

FINAL REPORT
FOR
CONTRACT:

09-PDA-00097
C150432

DUCKS UNLIMITED, INC.
2926 E. MULBERRY STREET
FORT COLLINS, CO 80524

IN COOPERATION WITH:

THE COLORADO WATER CONSERVATION BOARD
THE SOUTH PLATTE WATER RELATED ACTIVITIES PROGRAM
THE UNITED STATES FISH AND WILDLIFE SERVICE
NORTH AMERICAN WETLANDS CONSERVATION COUNCIL
DT RANCH, LLC
DRAKE LAND FARMS, LLC



EXECUTIVE SUMMARY

DUCKS UNLIMITED (DU) IS PROUD TO PROVIDE THIS FINAL REPORT TO OUR FUNDING PARTNERS AT THE COLORADO WATER CONSERVATION BOARD (CWCB). OVER THE LAST FIVE YEARS THE CWCB AND DU HAVE PARTNERED TO DELIVER THE VERY BEST IN WETLAND HABITATS THAT PROVIDE FOR WATERFOWL AND PEOPLE. THIS PARTNERSHIP HAS RESULTED IN THE CONSERVATION OF HABITAT FOR BIRDS, WHILE RETIMING WATER TO MEET THE MULTIPLE NEEDS OF THE STATEWIDE WATER SUPPLY INITIATIVE.

THE CONTRACT WAS FULLY EXECUTED ON 5/22/2009 AND WE HAVE MADE CONSIDERABLE PROGRESS TOWARD COMPLETING ALL PROJECTS IN THE GRANT, WHICH INCLUDED FENDER (WINTERHAVEN), DT RANCH, AND DRAKE LAND FARMS. ALTHOUGH BOTH DRAKE LAND FARMS AND DT RANCH WERE COMPLETED TO OUR SATISFACTION, DT RANCH SUFFERED CATASTROPHIC DAMAGE IN THE FLOOD OF SEPTEMBER 2013, AS DID WINTERHAVEN. THESE PROJECTS ARE CURRENTLY UNUSABLE AND A SATISFACTORY PLAN FOR RESTORING THE PROJECTS HAS YET TO BE FOUND. WE DISCUSSED THE LOSS OF THESE PROJECTS WITH REBECCA MITCHEL ON OCTOBER 8, 2013 AND DETERMINED THAT WE NEEDED TO CLAIM “FORCE MAJEURE” FOR THESE PROJECTS, RENDERING THEM DEFUNCT.

DRAKE LAND FARMS SUFFERED VERY LITTLE DAMAGE AND CONTINUES TO OPERATE AS DESIGNED. WE ARE VERY PROUD OF THAT PROJECT AND HOPE TO SEE IT EXPAND TO PROVIDE WATER FOR ADDITIONAL WATER PROVIDERS IN COMING YEARS.

THIS GRANT PROVIDED \$825,552 IN FUNDS FROM THE CWCB AND REQUIRED \$1,234,129 IN MATCHING FUNDS FROM DU SOURCES. DU WAS UNABLE TO EXPEND THE ENTIRE GRANT AMOUNT DUE TO INSURMOUNTABLE ISSUES WITH COMPLETING THE WINTERHAVEN PROJECT AND CATASTROPHIC FLOODS IN SEPTEMBER 2013 THAT SEVERELY DAMAGED THE WINTERHAVEN AND DT RANCH PROJECTS.

Projected Grant and Match Funds Through May 22, 2014

	CWCB		DU Match	
	Authorized	Spent	Required	Spent
Drake Land Farms	\$142,231	\$142,231	\$188,973	\$316,582
DT Ranch	\$316,500	\$276,352	\$684,509	\$678,830
Winterhaven (Fender)	\$366,821	\$309,158	\$360,647	\$487,443
Total	\$825,552	\$727,741	1,234,129	1,482,855
Remaining		\$97,811		-\$248,726*

* Negative sign indicates MORE match provided than required

OUR ORIGINAL APPLICATION IDENTIFIED SEVERAL THOUSAND ACRE-FEET BEING RETIMED THROUGH RECHARGE FACILITIES IN ANY GIVEN YEAR. GIVEN THAT FLOODS DESTROYED INFRASTRUCTURE ON DT RANCH AND MUCH OF WINTERHAVEN, WE THINK IT PRUDENT TO REPORT THAT ZERO WATER WILL BE RETIMED THROUGH EITHER PROJECT FOR THE PURPOSES OF THE GRANT. DRAKE LAND FARM IS FULLY OPERATIONAL AND HAS A DECREE FOR AUGMENTING THEIR WATER BY TRADING CREDITS WITH FORT MORGAN RESERVOIR AND IRRIGATION COMPANY, A TOTAL OF 56.3 ACRE-FEET ANNUALLY. ALTHOUGH THE AMOUNT OF WATER TRADED SEEMS SMALL, IT IS MOSTLY DUE TO THE DECISION TO NOT INCLUDE THE DEVELOPED HEADGATE WELL IN THE AUGMENTATION PLAN (10CW134) GIVEN THE STATE ENGINEER'S POLICY CHANGE OF FEBRUARY 1, 2012 TO REQUIRE ALL WELL PERMITS BE SUBJECT TO COURT DECREE. AFTER SEVERAL YEARS WORK ON THE DECREE, WE DECIDED TO REMOVE THE HEADGATE WELL IN ORDER TO ALLOW IT TO DELIVER SUBSTANTIAL WATER DURING FREE RIVER PERIODS AND RETIME ALLOCATIONS OUTSIDE ADMINISTRATIVE TRACKING.

ALTHOUGH THE WATER DIVERSIONS MAY HAVE BEEN DESTROYED, SEVERAL THOUSAND ACRES OF WETLAND HABITAT WERE CONSTRUCTED AND REMAIN INTACT FOLLOWING THE FLOOD. CWCB GRANT FUNDS AIDED IN PROTECTING THE HABITAT ON BOTH DT RANCH AND WINTERHAVEN IN PERPETUITY THROUGH CONSERVATION EASEMENTS. DRAKE LAND FARMS IS ALSO PROTECTED THROUGH SIMILAR PROGRAMS ALTHOUGH NOT PART OF THIS GRANT. WE BELIEVE THE WETLAND HABITAT ON ALL PROPERTIES WILL SERVE FUNCTIONS FOR WILDLIFE AND RECREATION. WE ALSO BELIEVE THAT THE WATER DELIVERY INFRASTRUCTURE ON MOST GRANT PROPERTIES WILL BE RESTORED AT A FUTURE DATE TO FULLY ENHANCE THE PROPERTIES AND ATTAIN THE GOALS WE ORIGINALLY ENVISIONED.

ACREAGE SUMMARY

Table 1. Acreage and Acre-foot summary table for all projects funded by the CWCB under contract #: 09-PDA-00097.

#	Name	Acre-feet Proposed	Acre-feet Revised	Acres Proposed	Acres Revised
	Fender (Winterhaven) Wetland Creation	160	0	0	24
	DT Ranch Recharge and Easement	400	0	800	1200
	Drake Land Wetland Recharge	2500	53.6	0	62
	TOTAL	3060	53.6	800	1286

ALTHOUGH DU HAS INCURRED OVER 20% HIGHER COSTS THAN ORIGINALLY ANTICIPATED, WE CONTINUE TO SUPPORT THE CWCB AND THEIR GOALS TO MEET THE WATER SUPPLY GAP. UNFORTUNATELY, NATURE WORKED AGAINST US OVER THE COURSE OF THIS GRANT AND ROBBED OUR SUCCESS. WE THEREFORE WILL BE RETURNING ANY REMAINING FUNDS IN THE GRANT SO THAT FUTURE INNOVATORS MAY APPLY CWCB FUNDS TO SUCCESSFUL WATER SUPPLY PROJECTS.

WE LOOK FORWARD TO MAINTAINING THE SUCCESSFUL PARTNERSHIP WE HAVE ENGENDERED WITH THE CWCB. THANK YOU FOR THE OPPORTUNITY TO REPORT OUR ACCOMPLISHMENTS AND PLEASE CALL WITH ANY QUESTIONS.

SINCERELY,

GREG KERNOHAN
MANAGER, CONSERVATION PROGRAMS

FINANCIAL SUMMARY

South Platte Wetlands Recharge II								
Contract Routing Number:								
Contract or Purchase Order No.: 00097								
Grant Amount: \$825,552								
Date of Invoice: May 22, 2014								
Task		Description	Total Budget/Grant Funds	Current Amount Invoiced	Invoice #	Invoiced to Date	% of Budget Spent	% of Task Complete
Fender Wetland Augmentation								
1	CO-136-1	Feasibility Study	\$6,500.00		2009-245	\$6,500.00	100%	100%
2	CO-136-1	Conduct and Complete Survey and Design	\$19,265.00		2009-245	\$10,000.00	238%	70%
				\$35,940.30	2013-339			
3	CO-136-1	Complete Water Court Filing	\$41,604.00		2010-201	\$9,265.00	22%	0%
4	CO-136-1	Construct Wetlands	\$233,657.00		2010-201	\$77,958.50	61%	65%
					2010-296	\$65,676.79		
5	CO-136-4	Conservation Easement	\$65,795.00		2009-245	\$7,217.00	158%	100%
					2010-129	\$96,599.95		
DT Ranch Augmentation & Easement								
1	CO-146-4	Construct Wetlands	\$200,000.00		2010-264	\$8,779.39	54%	90%
					2012-320	\$98,906.89		
					2012-328	\$37,246.38		
					2013-269	\$14,919.51		
2	CO-146-3	Conservation Easement	\$116,500.00		2010-264	\$116,500.00	100%	100%
Drake Land Farms Wetland Augmentation	CO-180-1							
1		Feasibility Study	\$12,324.00		2009-245	\$6,100.00	49%	100%
2		Conduct and complete a survey and design	\$11,994.00		2010-129	\$23,176.00	193%	100.0%
3		Complete water engineering and water court filings	\$4,958.00				0%	100.0%
4		Construct wetland impoundments	\$112,955.00		2010-264	\$112,955.00	100%	100.0%
		TOTALS	\$825,552.00	\$35,940.30		\$691,800.41	88%	
		Remaining to Spend		\$97,811				

Project Description:

As part of our Revolving Land Strategy, DU purchased this property in fee-title in January of 2008. Adjacent to the Heyborne Project, the Fender property offered substantially improved soils for development of high-capacity wells to supply water to recharge projects. With over 800 acres and one half mile of the river channel, over 100 acres of irrigated agriculture and 700 acres of sandhill for creation recharge wetlands the property lends very well to the mission of DU and the partnerships we have formed.

In addition, DU purchased two shares of the South Reservation Ditch, a high priority ditch near the end of the Platte River system in Colorado. With this purchase DU holds a 1/7th interest in the ditch company. We continued using our shares for agricultural production throughout most of the irrigation season. We successfully carved out 24 acres of the irrigated cropland to construct shallow water wetlands for wildlife habitat. The wetlands are capable of being flooded with South Reservation Ditch rights during the “shoulder” months of irrigation season. The remaining 70 acres of irrigated ground remain in agriculture.

Although we had executed agreements with Sedgwick County Well Users, and South Platte Water Related Activities Program to develop new water rights for recharging wetlands constructed throughout the property, DU struggled to secure access to the river for diverting new rights to the wetlands. Several years negotiations with several landowners along the river proved fruitless and eventually we abandoned the idea of developing new rights for this project.

We were able to protect the property and the South Reservation water rights with a conservation easement, which was originally scoped in the application. The entire property with improvements is protected in perpetuity with Colorado Open Lands. Colorado Open Lands Trust purchased the easement from Ducks Unlimited on November 30th, 2009. The property’s 808 acres will be protected in perpetuity so as wildlife and water users will be able to depend on the project for several years to come.

Unfortunately, in the fall of 2013, a historic flood inundated the property and destroyed water diversions and check structures in sloughs. Many surrounding properties were destroyed as well.

Wildlife Benefits:

We expect to see an increase in the use-days of dabbling ducks common to this portion of the South Platte River watershed. Target hydrophytic plant species include smartweed, barnyard grass (wild millet), curly dock, threesquare and other grasses. Flooding and drawdown regimes will be devised such that these plant communities remain vigorous and produce enough seeds and litter to provide high-quality plant and invertebrate forage for feeding waterfowl. Moreover, these regimes will be managed such that water depths seldom exceed the 12"-20" depths expedient for foraging waterfowl.

Project Accomplishments:

To date we have:

Task 1 - Conduct preliminary investigations into feasibility (COMPLETE)

Deliverables

- Core sample locations and report will be delivered by LSPWCD
- A detailed preliminary report of findings for water availability
- Conservation Agreements signed with landowners which is DU

Task 2 - Conduct and complete a survey and design (Complete)

- **We have completed the survey and will begin and finish design work in January**

Deliverables

- A detailed survey and design of the wetland project for the area attached in Appendix A – **The survey is started, but the water analysis proved that better wells and recharge could we must expand the survey area to include about 100 additional acres.**
- Provide a detailed bid package including all plans and specifications, and quantities for materials and equipment. (COMPLETE)

Task 3 - Complete water engineering and water court filings (INCOMPLETE)

Deliverables

- Completed engineering details associated with the recharge plan. – We were able to complete an water availability analysis that indicated 70 acre-feet per day was available throughout the winter months from October 15th through March 31. Unfortunately, we were unable to secure a permanent location for diverting water from the river. The alluvial aquifer throughout a 2 mile section of river extending east from the property is very shallow, incapable of supplying water for high capacity wells. We were refused by several landowners for access to suitable facilities where infiltration galleries, small capacity well batteries, or floating pumps would have met our needs.
- Copy of water court filings and substitute supply plan. (NOT STARTED)

Task 4 - Construct wetland impoundments via contour levees, and install water level control structures. Contract construction components to eligible parties. Provide construction management oversight through to project completion. (COMPLETE)

Deliverables

- Ducks Unlimited completed a project with 5 recharge wetland basins totaling 40 acres. These sites have been constructed in the uplands as indicated on the final plans (included separately). Constructed impoundments could be used for the intended purposes if access to the river could be negotiated with any of several landowners as mentioned above.

Task 5 –Conservation Easement (COMPLETE)

Deliverables

- 1) Execute a Purchase and Sale Agreement with landowner (COMPLETE)
- 2) Submit a Preliminary Property Inspection Report to DU for internal approval (COMPLETE)

- 3) Contract with professionals to complete the required due diligence including:
 - a. Baseline Documentation Report (COMPLETE)
 - b. Mineral Remoteness Report (COMPLETE)
 - c. NEPA Phase I Report (COMPLETE)
 - d. Easement Appraisal (COMPLETE)
 - e. Title Commitment (COMPLETE)
- 4) Close and Record the Easement (COMPLETE)
 - Description of the major deliverables/products that will be produced upon successful completion of the task:
 - a. Copy of Purchase and Sale Agreement (COMPLETE)
 - b. Copies of all final reports (COMPLETE)
 - c. Copy of recorded easement deed and exhibits (COMPLETE)

The Project map has been revised since the last update.

INSERT FINAL PLAN SHEET 2 HERE

DT RANCH – INFILTRATION GALLERY AND WETLANDS

Project Background:

The DT Ranch is a duck club located near Weldona, CO in Morgan County and has been operated as such for nearly 90 years. Covering most of 2,000 acres in the riverbottom south of the South Platte River, the property is composed of river channel, warm-water sloughs, riparian corridor, and vast acreages of irrigated farming and grazing land. The ranch employs a full-time manager that oversees agricultural operations and wildlife management. In 2004, the DT Ranch sold a bargain sale conservation easement to DU on 800 acres to protect the water rights on that property and in 2010 sold the remaining acreage for a total of 2,100 acres into a perpetual easement with DU. The CWCB provided some funds to purchase the conservation easement.

As part of completing both easements DT Ranch took unprecedented steps and changed their water rights certificates to include DU as a co-owner of the water shares. Although our easements outline detailed uses for water encumbered with a DU conservation easement, taking the step to reissue certificates assures the water will not be sold from the property without DU's consent. We are now able to apply several shares of the water to flood irrigate wetlands and pasture for grazing and waterfowl needs.

In addition to the conservation easement, the CWCB project will construct water delivery infrastructure to retime recharge credits generated from the FMRICO augmentation plan on the property. Augmentation occurs on the property via the Fort Morgan Reservoir and Irrigation Company (FMRICO) Decree for Case W-2692 filed on May 19, 1972 (the FMRICO Augmentation Plan) and entered by the court on December 3, 1974 and amended several times. The DT Ranch entered into a long-term, 99 year, agreement with the FMRICO on February 4, 2006 related to augmentation activities at the subject property. The original agreement between DT Ranch and FMRICO was for a 20-year term and was executed on July 31, 1991. The Ranch uses some of the accretions it generates under this augmentation plan to make up for gravel pit lake depletions; however, the DT Ranch has historically had significant volumes of excess accretions that DT Ranch would like to put to beneficial use. Excess accretions have averaged approximately 260 acre feet per year for the period from November 2000 through November 2007 for a total of 2,124 acre feet of water that could have been put to beneficial use on the ranch over this 7-year period of record.

Ultimately, we constructed an infiltration gallery along the South Platte River, just west of Weldona. The gallery, constructed of 200 yards of slotted pipe was installed in at the toe of the riverbank and the river channel at a location where water constantly flows. The channel in which our pipe was installed was filled naturally with the shifting sands of the river. Water from the gallery flows into a clearing well where silt and sand can settle and then to a pumping well where the water is pumped south to a surface ditch lateral for distribution throughout the property. Early tests indicated that the system was running well, capable of delivering 600 to 900 gallons per minute. Unfortunately, part of the

infiltration gallery was destroyed in the floods of September 2013 and has been inoperable since that time.

Wildlife Benefits:

We expect to see an increase in the use-days of dabbling ducks common to this portion of the South Platte River watershed.

Project Accomplishments:

Task 1 (**COMPLETE**)

- Description of task: Restore Wetlands
- Method or procedure that will be used or followed to accomplish the task and identify who will undertake the task:

DU completed a survey and design for the impacted area, identified on the attached map. A topographic survey will be developed using Trimble GPS technology. From the survey, maps will be produced using AutoCAD 2007 which will illustrate the 6" or 12" contours of the micro topography. Paragon's professional engineers will work with DT Ranch, to provide a detailed design of wetland impoundments, water level control structures, and water delivery infrastructure, including pipeline and well design.

The landowner will oversee construction of the project via a site-specific agreement with Ducks Unlimited. The project will need to follow all federal and state rules for procurement of any and all contractors.

- Description of the major deliverables/products that will be produced upon successful completion of the task:
 - Complete Project Specification including:
 - Survey and Design (Complete)
 - Water Court Filing and TWSSP (Not Complete)
 - The project was destroyed in September 2013, less than one year after completing construction. Water court filings were deemed unnecessary until the project is restored.
 - Construction Bid Package (Complete)
 - Construction of all infrastructure (Complete)
 - Final As-built drawings (Complete)

Task 2 (**COMPLETE**)

- Description of task: Protect the land and water with a conservation easement.
- Method or procedure that will be used or followed to accomplish the task and identify who will undertake the task:
 - 1) Execute a Purchase and Sale Agreement with landowner – (Complete)
 - 2) Submit a Preliminary Property Inspection Report to DU for approval – (Complete)

- 3) Contract with professionals to complete the required due diligence including:
 - a. Baseline Documentation Report – (Complete)
 - b. Mineral Remoteness Report – (Complete)
 - c. NEPA Phase I Report – (Complete)
 - d. Easement Appraisal – (Complete)
 - e. Title Commitment – (Complete)
- 4) Close and Record the Easement
 - Description of the major deliverables/products that will be produced upon successful completion of the task:
 - a. Copy of Purchase and Sale Agreement (Complete)
 - b. Copies of all final reports (Complete)
 - c. Copy of recorded easement deed and exhibits (Complete)

DT RANCH - INSERT FINAL PLAN SHEET 2 over aerial

Drake Land Farms – Headgate and Meadow Well Construction and Wetlands

Project Description:

The project is located at the South Platte River near Goodrich, CO in Morgan, County. It is comprised of similar habitats as mentioned for other properties in this application including riparian and warm-water sloughs. The property does exhibit a retired gravel pit formerly used to supply the county with pit run gravel for roads. The pit was retired in 2007 in anticipation of a conservation easement (not associated with this grant) to be held with Ducks Unlimited. We have now completed the conservation easement which was bargain-sale purchased by DU in June 2008. The property is protected in perpetuity.

CWCB funds was used to construct a large wetland recharge project and restored wetlands on the property. Drake Land Farms is a member of the CCWCD sub district, which provides water to cover evaporative loss from the gravel pit (94acft/year). Recently the club purchased 4 shares of Jackson Lake Reservoir and Ditch Company to provide water for part of the forthcoming augmentation plan.

Construction of the project included installation of a headgate well, one of the last approved before the State Engineer changed policies that eliminated such permits. We installed a large diameter pipe from the river to a complex of shallow water wetlands constructed for the purpose of providing recharge, exchange, and retiming of water with FMRICO. Additionally, we installed two wells within very close proximity to wetlands in order to pump water directly from the alluvial aquifer without causing significant lag depletions. Water from the various wells flows into several impoundments over 70 acres along the South Platte River riparian corridor.

Originally, the project was to be constructed in association with Central Colorado Water Conservancy District, but the site was insufficient for CCWCD needs. The landowners were able to work out an exchange agreement (attached separately) with FMRICO, to exchange Drake Land Farms Jackson Lake shares for FMRICO augmentation credits. Drake Land Farms receives credits accruing to the FMRICO augmentation plan in non-irrigation months and therefore unnecessary for augmentation of the FMRICO needs, and in return, FMRICO receives Jackson Lake irrigation water from the reservoir during irrigation months when demand for FMRICO is high. The decree for operating the Drake Land Farms project is 10CW134.

Wildlife Benefits:

Most of the South Platte's seasonal wetlands utilized by migratory waterfowl for spring and fall forage have been lost due to reduced over-bank river floods and agricultural encroachment. Improved foraging habitat is especially important to spring waterfowl migration. This indicates that high quality forage along the migration route is important for nest success. Waterfowl provided with high quality carbohydrates and proteins are placed in better condition before initiating a nest.

Project Accomplishments:

Task 1 - Conduct preliminary investigations into feasibility **(COMPLETE)**

Deliverables

- Core sample locations and report will be delivered by LSPWCD (Complete)
- A detailed preliminary report of findings for water availability (Complete)
- Conservation Agreements signed with landowners which is DU (Complete)

Task 2 - Conduct and complete a survey and design **(COMPLETE)**

Deliverables

- Detailed survey and design of the wetland project for the area. – (Complete)
- Provide a detailed bid package including all plans and specifications, and quantities for materials and equipment. (Complete)

Task 3 - Complete water engineering and water court filings **(COMPLETE)**

Deliverables

- Completed engineering details associated with the recharge plan. – (Complete)
- Copy of water court filings and substitute supply plan (A TSWP is not required due to the executed decree 10CW134. (Complete)

Task 4 - Construct wetland impoundments via contour levees, and install water level control structures. Contract construction components to eligible parties. Provide construction management oversight through to project completion. **(COMPLETE)**

Deliverables

- Ducks Unlimited will deliver a completed project capable of delivering recharge credits annually. (Complete)

Final Plan of wetland locations for Drake Land Farm

INSERT FINAL PLAN SHEET 2 OVER AERIAL PHOTO