COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 721
Denver, CO 80203

August 7, 2014

La Plata County Water Conservancy District
c/o Eric Bikis, Project Manager
P.O. Box 1036
Durango, CO 81302

RE: Notice to Proceed – WSRA Grant – La Plata Water Conservancy District – Long Hollow Reservoir Compact Water Delivery Study in the Southwest River Basin

Dear Eric:

This letter is to inform you that the purchase order request for the WSRA grant to assist in the Long Hollow Reservoir Compact Water Delivery Study in the Southwest River Basin was approved on August 6, 2014.

With the executed purchase order, you are now able to proceed with the project and begin invoicing the State of Colorado for costs incurred through June 30, 2015. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 45 days. I wish you much success in your project.

Sincerely,

/s/

Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman St, Rm. 721
Denver CO 80203
(303) 866-3441, ext 3210 (office)
(303) 547-8061 (cell)
craig.godbout@state.co.us

Attachments

PURCHASE ORDER GRANTS GIVEN
STATE OF COLORADO
Department of Natural Resources

ORDER
Number: POGG1 PDAA 20150000000000000122
Date: 08/07/14
Description:
PDAA 2500 WSRA LONG HOLLOW RES WTR DEL STUDY SW BASIN

BUYER
Buyer: Vigil Dori
Email: dori.vigil@state.co.us

VENDOR
LA PLATA WATER CONSERVANCY DIST
PO BOX 1136
DURANGO, CO 81302

Contact: T.Obrien
Phone: 9705882288

**** IMPORTANT ****
The order number and line number must appear on all invoices, packing slips, cartons and correspondence

BILL TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718

DENVER, CO 80203

SHIP TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718

DENVER, CO 80203

SHIPPING INSTRUCTIONS
Delivery/Install Date:
F.O.B:
VENDOR INSTRUCTIONS:

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
1	G1000		0	$0.00	$38,000.00	☐

Description: PDAA 2500 WSRA LONG HOLLOW RES WTR DEL STUDY SW BASIN
Start Date: 08/06/14 End Date: 06/01/15

TERMS AND CONDITIONS
https://www.colorado.gov/osc/purchase-order-terms-conditions

REASONS FOR MODIFICATION
Change Order No: 1
Change Buyer

DOCUMENT TOTAL = $38,000.00

Exhibit A

Statement of Work

WATER ACTIVITY NAME – Long Hollow Reservoir Water Delivery Study

GRANT RECIPIENT – La Plata Water Conservancy District

FUNDING SOURCE – Basin Water Supply Reserve Account

INTRODUCTION AND BACKGROUND

The Long Hollow Reservoir Compact Water Delivery Study will help to understand stream characteristics of the La Plata River along the 4.5-mile reach between Long Hollow and the New Mexico state line stream gage. This work will develop a plan for reservoir releases and stream administration.

The 1922 Compact requires the State of Colorado to deliver half of the daily mean flow at the La Plata River at Hesperus gage to New Mexico the following day. Historically, Colorado has not always been able to satisfy this Compact due to a variety of factors, but primarily due to changing stream characteristics along the 31 river miles between the Hesperus and State Line gages. The Long Hollow Reservoir (LHR) is being constructed to help meet the Compact requirements. Releases from the reservoir will be made when streamflow in the La Plata is not sufficient to satisfy Compact requirements.

OBJECTIVES

It is expected that the proposed study will:

1) Help to administer Compact compliance.
2) Develop a plan for reservoir releases and stream administration.
3) Promote maximum use of state waters now and for future needs.

TASKS

Task 1: Review and evaluate available and pertinent gage data.

Description:

- The study will begin by reviewing and evaluating existing gage data to define existing stream characteristics.

Method:

- Review current and historical gage data provided by the Colorado Division of Water Resources and Bureau of Reclamation to help to understand historical stream flow trends.
- Compilation and analysis of existing data.

Deliverables:

- Findings will be included in a final report which will be provided CDWR, CWCB and others for future use.

Task 2: Collect stream flow measurements

Description:

- Multiple stream flow measurements will be collected at up to four locations along the 4.5-mile reach of the La Plata River (LPR) below the outlet works and the New Mexico state line to assess losing and gaining reaches under various flow conditions.

Method:

- Stream flow measurements will be taken at up to four locations at various river stages.
- Stream flows will be measured with a U.S. Geological Survey approved Type AA or Pigmy Current Meter.
- Data will be compiled and analyzed.

Deliverables:

- Results will be included in the final report and made available to CDWR, CWCB and others for future use.

Task 3: Evaluation of available well records.

Description:

- Evaluation of available well records will help to characterize subsurface conditions.

Method:

- Utilize the Colorado Division of Water Resources well database to research available well records in and around the area.

Deliverables:

- Results will be included in the final report and made available to SEO, CWCB and others for future use.

Task 4: Drill two exploratory test holes and install two piezometers

Description:

- Two exploratory test holes will be drilled to bedrock along the LPR between Long Hollow and the New Mexico state line. Piezometers will be installed and water level measurements will be monitored contemporaneously with stream flow measurements. This data will help characterize subsurface characteristics and the relationship between La Plata River flows and adjacent groundwater levels.

Method:

- A well contractor will drill into the LPR alluvium to bedrock.
- Perforated pipe will be installed to measure water levels.
- Data will be collected and compiled.

Deliverables:

- Results will be included in the final report and made available to CWDR, CWCB and others for future use.

Task 5: Review of geologic data and additional field mapping

Description:

- Geologic data and additional field mapping of the area will be collected and analyzed to compare losing and gaining stream reaches with hydrogeologic conditions and riparian vegetation.

Method:

- Review geologic maps of the LPR basin
- Conduct surveys of geology and vegetation

Deliverables:

- Results will be included in the final report and made available to SEO, CWCB and others for future use.

Task 6: Documentation and reporting

Description:

- All data will be analyzed, compiled, and included in a final report. The report will summarize findings of the study. These findings will be used to assist in the development of a release plan for the LHR in order to meet compact requirements.

Method:

- Final report for the project
  - Report will include spreadsheets, graphs, mapping, and other formats to best represent the study methods and results.

Deliverables:

- A final report will be provided in hard copy and electronic format.
- Report will be made available to LPWCD, CWCB, CWDR and other entities as appropriate.

REPORTING AND FINAL DELIVERABLE

See Task 6 above.

BUDGET

The proposed project will be completed by Bikis Water Consultants, LLC which has extensive experience with LHR, the La Plata River and specific water rights concerns. Support and guidance will be provided, as needed, by CDWR who will assist with collection of stream flows and provide input on results of the study. The LPWCD Board, ditch companies and water rights owners will provide historical input and comments on the study results as an in-kind contribution. Qualifications of key personnel are available upon request.

Table 1. Total Costs				
Task	Labor Cost	Direct Cost	Total Costs	In-Kind
	(1)	(2)	(3)	(4)
1. Review and evaluate available and pertinent gage data	$2,945	$295	**$3,240**	CDWR
2. Stream flow measurements	$8,455	$845	**$9,300**	CDWR LPWCD
3. Evaluation of well records	$1,381	$138	**$1,519**	-
4. Drilling of two exploratory test holes and installation of piezometers	$17,136	$235	**$17,371**	-
5. Geologic review and mapping	$1,773	$177	**$1,950**	-
6. Documentation, Reporting and Recommendations	$4,182	$418	**$4,600**	CDWR
Total Costs	**$35,871**	**$2,109**	**$37,980**	-
Basin Grant			**$38,000**	-
LPWCD Matching Funds			$10,000	**LPWCD**
CDWR Matching Funds			$4,590	**CDWR**
Total Matching Funds			**$14,590**	-
Total Project Costs			**$52,590**	-

Notes:

(1) Labor costs shown in Table 1a (below).

(2) Direct Costs equal 10% of labor costs (excluding Legal). Direct costs include mileage, copies, software, travel time, etc.

(3) Total Project Cost equals sum of columns 1 and 2.

Table 1a. Budget per Personnel				
Task	Prof Staff	Tech & Admin	Driller	Total
	(1)	(2)	(3)	(4)
1. Gage data	$2,240	$1,000	$0	**$3,240**
2. Stream flow measurements	$6,400	$2,900	$0	**$9,300**
3. Well records	$829	$690	$0	**$1,519**
4. Exploratory test holes/piezometers	$1,800	$550	$15,000	**$17,350**
5. Geologic review and mapping	$1,200	$750	$0	**$1,950**
6. Reporting	$2,800	$1,800	$0	**$4,600**
Total Costs	**$15,269**	**$7,690**	**$15,000**	**$37,959**

Notes:

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Total Costs	**$15,269**	**$7,690**	**$15,000**	**$37,959**

Notes:
(1) Professional staff includes project manager and support staff. Rates range from $65/hr to $175/hr.
(2) Technicians and Administrative Assistant rates range from $44/hr to $60/hr.
(3) Driller costs are a lump sum of $15,000 for the project for construction of 2 piezometers.
(4) Equals sum of columns 1 through 3.

SCHEDULE

Task	Start Date	Finish Date
1. Review and evaluate gage data	Upon NTP	NTP + 2 months
2. Stream flow measurements	Upon NTP	NTP + 9 months
3. Evaluate well records	Upon NTP	NTP + 3 months
4. Drill test holes and install piezometers.	Upon NTP	NTP + 5 month
5. Documentation and Reporting	Upon NTP and completion of tasks 1 through 4.	NTP + 9 months
Total Project	**NTP**	**NTP + 9 months**

NTP= Notice to Proceed