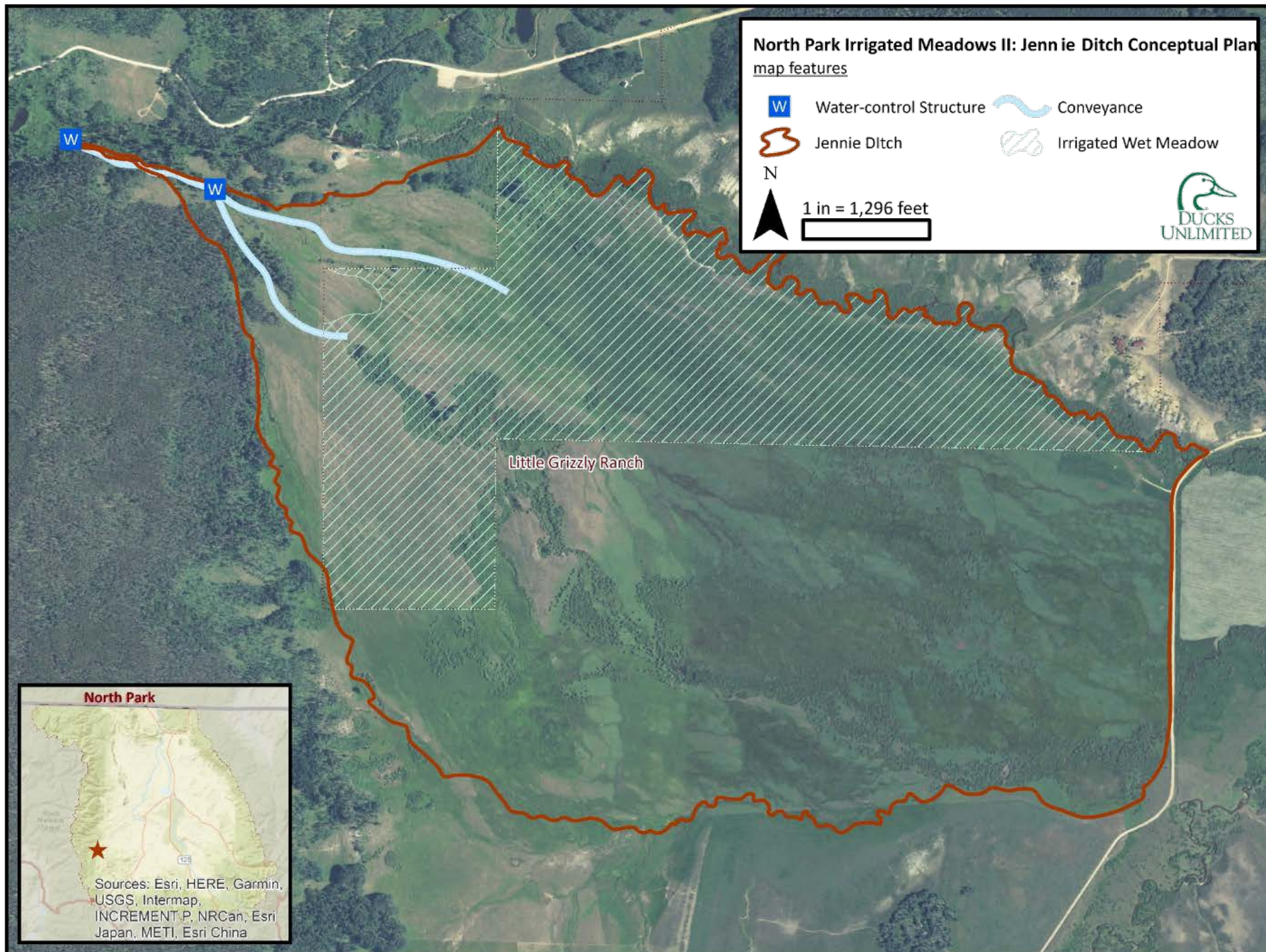
Cheyenne

Denver

Colorado



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



North Park Irrigated Meadows II: Newport/Walker Ditch Conceptual Plan

map features

-  Newport/Walker Ditch
-  Conveyance
-  Water-control Structure
-  Irrigated Wet Meadow

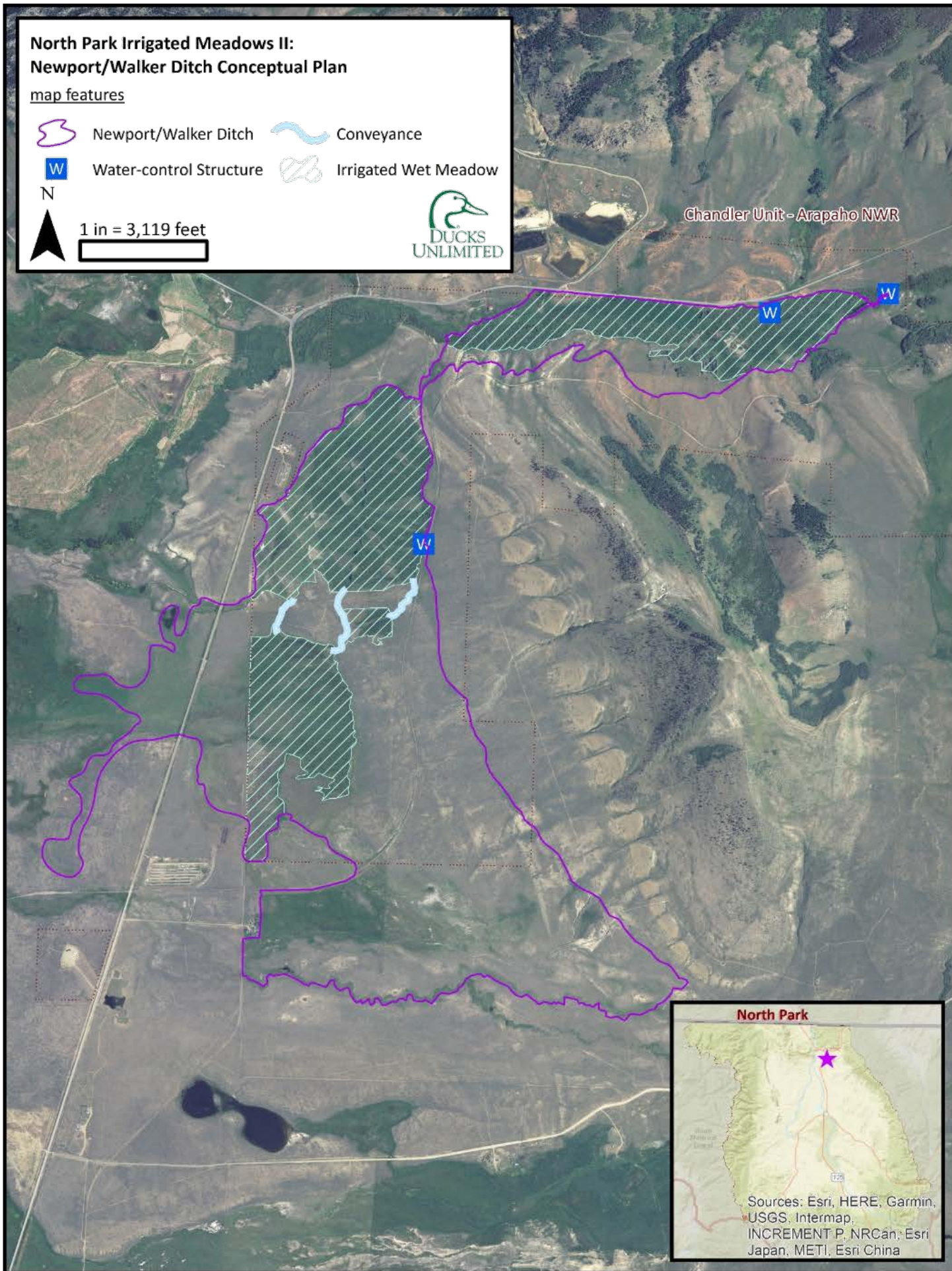
N



1 in = 3,119 feet



Chandler Unit - Arapaho NWR



North Park



**North Park Irrigated Meadows II:
Sherman/Hamilton Ditch Conceptual Plan**
map features



Water-control Structure



Sherman/Hamilton Ditch



Conveyance

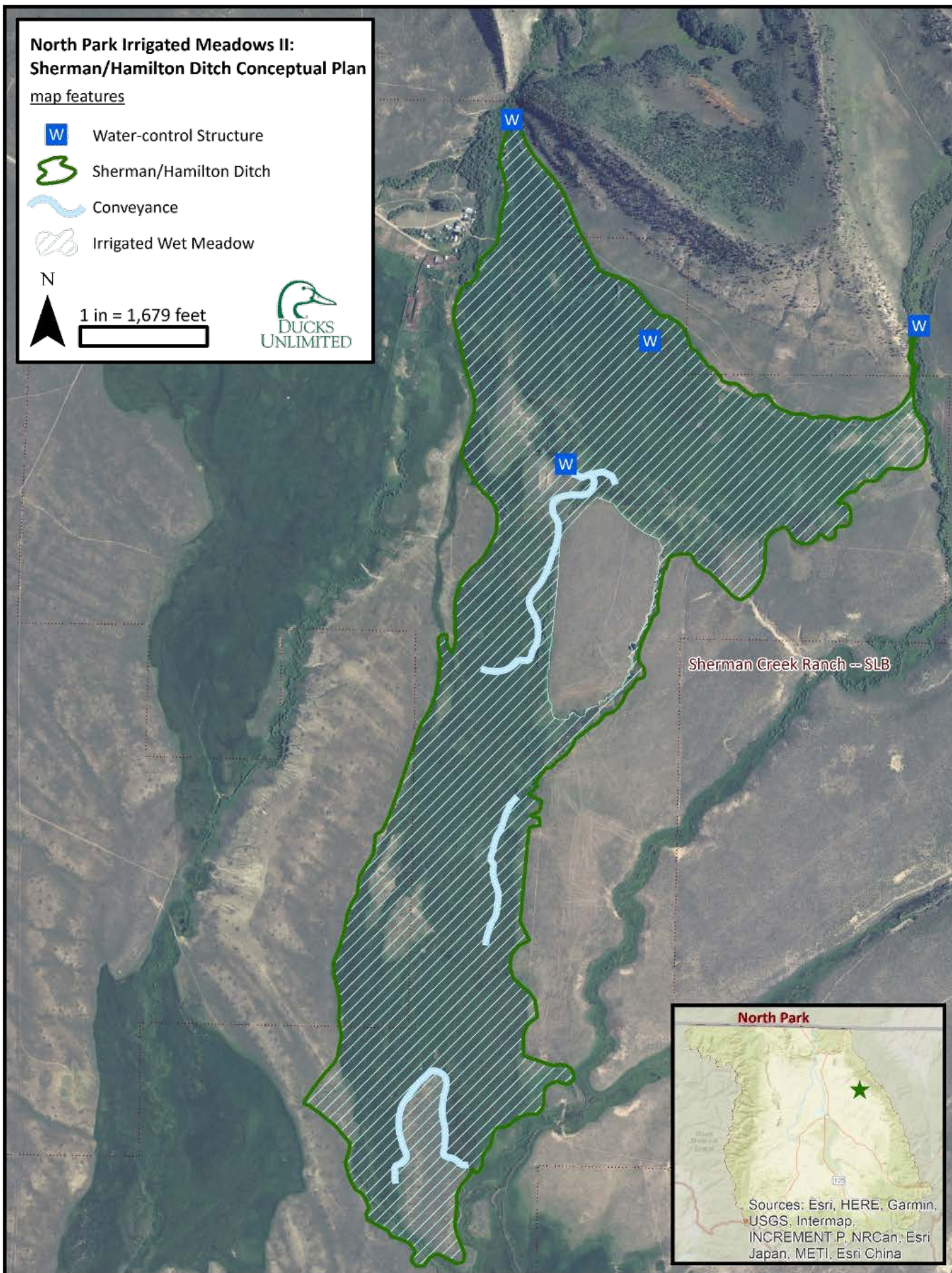
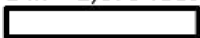


Irrigated Wet Meadow

N

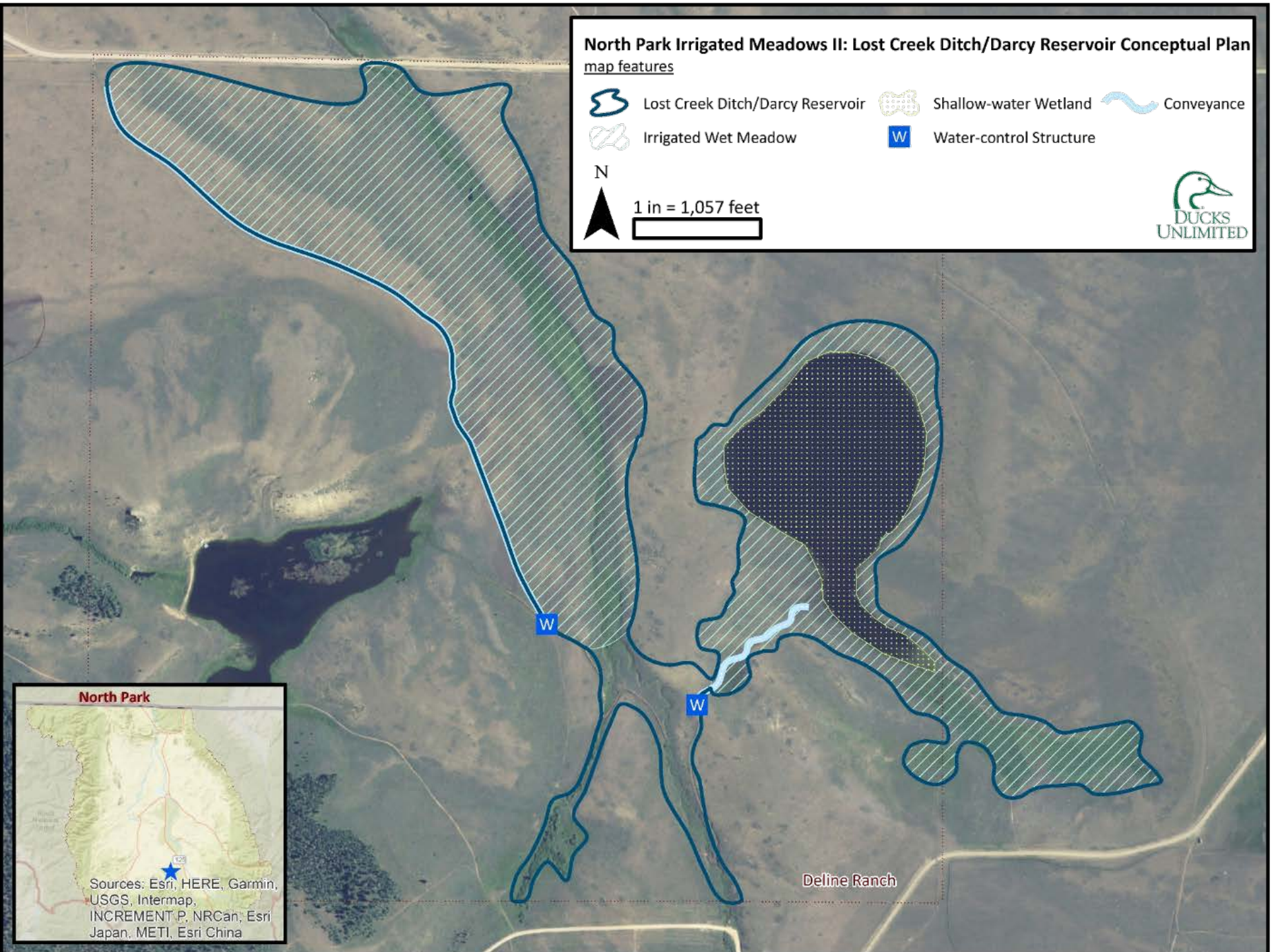
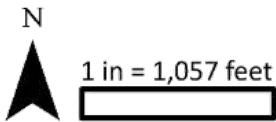


1 in = 1,679 feet



North Park Irrigated Meadows II: Lost Creek Ditch/Darcy Reservoir Conceptual Plan map features

-  Lost Creek Ditch/Darcy Reservoir
-  Shallow-water Wetland
-  Conveyance
-  Irrigated Wet Meadow
-  Water-control Structure





COLORADO

Parks and Wildlife

Department of Natural Resources

317 West Prospect Road

Fort Collins, CO 80526

P 970.472.4379

Jim.gammonley@state.co.us

August 24, 2018

Dear Members of the North Platte Basin Roundtable,

I am pleased to write this letter of support for the WSRF project proposal by Ducks Unlimited Inc. The proposed project will produce improvements to flood irrigation infrastructure and increase irrigated acres in North Park. In addition, the project will complement on-going research and conservation efforts by Colorado Parks and Wildlife (CPW). North Park, in Jackson County, has long been recognized as a regionally important area for migratory waterfowl and other wetland wildlife, and is a Focus Area in CPW's Wetland Wildlife Conservation Program. CPW and its conservation partners continue to invest in habitat projects on private and public land in North Park. The primary objective of these efforts is to provide important habitats for breeding and migrating waterfowl and other wetland-dependent wildlife, while also maintaining working lands and traditional water uses throughout North Park.

The proposed project will help quantify the wildlife value of different wetland habitats on private and public land in North Park, assist in future conservation planning, and help communicate the value of working lands and water uses in North Park and similar basins throughout the Intermountain West. These are also priority objectives for CPW, and the CPW Avian Research Program will provide a minimum of \$252,000 in matching funds for the proposed project. We are excited to support this well-crafted proposal and continue our well-established partnerships with Ducks Unlimited, Colorado State University, and the Intermountain West Joint Venture, and we look forward to a productive collaboration with the Roundtable.

Thank you for your consideration of this proposal.

Sincerely,

James H. Gammonley, Ph.D.
Avian Research Leader
Colorado Parks and Wildlife



Fish, Wildlife, and Conservation Biology
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David N. Koons, Assoc. Professor
James C. Kennedy Endowed Chair of
Wetland & Waterfowl Conservation
Tel: 970-491-6457
E-mail: david.koons@colostate.edu

17 August 2018

Dear members of the North Platte Basin Roundtable,

I am excited to collaborate with the roundtable in helping support the WSRF project proposed by Ducks Unlimited, Inc. This project will initiate a number of new improvements to flood irrigation structures in North Park, increase irrigated acres, and of critical importance going forward, it will provide rigorous quantitative measurements of the non-consumptive benefits of flood irrigation to waterfowl. This scientific research could help generate funding for North Park irrigation projects for many years to come, and it could inspire new Farm Bill initiatives to do the same, all of which will benefit the long-term agricultural and non-consumptive uses of flood irrigation in North Park and similar western landscapes.

At Colorado's land-grant university, I am extremely fortunate to be supported by a private endowment made possible by Mr. James C. Kennedy, Chairman of Cox Communications and a passionate waterfowl hunter and steward of the land. Along with matching funds provided by Colorado Parks and Wildlife, I can commit \$71,000 in matching funds from the Kennedy endowment to help support the proposed research and outreach, which is further detailed in the proposal and budget.

Sincerely,

A handwritten signature in blue ink that reads "David Koons". The signature is stylized with a large, looped "D" and a cursive "Koons".

David Koons, Ph.D.



Colorado State University