

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet**

Applicant: Ducks Unlimited, Inc.

Water Activity Name: Lower South Platte Wetland Initiative Phase I

Water Activity Purpose: Feasibility Studies, technical assistance and structural/consumptive project

County: Sedgwick, Morgan and Logan

Drainage Basin: South Platte River

Water Source: South Platte River

Amount Requested: \$278,476 (Statewide Account)

Matching Funds: Yes, \$500,255

Water Activity Summary:

The objective of this project is to develop several wetland recharge projects along the lower South Platte River in Morgan, Logan and Sedgwick Counties. The concept is to divert water into wetlands in the winter months when it is legal available and allow the water to infiltrate into the alluvial aquifer and eventually back to the river channel. Detailed analyses and modelling have been performed to assure that recharge water returns to the river at the predicted time. Through these wetland recharge projects, less senior water rights can operate out of priority without causing injury to senior right holders. River management under this type of system has permitted several junior water rights holders to continue operating legally. Recharge projects as part of a program to augment South Platte River flows through the alluvial aquifer have become a widely accepted and dependable technique for meeting the demands of water users along the river. Without river augmentation municipal, industrial, and agricultural operations would be severely and negatively impacted. Aside from retiming the legal available flows in the river, these wetland recharge projects provide significant benefit to migrating and wintering birds. The lower South Platte is an import flyway for migratory birds and waterfowl. Recent studies conducted by the Rocky Mountain Bird Observatory (RMBO) and the CDOW demonstrate that recharge wetlands are vital to migratory and wintering birds on the South Platte River, as more than 20 species of migratory birds and 27 species of waterfowl of national importance depend on these. These wetlands will be utilized for waterfowl hunting which contributes significantly to the local economies.

Early in Duck Unlimited's (DU) program efforts, they joined Northern Colorado Water Conservancy District (NCWCD), Lower South Platte Water Conservancy District (LSPWCD), and South Platte Wetlands Focus Area (SPLRG) to develop the Tamarack Recharge Project. This project is the centerpiece of Colorado's contribution to the Platte River Recovery Program (PRRP). Seven years after initiating preliminary work on the Tamarack Ranch recharge activities, the PRRP was signed by all three states and the federal government, making Tamarack a much needed project. But, it is only part of the solution. Much more work is needed to build the required capacity to meet the 10,000 acre feet/year first increment goal for Colorado. For Morgan, Logan and Sedgwick and Washington Counties, SWSI identified a shortfall of 8,000 acre-feet of water for M&I uses for 2030 assuming that 8,900 acre-feet developed through the Identified Projects and Processes (IPPs).

For the purposes of this application DU chose three landowners on three tracts of land that would best demonstrate the power of collaboration and the ability for partnerships to meet the goals and objectives of

the SWSI and HB-1177. These tracts are located throughout the lower river from Brush to the stateline. The Applicant chose this geographic area because it conforms to the administrative boundaries of the LSPWCD, and the project focus area of the South Platte Water Related Activities Program (SPWRAP) as well as within the larger project boundary identified by DU. The SPWRAP is a Colorado nonprofit formed for Colorado water users that wish to participate in the PRRP to address issues raised under the Endangered Species Act.

Brush Prairie Ponds SWA

This 620 acre property's top priority is to provide recharge credits to cover the City of Brush's municipal wells. Owned by the city, wetlands have been developed throughout the property by DU and CDOW to provide waterfowl habitat for public hunting. The Fort Morgan canal delivers recharge water in the spring and early summer to fill the wetlands, which remain flooded through the first part of fall. The City and the Fort Morgan Reservoir and Irrigation Company split the recharge credits, benefitting both entities.

Survey's conducted by CDOW and RMBO indicate that this is one of the most popular waterfowling destination in Northern Colorado, and harvests more than double the birds than most any other public access property. However, there is still room to grow. The original decree allowed for 12 diversions along the Fort Morgan Canal as it crosses the property, and although the 12th diversion was installed, it was never used. Concerns over potential flooding of adjacent neighbors, contamination of groundwater halted the easternmost project from being completed. The city has now settled those disputes through intense groundwater monitoring and adjacent land purchases and is now ready to proceed with the final phase of the project. Ducks Unlimited will refurbish the existing diversion structure and construct laterals to deliver water from the canal to the wetland basins. Four wetland basins will be developed and connected through open ditches and pipelines. A total of 20 new acres of wetlands will be developed capable of holding 20 acre feet at full service level. These wetlands will be topped off several times throughout the recharge season to introduce several hundred acre feet annually.

Golden Eagle Ranch

This property is quickly becoming the centerpiece of DU's projects on private lands. The 2,000 acre property located near Proctor, Colorado straddles both sides of the river. In 2003, the landowners donated a conservation easement to Ducks Unlimited, protecting the land and water rights in perpetuity. DU has been working with the landowners to develop recharge facilities that will increase recreational hunting opportunities while maintaining an agricultural enterprise.

The LSPWCD recently recieved a small North American Wetlands Conservation Act (NAWCA) grant for \$75,000 to construct wetlands on the property for the purposes of recharge, and to provide habitat for waterfowl. Funds will be used to construct eight wetlands on marginal irrigated land. NAWCA funds will pay for survey and design, levee construction, and water level control structures. However, as part of the restoration, funds are required to improve the water delivery infrastructure. Upgrades are required at most ditch crossings and over half of one mile of pipe is required to line the laterals, which will assure water infiltrates the groundwater table in wetlands, not in the laterals. Engineering and legal documents are being drafted ow and should be filed before funds from this grant application are awarded.

Recharge credits from the project will be used by landowners, agricultural well districts, and SPWRAP. The landowners are interested in having the water to flood wetlands for recreational opportunities. This will require water from both flooding recharge wetlands with recharge water and out-of priority water covered by credits. The Lower Logan Wells Users will benefit directly from the recharge credits to cover subdistrict members, mostly agricultural producers. SPWRAP has agreed to lease any excess credits from the subdistrict. Current engineering indicates that there should be at least 120 acre feet of water available to the SPWRAP for PRRP.

Heyborne Recharge Project Phase I

The Heyborne project as it has become known includes approximately 650 acres located along the river at Ovid. Several property owners are in negotiations with the DU, PFW, LSPWCD, NCWCD, SPWRAP partnership to develop unappropriated water at the stateline for purposes of agricultural, municipal, and endangered species needs. Preliminary investigations indicate that substantial water is available at the Nebraska stateline during winter months. These waters can be retimed through recharge to meet the needs of the PRRP and surrounding agricultural and municipal needs. DU and SPLRG have conducted core samples of the properties involved and found that deep soils (>65 ft) and soil conditions are ideal for aquifer recharge projects.

The SPWRAP has agreed to lease any and all credits from the project for the PRRP. DU has also been approached by local agricultural producers to lease credits to cover several tributary wells that are currently operating out of priority. The landowners interest are purely for waterfowl. These properties have been purchased as duck clubs, applied water to the wetlands during the hunting season and typically release almost all credits for use to support area and state priorities. This application seeks funds to further the feasibility study and construct test sites. Core samples conducted by SPLRG indicated that the project sites are viable for recharge. DU will need additional funds to conduct the survey and design aspect of this project. NCWCD and LSPWCD request funds to assist in developing recharge models based off State CU and Stream Depletion Factor (SDF). As some of these tasks are already underway, it will be important to recognize the need to construct test sites and perform pumping tests to assure enough water can be delivered.

Discussion:

This project has the ability to provide significant economic value to Morgan, Logan and Sedgwick Counties. While providing for new habitat for waterfowl and migratory birds, the creation of wetlands in the lower South Platte River has the potential to provide for the replacement of depletions associated with junior agricultural irrigation.

Staff would like to clarify a few items stated in the application. The application references the Statewide Water Supply Initiative (SWSI) and states that Morgan, Logan and Sedgwick counties will provide 8,900 acre-feet to help meet the M&I gap. In SWSI, the 8,900 acre-feet is the amount of water that will be needed in 2030 and is expected to be provided by the identified, projects and processes (IPPs). Nonetheless, it is encouraging that these projects are moving forward to help meet the present and future needs of the lower South Platte River.

The Applicant also states that “the State is required to deliver 10,000 acre-feet for the Platte River Recovery Program (PRRP), an additional gap that the SWSI neglected to account for, but must be met as part of the overall gap in future water needs.” The State of Colorado is not required to “deliver” water under the PRRP. Rather, the State of Colorado will be retiming water supply from excesses to shortages to species target flows. This water will be put to beneficial use in Colorado and will be available for use by others in Colorado consistent with the South Platte compact. Any waters which reach the species habitat by gravity may be credited to Colorado under the PRRP. The proposed project can assist Colorado in this goal. SWSI also identified the need for a successful PRRP to allow development of water supplies consistent with the Endangered Species Act.

The amount of collaboration involved in this project is impressive and should not go unnoticed. The supporters and financial contributors include: USFWS Partners for Wildlife (PFW), CDOW, Colorado Open Lands (COL), Lower South Platte Water Conservancy District (LSPWCD), Northern Colorado Water Conservancy District (NCWCD), Rocky Mountain Bird Observatory (RMBO), South Platte Lower River Group (SPLRG), the South Platte Water Related Activities Program (SPWRAP) and several landowners.

The Applicant was quite thorough in describing how they meet the WSRA Threshold Criteria and the Statewide Evaluation Criteria (please refer to the application to review their response in entirety). In summary, the Applicant stresses the importance of these types of river augmentation projects to the local community, entire basin and the State of Colorado. By diverting the available winter flows and applying this water to off-stream recharge basins, relatively junior rights are able to continue diverting. Obviously, the benefits extend beyond the State's desire to fully utilize its compact entitlements. These types of projects also provide for important wetland habitat for waterfowl as well as a potential source of water for the endangered species. Below is a list of criteria that pertain to how a particular water activity addresses issues of Statewide Value. Staff believes this project meets most, if not all, of the criteria listed below.

- The water activity helps sustain agriculture, and open space, or meets environmental or recreational needs.
- The water activity assists in the administration of compact-entitled water or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
- The water activity assists in the recovery of threatened and endangered wildlife species or Colorado state species of concern.
- The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
- The water activity is complimentary to or assists in the implementation of other CWCB programs.
- The water activity helps support the State's economic vitality and competitiveness in national and international markets.

Issues/Additional Needs:

- Please provide a detailed project schedule that provides a timeline for the identified tasks/subtasks.
- SWSI identified that in the future, winter calls will occur more frequently. As senior conditional water rights are perfected, will these wetland recharge projects be able to remain operational? Please provide additional detail.
- The deliverables described for the Brush Prairie Ponds do not include water rights analysis and engineering details—please include as deliverables.
- It is unclear from the application how much water might be made available from these projects. Please provide additional detail.
- Considering that the State will contribute significantly to this project, should the State be provided an interest in the water, or at a minimum the right of first refusal?

Staff Recommendation:

The proposed project meets the Threshold Criteria and meets many, if not most, of the criteria for the Statewide Fund. Staff recommends approval of up to \$278,476 for the Lower South Platte Wetlands Initiative Phase I project contingent on resolution of the items in the issues/additional needs section. It should be noted that past costs can not be reimbursed.