Statement of Work

WATER ACTIVITY NAME – Use of ATMs to meet non-consumptive and consumptive needs in the Yampa Basin

GRANT RECIPIENT – The Nature Conservancy

FUNDING SOURCE – CWCB Alternative Agricultural Water Transfer Methods Grant Program

INTRODUCTION AND BACKGROUND
Provide a brief description of the project. (Please limit to no more than 200 words; this will be used to inform reviewers and the public about your proposal)

The Yampa-White Basin roundtable has completed a consumptive needs assessment and is working towards completion of a non-consumptive needs assessment as required by HB05-1177. This project is intended to build on the findings of these needs assessments to identify potential alternative agricultural transfer projects that could be used to meet needs for both non-consumptive and consumptive water uses in the Yampa Basin. Information from previous CWCB and basin roundtable studies will be used to identify candidate locations at which ATMs could be utilized for multipurpose projects meeting both non-consumptive and consumptive needs, with a specific focus on projects that meet environmental needs and agricultural shortages. Through combining this technical analysis with a targeted outreach and ground-truthing effort, the project will produce a report that describes favorable candidate locations for implementation of ATM projects and will describe in detail the ATM arrangement that would best facilitate the alternative water transfer in each candidate location. Thereafter, Applicant will begin implementation of recommended ATM projects.

Study Objectives and Overview

This effort is intended to build on the findings of the Yampa-White Basin needs assessments to identify potential projects and methods that could be used to meet non-consumptive and consumptive needs in the Yampa Basin. This effort will leverage existing studies funded by CWCB to identify the most favorable candidate locations for implementing ATM projects to meet non-consumptive and consumptive needs. The main targeted needs of this project will be environmental attributes and agricultural shortages. The project will examine available water rights and a variety of ATM mechanisms to ensure that the final report identifies the best candidates possible for ATM projects. The final report will serve as a blueprint for near-term implementation of a number of ATM projects, and in the long term, the analysis developed through this project will serve as a model for locating multipurpose projects that optimize water use in the Yampa basin.

Following are the study objectives for this project:

1. Identify locations in the Yampa Basin where ATM could help to meet non-consumptive needs and agricultural shortages
2. Analyze ATM transactions that might be used to meet multiple needs in specific candidate locations
3. Identify which ATM mechanisms are most suitable for meeting multiple purposes in each candidate location

4. Conduct outreach to water rights owners, governmental entities and other interests to gage, and develop, interest in ATM transactions
5. Produce a final report describing in detail the most favorable ATM transactions and describing the next steps for implementing each of those transactions
6. Begin working toward implementation of ATM transactions recommended in the final report.

Following is a summary of the tasks to be completed as part of the study and outreach effort:

Tasks include:

- Task 1 – Identify location and timing of non-consumptive and consumptive needs, with a focus on environmental needs and irrigation shortages
- Task 2 – Analyze possible ATM transactions that might be implemented to meet multiple needs in these locations, including analysis of timing and location of water availability through the ATM
- Task 3 – Identify the best ATM transaction for implementation in each location, taking into account the timing and location of water available through the ATM and the timing and location of the non-consumptive and consumptive need
- Task 4 – Conduct outreach to appropriate water rights owners, governmental entities and other interested parties
- Task 5 – Prepare a report describing the most favorable ATM transactions and identifying next steps to implement transactions
- Task 6 – Begin implementation of recommended ATM transactions

Task 1 – Identify Location and Timing of Non-Consumptive and Consumptive Needs
CDM ("Contractor") will utilize the following information to identify locations and timing of non-consumptive and consumptive needs in the Yampa Basin for a range of hydrologic conditions:

- SWSI 2010
- Irrigated lands from Colorado Decision Support System and reviewed during Yampa-White Ag Study
- Water short agricultural areas based on existing studies
- M&I Demands to 2050
- Environmental needs based on existing information from the Non-consumptive Needs Assessment, Watershed Flow Evaluation Tool, Priority Waters Project, and TU's Conservation Success Index. The flow evaluation tool will be used based on a range for each CDSS node. Flow amounts are generated based on attribute and location in the Non-consumptive Needs Assessment mapping. Up to three hydrologic periods will be simulated in CDSS. Contractor will identify areas where non-consumptive attributes would benefit from additional water.

Contractor will use above information to identify location and timing of water needs over three hydrologic periods. Once these needs have been identified at specific locations, areas with multiple uses can be determined.
Contractor will develop a brief technical memorandum summarizing the results of Task 1. In addition, Contractor will prepare GIS database of information gathered in this task.

Task 2 – Analyze Possible ATM Transactions
Based on information gathered in Task 1, Contractor will investigate the most appropriate ATMs for addressing multiple (non-consumptive and consumptive) water needs. The Contractor will use the CDSS to evaluate these options.

Alternative Transfer Methods to be examined include, but are not limited to, the following:

- Interruptible supply agreements
- Rotational fallowing
- Reduced crop consumptive use
- Deficit irrigation
- Purchase and leaseback
- Delivery system efficiency improvements
- Crop type changes
- Participation in water banking as that concept develops

Contractor will prepare an inventory of the water rights associated with candidate locations identified in this task and will analyze the timing and amounts of water that would be made available through application of an ATM to these water rights. In addition, Contractor will evaluate whether exchange potential exists to address a multi-purpose area. Contractor will investigate the timing of return flows from irrigated lands that may need to be taken into account when implementing an ATM . This task could involve use of the CDSS in a limited fashion to evaluate the feasibility of this.

Task 3 – Identify the Best ATM for Implementation in each Location
Building on the information gathered in Tasks 1 and 2, Contractor will identify the best ATM transaction for implementation in each location with multiple (non-consumptive and consumptive) water needs. In determining the best possible ATM transactions, Contractor will take account of the timing and location of water available through the ATM and the timing and location of the non-consumptive and consumptive need. For the candidate locations, estimates on amount of water and timing to address needs will be summarized. This information will be summarized using GIS information.

Contractor will prepare a brief technical memorandum summarizing the results of Tasks 2 and 3 and will map candidate locations.

Task 4 – Conduct Outreach to Appropriate Water Rights Owners, Governmental Entities and Other Interested Parties
Early in the project (concurrent with Task 1), Contractor, the Project Team and CSU Extension Office ("Project Partners") will conduct outreach to various governmental entities and water interests in the basin to provide information about the study and receive feedback and reactions. Later, based on information gathered through Tasks 1 through 3, the Contractor will identify specific landowners and water rights holders and other interested parties to contact regarding specific ATM transactions to meet multiple-purpose needs. The Project Partners will conduct outreach to these parties and will work to develop interest in the candidate ATM transactions. Also, the Project Partners will conduct outreach with a broad range of potential partners at the basin and statewide levels in order to build coalitions that can effectively muster the resources to successfully implement one or more pilot projects in the future.

Task 5 – Prepare a Report Describing the most Favorable ATM Transactions and Identifying Next Steps to Implement Transactions

Contractor will summarize information from Tasks 1 through 4 in a final report. The report will identify a number of the most favorable candidate locations for implementation of a multi-purpose ATM and will describe the ATM method or methods most suited to each location. The report will detail the ATM arrangement that Contractor recommends for each candidate location. It will identify whether any infrastructure may be needed to resolve multi-purpose needs, and it will describe steps necessary to implement the ATM.

Task 6 – Begin Implementation of Recommended ATM Transactions

With the report complete, Project Partners will work to develop the recommended ATM transactions. Implementation of recommended ATM transactions will require working partnerships with water rights holders and others and will also require financial resources. The Project Partners will work to bring in partners throughout the Yampa Basin and the state to assist in working towards implementation of the recommended transactions. As part of this grant request, the Project Team would like to reserve $10,000, as cash match from TNC and TU, to put towards implementation of a recommended ATM transaction, but will also seek further funding in the future from various sources and through partnerships should this amount be insufficient to begin implementation of a pilot.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to help promote the development of a common technical platform.

Yampa Basin
Last updated: June 29, 2011
Project Budget:

EXHIBIT A

Use of ATMs to meet nonconsumptive and consumptive needs in the Yampa River Bain

Total Costs

Tasks	Labor	Other Direct Costs	Project Costs	Total Project Costs
Task 1 - Identify Location of Non-consumptive Needs and Irrigation Shortages	$ 37,000	$ 908	$ 37,908	$ 37,908
Task 2 - Analyze Possible ATM Transactions	$ 24,180	$ 908	$ 25,088	$ 25,088
Task 3 - Identify the Best ATM for Implementation in each Location	$ 25,480	$ 1,008	$ 26,488	$ 26,488
Task 4 - Conduct Outreach to Appropriate Water Rights Owners, Governmental Entities and Other Interested Parties	$ -	$ -	$ -	$ -
Task 5 - Prepare a Report Describing the most Favorable ATM Transactions and Identifying Next Steps to Implement Transactions	$ 19,120	$ 1,196	$ 20,316	$ 20,316
Task 6 - Implementation of Recommended ATM Transactions	$ 10,200	$ -	$ 10,200	$ 10,200
Indirect Costs				$ 12,000
Total Costs	$ 115,980	$ 4,020	$ 120,000	$ 132,000

Labor Costs

Example Project Personnel	Project Manager	Project Engineer	Scientist	Graphics/Designer	Clerical	Total Costs
Hourly Rate:	$195	$150	$100	$80	$60	
Task 1 - Identify Location of Non-consumptive Needs and Irrigation Shortages	40	80	160		20	$ 37,000
Task 2 - Analyze Possible ATM Transactions	24	50	100	10	20	$ 24,180
Task 3 - Identify the Best ATM for Implementation in each Location	24	60	106		20	$ 25,480
Task 4 - Conduct Outreach to Appropriate Water Rights Owners, Governmental Entities and Other Interested Parties						$ -
Task 5 - Prepare a Report Describing the most Favorable ATM Transactions and Identifying Next Steps to Implement Transactions	16	40	60	20	40	$ 19,120
Task 6 - Implementation of Recommended ATM Transactions	20	14	30		20	$ 10,200
Total Hours:	124	244	456	30	120	974
Total Costs:	$24,180	$36,600	$45,600	$2,400	$7,200	$ 115,980

Other Direct Costs

Item	Copies (No.)	Materials	Equipment/ Supplies	Mileage (Miles)	Total
Unit Cost	$0.50/page	$	$	$0.51/mile	
Task 1 - Identify Location of Non-consumptive Needs and Irrigation Shortages	200	$ -	$ 400.00	800	$ 908
Task 2 - Analyze Possible ATM Transactions	200	$ -	$ 400.00	800	$ 908
Task 3 - Identify the Best ATM for Implementation in each Location	400	$ -	$ 400.00	800	$ 1,008
Task 4 - Conduct Outreach to Appropriate Water Rights Owners, Governmental Entities and Other Interested Parties	0	$ -	$ -	0	$ -
Task 5 - Prepare a Report Describing the most Favorable ATM Transactions and Identifying Next Steps to Implement Transactions	776	$ -	$ 400.00	800	$ 1,196
Task 6 - Implementation of Recommended ATM Transactions	0	$ -	$ -	0	$ -

EXHIBIT A

Total Units	1,576	$ -	$ 1,600.00	3,200	
Total Cost	$ 788	$ -	$ 1,600	$ 1,632	$ 4,020

The Nature Conservancy

CWCB Yampa ATM Budget Proposal

June 29, 2011

Activity	Applicant (TNC)	Cash Match (TNC)	3rd Party Cash Match (TU)	TOTAL PROJECT COSTS	In-kind Match (TNC)	3rd Party In-kind Match (TU)
Salary + Benefits						
TNC CO Water Program Manager	-	-	-	-	8,350	-
TNC Yampa Valley Project Director	-	-	-	-	3,501	-
TNC CO Water Project Director	-	-	-	-	3,123	-
TNC GIS Analyst, CO	-	-	-	-	628	-
TU Water Program Director	-	-	-	-	-	3,000
TU Yampa Valley Coordinator	-	-	-	-	-	3,000
Subtotal	-	-	-	-	15,602	6,000
Contracts (Camp, Dresser, McKee)	120,000	-	-	120,000	-	-
Outreach	-	5,000	-	5,000	-	-
Water Acquisition	-	5,000	5,000	10,000	-	-
Total Direct Costs	120,000	10,000	5,000	135,000	15,602	6,000
Indirect (10%)	12,000	-	-	12,000	-	-
Grand Total	**132,000**	**10,000**	**5,000**	**147,000**	**15,602**	**6,000**

EXHIBIT A

Yampa Basin
Last updated: November 1, 2011

Project Schedule:
Use of ATMs to meet nonconsumptive and consumptive needs in the Yampa River Bain

	2011	2012												2013					
Task	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Task 1 - Identify Location of Non-consumptive Needs and Irrigation Shortages																			
Task 2 - Analyze Possible ATM Transactions																			
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Yampa Basin
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Yampa Basin

Last updated: November 1, 2011

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Use of ATMs to meet nonconsumptive and consumptive needs in the Yampa River Bain

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