STATE OF COLORADO

Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman Street, Room 721
Denver, Colorado 80203
Phone: (303) 866-3441
Fax: (303) 866-4474
www.cwcb.state.co.us

May 27, 2009

Florida Canal Company
c/o Wright Water Engineers, Inc.
1666 N. Main Ave, Suite C
Durango, CO 81301

RE: Notice to Proceed—Florida Canal, Florida Canal Enlargement, Florida Co-operative Ditch, and Florida Farmers Ditch Loss, Hydropower, and Monitoring Improvement Program

Dear Mr. Foster:

This letter is to inform you that the contract for your grant request of $100,000 to assist in the funding of Florida Canal, Florida Canal Enlargement, Florida Co-operative Ditch, and Florida Farmers Ditch Loss, Hydropower, and Monitoring Improvement Program was signed on May 26, 2009. An original signed copy of the contract will be mailed to you.

With the executed contract, you are now able to proceed with the project and begin invoicing the State of Colorado for costs incurred from May 26, 2009 through June 30, 2011. 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/
Greg Johnson, CWCB
Intrastate Water Management and Development
(300) 866-3441 x3249
Greg.johnson@state.co.us

To. Weston Wenegar ph # 703-906-2801

WATER CONSERVATION BOARD
1313 SHERMAN STREET, ROOM 721
DENVER, CO 80203

Buyer: MAGGIE VAN CLEEF
Phone Number: 303-866-3292
Agency Contact: DORI VIGIL
Phone Number: 303 866 3441

DATE: 05-26-09

IMPORTANT
The PO# and Line # must appear on all invoices, packing slips, cartons and correspondence

ACC: 05-22-09

PURCHASE ORDER
STATE OF COLORADO

P.O. # OE PDA 09000000115 **Page#** 01

State Award #

BID #

FEIN 840204317 **Phone:** 970-259-8471
Vendor Contact: PETER FOSTER/WWE
Purchase Requisition #:

VENDOR
FLORIDA CANAL COMPANY
908 SPRUCE DRIVE
DURANGO CO 81301-4427

Invoice in Triplicate
To: DIVISION OF WATER CONSERVATION
1313 SHERMAN STREET, ROOM 721
DENVER, CO 80203

Payment will be made by this agency

Ship To: DIVISION OF WATER CONSERVATION
1313 SHERMAN STREET, ROOM 721
DENVER, CO 80203

Delivery/Installation Date: 06-30-11
F.O.B. DESTINATION STATE PAYS NO FREIGHT

INSTRUCTIONS TO VENDOR:

1. If for any reason, delivery of this order is delayed beyond the delivery/installation date shown, please notify the agency contact named at the top left. (Right of cancellation is reserved in instances in which timely delivery is not made.)
2. All chemicals, equipment and materials must conform to the standards required by OSHA.
3. NOTE: Additional terms and conditions on reverse side.

SPECIAL INSTRUCTIONS:

LINE ITEM	COMMODITY/ITEM CODE	UNIT OF MEASUREMENT	QUANTITY	UNIT COST	TOTAL ITEM COST
001	96134000000				$100,000.00

WSRA GRANT -PLEMENTAION OF A STRUCTURA, CONSUMPTIVE WATER STUDY - DITCH LOSS, HYDROPOWER AND MONITORING PROGRAM.

DOCUMENT TOTAL = $100,000.00

THIS PO IS ISSUED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS
This PO is effective on the date signed by the authorized individual.
EPSFG PAA

FOR THE STATE OF COLORADO

Authorized Signature

5/26/09
Date

DP-01 (R-02/06)

WWE
Wright Water Engineers, Inc.
1666 N. Main Avenue, Suite C
Durango, Colorado 81602
(970) 259-7411 TEL
(970) 259-8758 FAX

www.wrightwater.com
e-mail:pfoster@wrightwater.com

April 26, 2009

Via Email: gregory.johnson@state.co.us

Greg Johnson
Colorado Water Conservation Board
Intrastate Water Management and Development
1580 Logan Street, Suite 600
Denver, CO 80203

Re: Scope of Work

Dear Mr. Johnson:

As requested here is a narrative scope of work with the addition of the payment language discussed. An amended Table 1 is provided with an extra column that details the expenditure of WSRA funds for each line item totaling $100,000. The WSRS expenditures reflected are based on the anticipated Bureau of Reclamation award in May. If that changes some of the WSRA expenditures might be shifted from Task 3 to Task 2 at that time. A signed W-9 form is attached for the Florida Canal Company which has been designated as the lead entity for the grant.

Task 1 – Canal seepage losses

Canal seepage losses in the Florida Canal and Florida Farmers Ditch to Pastorius Reservoir will be determined using canal discharge measurements and water accounting of individual diversions. Some of the ramp flumes may not measure discharge accurately; therefore, as part of the water accounting task, discharge measurements will be made at selected ramp flumes, and the rating tables will be verified for these flumes. Soil types will be overlaid on GIS coverages to determine areas with the most permeable soils. Seepage losses will be determined for selected canal laterals located on more permeable soils.

The sections of canal and ditches outlined in the R&B Study for lining will be prioritized in order of the highest seepage areas first. The canal and ditch seepage study and associated prioritization will provide a basis and starting point for future canal and ditch lining projects.

Task 2 – Purchase and install telemetry for seven gaging sites, design and installation of three water measuring devices, and installation of automated gates.

Canal discharge monitoring using telemetry equipment will be purchased and installed for seven sites: 1) Florida Canal inflow at the confluence, 2) Florida Farmers Ditch inflow at the confluence, 3) Florida Canal outflow from the confluence, 4) Florida Farmers West outflow at the confluence, 5) Florida Farmers West inflow to Pastorius Reservoir, 6) outflow from Pastorius Reservoir and 7) the end of the Pine Ditch. The locations of these sites are shown in Figure 2.

The raw data will be uploaded to the USBR master data base in Provo, Utah, for viewing of historical data, archiving, and back up.

Three water measuring devices will be designed and installed (see Figure 2). The locations of the water measuring devices are as follows: 1) Florida Farmers West inflow into Pastorius Reservoir, 2) at the outlet from Pastorius Reservoir and 3) at the end of the Pine Ditch. This task includes the design and installation of the water measuring devices.

Three automated gates will be installed at the following locations (see Figure 2): 1) Florida West outflow from the confluence, 2) outfall of Pastorius Reservoir, and 3) at the headgate of the Pine Lateral.

Task 3 – Hydropower

Review hydropower sites selected by the USBR as part of the R&B Study. Identify additional hydropower sites based on water yield, hydraulic elevation, location of existing electrical infrastructure, site access, water rights, and environmental constraints. Assess revenue generation from current rates provided by the electrical utility.

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 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 the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

If you have any questions, please feel free to call.

Very truly yours,

WRIGHT WATER ENGINEERS, INC.

By _____
Peter R. Foster P.E.
Project Manager

Attachment(s)/Enclosure(s)
Table 1 Grant Budget w/WSRA expenditures
W-9 Form

cc:
John Ey, FWCD
Charles McCoy
Justin Catalano

P:\061-110\040\Proposals\Local Roundtable\CWCB Contract\Amended budget and scope for Greg Johnson 4-26-09\scope of work amended 4-26-09.doc

Table 1
Florida Mesa Canal Companies Water Loss Reduction Project
Itemized Budget

			Cost per Unit	Unit	Quanitity	Cost	WSRA
Task 1	**Ditch Loss Study**						
		Labor (see attached labor breakdown Table 2)				$44,875	$44,875
		Equipment				$2,500	$2,500
		Direct Costs				$3,316	$3,316
		In-Kind	25		140	$3,500	
	Total Ditch Loss Study					**$54,191**	**$50,691**
Task 2	**Telemetry**						
		Float Pulley Assembly	$520		7	$3,640	
		CR-1000 w/ 15 channels	$1,430		1	$1,430	
		CR-850 w/ 4 channels	$1,340		3	$4,020	
		Radio	$455		4	$1,820	
		RF Modem	$390		4	$1,560	
		Mast and Antenna	$130		4	$520	
		Fiberglass Box	$300		7	$2,100	
		Wiring Panel	$260		4	$1,040	
		Solar Panel and Battery	$496		4	$1,984	
		Miscellaneous	$325		7	$2,275	$1,800
		Subtotal Telemetry Equipment				**$20,389**	**$1,800**
		Telemetry-Labor	$90		40	$3,600	
		Telemetry-Cleaning out existing wet wells	$300		4	$1,200	
		Subtotal Telemetry Labor				$4,800	
	Telemetry Labor and Equipment					**$25,189**	**$1,800**
	Automated Gates						
		Master Site Hardware	$3,808		1	$3,808	
		Control Site Hardware	$8,500		3	$25,500	
		24 VDC Actuator Motor	$6,000		3	$18,000	
		Subtotal Automated Gates Equipment				**$47,308**	
		Master Site Labor	$3,820		1	$3,820	
		Control Site Labor	$6,510		3	$19,530	
		Labor Trenching	$1,000		3	$3,000	$2,500
		Subtotal Automated Gates Labor				**$26,350**	**$2,500**
	Automated Gates Labor and Equipment					$73,658	$2,500
	Measuring Devices						
		Excavation	$125	$/hr.	18	$2,250	$2,250
		Labor	$35	$/hr.	112	$3,920	$3,800
		Well houses	$2,211	$/hse	2	$4,422	$4,000
		Drawings/Design	$55	$/hr.	18	$990	$990
		Travel per Diem	$150	$/day	10	$1,500	$1,500
		Concrete	$150	$/yd	19.5	$2,925	$2,925
		Culverts	$79	$/ft.	30	$2,370	$2,300
		Piping	$15	$/ft.	126	$1,890	$1,890
		Rebar	$15	$/ft.	100	$1,500	$1,500
		Valves and Fittings				$1,067	$845
	Measuring Devices Total Labor and Equipment					**$22,834**	**$22,000**
		Subtotal Total Water Activity Task 2				$121,681	$26,300
		Contingency 13%				$15,819	
		In-Kind	25	$/hr	100	$2,500	
	Total Water Activity Task 2					**$140,000**	**$26,300**
Task 3	**Hydropower**						
		Labor (see attached labor breakdown Table 3)				$22,851	$22,000
		Direct Costs				$3,453	$1,009
		Inkind	25	$/hr	16	$400	
	Total Total Water Activity Task 3					**$26,704**	**$23,009**
Total Project						**$220,895**	**$100,000**

Budget may have to be changed if USBR grant is not approved.

Table 2

Task 1: Ditch Loss Study

Wright Water Engineers, Inc. Labor Breakdown

Task	Project Personnel:	Project Engineer/ Manager	Civil Engineer / Hydrologist	Geologist	Drafting	Word Processing	Total Consultant Labor Cost
	Hourly Rate:	$171	$122	$98	$88	$71.5	
Task A	Perform Stream Gauging at selected sites includes 10 days of field work and preparation.	6	80		10		$ 11,666
Task B	Review and synthesize data collected in Task A and existing diversion records and ditch flow records kept by the canal companies and district.	6	40		10		$ 6,786
Task C	Overlay existing ditch system network on soils and geological mapping.	4	5	11	20		$ 4,132
Task D	Estimate ditch loss for canal sections	8	40	30	10		$ 10,068
Task E	Write Report	8	40	30	10	11	$ 10,854.5
Task F	Peer review, QA/QC	8					$ 1,368
	Total Hours:	40	205	71	60	11	387.0
	Total Cost:	$6,840	$25,010	$6,958	$5,280	$786.5	$ 44,874.5

Note: hourly estimates and rates may change during project, total labor charges will be held to tasks totals shown in Table 1 unless additional fees

Table 3

Task 3: Hydropower Feasibility

Wright Water Engineers, Inc. Labor Breakdown

Task	Project Personnel:	Project Engineer/ Manager	Civil Engineer / Hydrologist	Environmental	Drafting	Word Processing	Total Consultant Labor Cost
	Hourly Rate:	$171	$122	$148	$88	$72	
Task A	Review Hydropower sites proposed in USBR R&B Study.	5	10		20		$ 3,835
Task B	Identify additional Hydropower Sites based on water yield, hydraulic elevation, location of existing electrical infrastructure, site access, water rights and evironmental concerns	5	20	20	20		$ 8,015
Task C	Prioritize and select most promising sites.	5	20				$ 3,295
Task D	Assess revenue generation capabilities.	5	16				$ 2,807
Task E	Write Report		20	5		12	$ 4,044
Task F	Peer review, QA/QC	5					$ 855
	Total Hours:	25	86	25	40	12	188
	Total Cost:	$4,275	$10,492	$3,700	$3,520	$864	$ 22,851

		15%
Costs including travel, copies, phone, computer, plotting.	$	3,453
Total Labor and Costs	**$**	**26,304**

Note: hourly estimates may change during project, total labor charges will be held to tasks totals shown in Table 1 unless additional fees are authorized.

Table 4

Schedule of Work and Task Completion Milestone finish Dates

	2009				2010				Milestone Finish Date
	Jan-Mar	Apr-Jun	July-Sep	Oct-Dec	Jan-Mar	Apr-Jun	July-Sep	Oct-Dec	
Task 1 -Canal and ditch seepage loss study									
Tracer-dilution discharge measurements of large canals		X	X	X					
Download and format available data from DWR website		X	X						
Obtain available data from Florida Water Conservancy District and Ditch Companies		X	X						March 31, 2010
Tabulate and graph available data		X	X						
Calculate ditch losses between known points using available data			X						
Compile seepage loss data, enter data into GIS			X	X	X				
Prioritize canal and ditch lining sections based on estimated seepage.				X	X				
Task 2 - Purchase and Install Telemetry and Water Measuring Devices									
Purchase equipment and supplies		X	X	X	X				
Install telemetry		X	X	X	X			X	December 31, 2010
Install Water Measuring Devices		X		X	X			X	
Install Automated Gates		X	X	X	X			X	
Task 3 - Phase 1, Hydropower Feasibility									
Investigate previous hydropower feasibility studies on Florida Mesa from BOR R&B study		X	X	X					
Propose hydropower sites		X	X	X					March 31, 2010
Reconnaissance site investigations, surveying, preliminary geotechinical		X	X	X	X				
Report on Preliminary Engineering/Feasibility				X	X				