Exhibit A

SCOPE OF WORK

FOR

UPPER BIG SANDY GROUND WATER MANAGEMENT DISTRICT WATER BALANCE

SECTION I

DESCRIPTION OF WORK

The Upper Big Sandy Water Balance project will consist of three major tasks, described below. The purpose of the project is to obtain and analyze additional data which will assist the Upper Big Sandy Ground Water Management District in their decision-making role. The first step is to obtain additional information through the collection of field data. The second step is to conduct a member survey and additional research to obtain more data on precipitation, streamflow, and uses of the alluvial ground water. The third step is to use the information obtained from previous studies constructed by other consultants and governmental agencies along with the data collected during this project to revise and update a water balance for the Upper Big Sandy Ground Water Management District.

Task 1 – Field Work

The first task involves field work including:

- The advancement of multiple test holes and/or ground water monitoring wells during a three-day period, near the downstream end of the Basin to allow for detailed geologic logs and water level data collection. Water level data can then be compared to stream observations and/or measurements.
- Slug testing of existing and newly constructed ground water wells to obtain site-specific hydraulic parameters including the hydraulic conductivity of the alluvial aquifer.

The installation of additional ground water monitoring wells near the downstream end of the Upper Big Sandy Ground Water Basin will provide data to be used in the quantification of the underflow leaving the Basin. Additionally, the collection of site-specific geologic and hydrogeologic data obtained during test hole and monitoring well boring will allow for interpretation of the width of the alluvium which is essential in storage volume and available water calculations. Slug testing existing and newly constructed ground wells will provide defensible data for various hydraulic parameters including hydraulic conductivity to be used in the water balance.

Work will be conducted by Mr. Phillippe Martin and Mr. Bill Berg, geologists with Martin and Wood Water Consultants, Ms. Cristy Radabaugh, an engineer with Martin and Wood Water Consultants and by subcontractors such as licensed drilling companies. Mr. Martin and Mr. Berg will provide technical oversight during the test hole drilling and monitoring well installation. Ms. Radabaugh and Mr. Berg will perform slug tests on the ground water monitoring wells and will analyze the data to determine site-specific hydraulic parameters.

Deliverables for this task will include a letter report describing the well installation and the results of the field testing, and any problems encountered.

Task 2- Member Survey

The second task involves collection of additional data through research and member surveys as described below.

- Conduct a survey of members to determine if there are those willing to collect precipitation data, streamflow observations, and well measurements. Also, collect data during the survey on short-term pond water storage/stock watering (via recording of number of head of stock owned).
- Obtain ground water level data from wells throughout the District (via cooperating District members), including data following storms.
- Obtain precipitation data from multiple locations, including the eastern and western extents of the District and incorporate this data into the revised water balance.
- Perform collation and analysis of the data.

This work will be led by Mr. Martin with assistance from Ms. Radabaugh and Mr. Berg. Additionally, the District will facilitate communication between Martin and Wood through meetings and review of any materials to be sent to the members.

There are no deliverables associated with this task, but project personnel will communicate with the District regarding progress and any issues that arise via meetings, conference calls, phone calls, and email.

Task 3 –Water Balance

The purpose of the project is to create a water balance that considers the inflows and outflows within the Basin to determine the sustainable yield of the alluvial water supply. Mr. Martin, Ms. Radabaugh, Mr. Berg, and Ms. Johnson will work together to accomplish the following subtasks which lead to the completion of the Basin water balance.

- Update and revise the well database and well classification work started in 2004.
- Revise alluvial aquifer extent and alluvial cross sections based on revised well classifications and the additional data collection.
- Analyze the current or recent alluvial water levels and aquifer saturated thicknesses.
- Compare all precipitation data and obtain additional data applicable to the entire Basin.
- Conduct phreatophyte consumptive use analysis including electronic calculation in GIS of the estimated total area populated by phreatophytes.
- Reevaluate the irrigation application rate utilizing parameters felt to be more appropriate to the practices in the field.
- Conduct analyses and provide new estimates of hydraulic conductivity, transmissivity, specific yield, and recoverable volume in storage based on field data and on the application of published appropriate ranges of values.
- Evaluate test hole and monitoring well data to develop a more reliable and refined cross-section of the Basin at the downstream end of the District and estimate the underflow leaving the District.
- Develop recommendations for future geophysical data collection which may help the District in further defining the alluvial extent throughout the Basin.

- Evaluate the significance of surface flows and surface runoff in the water balance and develop recommendations as to whether the District should pursue related additional data collection.
- In recognition of the presence of wetlands, threatened species, and other environmental needs, consider the effects that any calculated potential change in water levels could have.
- If time and funding allow, determine defensible values for a range of inputs to the water balance including, but not limited to, irrigated acreage return flow, wastewater return flow, municipal consumptive use, and municipal pumping volumes.

This work will be led by Mr. Martin with assistance from Ms. Radabaugh, Mr. Berg, and Ms. Johnson. Additionally, the District will facilitate communication between Martin and Wood through conference calls.

Deliverables associated with this task include a draft and final report describing the water balance and Martin and Wood's technical conclusions. Additionally, all data will be provided to the District for their future use of the water balance as a management tool.

SECTION II

PERSONNEL

There are three main personnel for this project: Mr. Martin, Ms. Radabaugh, and Mr. Berg. Additional technical support will be provided by other Martin and Wood staff members including Mr. Joe Tom Wood, P.E., and Ms. Michelle C. Johnson.

Phillippe L. Martin, P.G., C.P.G., Geologist (Project Manager)

Phillippe L. Martin, C.P.G., has 24 years experience in work relating to ground water geology and all aspects of ground water resource evaluation. His work has included many ground water supply assessments in various hydrogeologic environments. He has extensive experience in the design and construction observation of shallow and deep high-capacity water supply wells, design of ground water monitoring well systems, borehole geophysical log interpretation, computer modeling of ground water flow and dewatering systems, stream depletion analyses, geostatistical analyses of ground and surface water data, well and aquifer testing, and analytical analysis of flow systems. He has supervised or carried out ground water monitoring studies, well optimization and interference analyses, well rehabilitation projects, and water quality sampling. Mr. Martin's significant computer programming experience has included writing of numerous programs relating to flow model input or output control, aquifer testing, intermittent cyclic well pumping, ditch leakage, aquifer mass balance, and reservoir routing. Mr. Martin is a Registered Geologist in Wyoming (PG-1318), is a Certified Professional Geologist (American Institute of Professional Geologists, CPG-7444), and has been qualified as an expert witness in Division I Water Court, Summit County District Court, and Jefferson County District Court. Mr. Martin will serve as the Project Manager and lead geologist/hydrogeologist on this project.

Joe Tom Wood, P.E., Water Resources Engineer (Technical Advisor)

Joe Tom Wood, P.E. is the president of Martin and Wood Water Consultants, Inc. and has nearly 40 years experience as a water resource engineer. Mr. Wood's experience includes water supply and demand analyses for municipalities and agriculture uses, evaluation of watershed yields, studies of historical uses of water rights including crop consumptive use, channel and river hydraulic analysis and design, studies of rainfall and snowmelt flood hydrology, and design of drainage systems. Mr. Wood is a licensed professional engineer in Colorado and has worked in all areas of the state. He brings both technical breadth and depth to the project. Mr. Wood will serve as the Technical Advisor for the project.

Cristyn R. Radabaugh, P.E., Water Resources Engineer (Staff Engineer)

Cristyn R. Radabaugh, P.E. has seven years experience with ground and surface water analyses. She is directly involved with water resource and water quality analyses, changes of water rights, historical use analyses, design and implementation of augmentation plans, alluvial recharge studies, dewatering system analyses, ground water modeling, monitoring well installation and development, slug testing, and Geographic Information Systems (GIS) applications related to water resources. Ms. Radabaugh's experience includes ground water and surface water sampling, stream flow measurements and calculations, data compilation and evaluation, aquifer parameter analyses, technical reporting, consumptive use analyses including crop requirements,

water rights accounting including stock depletions and return flows, and optimization of monitoring programs. Ms. Radabaugh is a licensed professional engineer in Colorado and will serve as a Staff Engineer.

William R. Berg, Geologist (Staff Geologist)

William R. Berg has nine years experience in work relating to surface and groundwater geology. Mr. Berg has extensive experience in the design, implementation, and management of hydrogeological field investigation programs including the design and construction observation of shallow monitoring and observation wells and both shallow and deep high capacity water supply wells along with water quality sampling, analysis, and interpretation. His field experience includes step tests, 24-hour tests, recovery tests, equilibrium tests, packer tests, slug tests, tracer tests, ground water sampling, surface water sampling, and soil sampling. Other technical experience includes stream depletion analyses, ground water resource assessments, bore hole geophysical interpretation, the design, implementation, and management of hydrogeological field investigation programs including soil and rock coring, logging, and sampling. He has designed, constructed, and calibrated both 2-D and 3-D ground water analytical models. Mr. Berg will serve as a Staff Geologist on this project.

Michelle C. Johnson, Geologist (Project Geologist)

Michelle Johnson has five years experience as a hydrogeologist. Ms. Johnson's ground water experience includes small- and large-scale ground water resource assessments, stream depletion analyses, well efficiency analyses, monitoring well installation, well design and construction, geophysical log interpretation, aerial photo interpretation, flow tests, and well permitting. Ms. Johnson has also conducted extensive hydrogeologic fieldwork including geologic mapping, structural interpretation, well construction observation, well production testing, soil and core sampling, GPS data collection, and water sampling. Ms. Johnson's surface water experience includes water resource and water quality analyses, historical consumptive use analyses, plans for augmentation, and future use studies. Ms. Johnson is proficient in GIS using the ArcInfo and ArcGIS software and serves as Martin and Wood's office expert for such software. Ms. Johnson will provide GIS expertise and will assist with geologic mapping and the creation of cross-sections, phreatophyte analyses, and return flow calculations. Ms. Johnson will serve as a Project Geologist.

Additional Personnel

In addition to the Martin and Wood personnel working on this project, a licensed drilling company will be used during the monitoring well and soil boring phase of the field work.

SECTION III

PROJECT BUDGET

The budget for the Upper Big Sandy Water Balance project presented in the tables below. The Upper Big Sandy Ground Water Management District is proposing $5,000 in matching funds toward the total project costs, so this funding request is for $45,000.

Summary of Costs

Summary of Costs by Task		
Task 1	$	17,953
Task 2	$	7,697
Task 3	$	22,350
Summary of Costs by Category		
Labor Costs	$	39,205
Anticipated Increase in Labor Costs (5%)	$	2,000
Other Costs	$	8,795
PROJECT TOTAL	**$**	**50,000**
Matching Funds	**$**	**5,000**
Requested Funds	**$**	**45,000**

Please note that this project represents a portion of work which was included in a previously submitted grant application (Severance Tax Trust Fund Operational Account application filed with the Colorado Water Conservation Board in January 2007). Any money received from the Severance Tax Trust Fund will be used to further expand the work proposed in that scope and duplication of previous or on-going work between the two projects will be avoided. Martin and Wood would work with Upper Big Sandy on the project described herein and the project that could be funded from the Severance Tax Trust Fund allowing the data and analyses from the first project to be built upon during the second project, if both projects are funded. Additionally, the Severance Tax Trust Fund application included additional tasks if funding allowed, so if 100 percent of the funding requests are granted, additional work will be performed.

Labor Cost Breakdown by Task

TOTAL LABOR COSTS					$ 38,785
	Time (hours)			Total	
Employee Type	**Staff**	**Project**	**Manager**	**Time**	**Cost**
Billing Rate	**105**	**115**	**165**	**--**	**--**
Task 1 - Well Installation and Field Measurements					
Set-up drilling, field mark locations, utility locates	12	0	2	14	$ 1,580
Obtain well permits	2	0	0	2	$ 210
Install alluvial wells and shallow borings	36	0	8	44	$ 5,060
Create well completion reports	6	2	0	8	$ 860
Setup slug testing	4	0	0	4	$ 420
Perform slug testing (including travel time)	20	0	0	20	$ 2,100
Subtotal	**80**	**2**	**10**	**92**	**$ 10,230**
Task 2 - Member Survey and Data Collection					
Prepare meeting agenda and minutes	2	0	1	3	$ 370
Create member survey and distribute	6	0	2	8	$ 950
Attend public meeting and one Board meeting	2	0	3	5	$ 690
Travel to/from meetings	3	0	6	9	$ 1,275
Collect survey results and input data to database	12	0	8	20	$ 2,540
Evaluate survey data and other precip resources	12	0	0	12	$ 1,260
Subtotal	**37**	**0**	**20**	**57**	**$ 7,085**
Task 3 - Technical Analyses for Water Balance					
Create Well Database	16	4	2	22	$ 2,460
Revise alluvial extent and cross sections	16	4	4	24	$ 2,780
Perform phreatophyte CU analysis using GIS maps	6	2	2	10	$ 1,180
Investigate importance of ponds, return flows, stock	4	2	2	8	$ 970
Estimate aquifer parameters based on field data and research	16	0	4	20	$ 1,160
Evaluate environmental effects due to changes in water table	8	0	2	10	$ 1,160
Recommend future geophysics/field data	4	0	2	6	$ 740
Modify efficiency percentages	2	0	0	2	$ 210
Evaluate surface flows and surface runoff	4	0	4	8	$ 1,060
Redo/check water balance	8	2	2	12	$ 1,390
Write report on results and data inputs	24	0	16	40	$ 5,080
Edit/revise/review report internally	4	0	6	10	$ 1,380
Copy and distribute Draft Report	4	0	0	4	$ 420
Incorporate comments on Draft Report	4	0	4	8	$ 1,060
Copy and distribute Final Report	4	0	0	4	$ 420
Subtotal	**116**	**14**	**48**	**178**	**$ 21,470**

Other Project Costs by Task

TOTAL OTHER PROJECT COSTS				$ 8,815
	Quantity	**Unit**	**Unit Price**	**Cost**
Task 1 - Well Installation and Field Measurements				
Drilling Contractor Mobilization/Demobilization Costs	1	Lump	400	$ 400
Drilling Contactor Daily Costs	3	Days	2000	$ 6,000
Mileage (Genesee to Limon, two employees, 40 miles field travel)	450	Miles	0.55	$ 248
Meals and Lodging (during drilling)	4	Days	90	$ 360
Equipment Rental	3	Days	140	$ 420
Mileage (Genesee to Limon, one employee, 40 miles field travel)	250	Miles	0.55	$ 138
Meals and Lodging (during slug testing)	2	Days	90	$ 180
Subtotal				**$ 7,745**
Task 2 - Member Survey and Data Collection				
Mileage (Genesee to Limon, two roundtrips)	400	Miles	0.55	$ 220
Meals	20	Meal	5	$ 100
Copies/Printing	1	Lump	200	$ 200
Postage (U.S. Mail)	210	Letters	0.43	$ 90
Subtotal				**$ 610**
Task 3 - Technical Analyses for Water Balance				
Copies/Printing	1	Lump	400	$ 400
Postage (U.S. Mail)	20	Packages	3	$ 60
Subtotal				**$ 460**

SECTION IV

SCHEDULE

The schedule presented below is tentative and is subject to change during the project and due to the notice to proceed. All drilling and field work is weather-dependant and will be conducted when the appropriate subcontractors and equipment are available.

Task	Start Date	Completion Date
Notice to Proceed/Funding Approval	--	April 1, 2008
Task 1 - Drilling and Field Work	April 1, 2008	June 15, 2008
Task 2 - Member Survey and Data Collection	April 1, 2008	October 20, 2008
Task 3		
Water Balance – Analyses	May 15, 2008	November 3, 2008
Water Balance – Draft Report	July 1, 2008	November 14, 2008
Water Balance – Comment Period (two weeks)	November 17, 2008	November 28, 2008
Water Balance – Final Report	November 25, 2008	December 12, 2008

Section V
PAYMENT

Payment will be made based on actual expenditures and invoicing by the water activity sponsor. The request for payment must include a description of the work accomplished by major task, and estimate of the 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 CWCB in hard copy and electronic format as part of the project documentation.