TTG TST
CONSULTING ENGINEERS

GREATROCK NORTH WATER AND SANITATION DISTRICT
ENGINEER'S REPORT
May 22, 2014

Concentrate Disposal and Stream Reclassification

Doug Camrud, of the Water Quality Control Division, spoke with Sarah Johnson, of the Division's Standards Unit regarding the possibility of reclassification. Doug instructed me to contact Sarah to discuss the possibility and the process.

Cla-Val Units at Pump Stations

iSiWest, Inc. is scheduled to perform the maintenance on June 10 and June 11. The service has been coordinated with Ramey Environmental Compliance.

Fire Hydrant Maintenance and Repairs

Five RFPs were issued to pre-qualified contractors. Two contractors submitted proposals. A summary of the proposals and a recommendation of award are included with this report.

Rocking Horse Farms Tank Repainting

I will present a change order recommendation for the flanged screen on the tank overflow pipe to the Board at the meeting.

Relocation of Water Meters in Rocking Horse Farms

Associated with the curb stop inspection, exercising, and repairs in the most recent Action Items matrix, Ramey Environmental Compliance is attempting to locate the five (5) remaining curb stops. Jeff Rabas and I will review those locations and discuss the next steps on June 10 while on-site for the Cla-Val service appointment. Two items to be addressed are 1) existing water service line diameter and 2) distance each existing curb stop is from the property line.

EDOP Compliance

Ramey Environmental Compliance has drafted the 2013 Annual Report for me to review.

Other Activities

Blending to Improve Water Quality: On November 11, 2013 TLECC modified the programming code to allow the RO run time to be operator defined. The timer now ranges from 0 to 1,440 minutes (24 hours) and is currently set at 240 minutes (4 hours) – up from the 30 minutes previously established. Ramey Environmental Compliance sampled for total dissolved solids at each tank site in January and March to determine the impact of this change in operation. Below are results:

	March 5, 2014	January 8, 2014	October 28, 2013
Box Elder Creek Ranch	586 mg/l TDS	553 mg/l TDS	677 mg/l TDS
Rocking Horse Farms	543 mg/l TDS	559 mg/l TDS	643 mg/l TDS
Greatrock North	566 mg/l TDS	575 mg/l TDS	594 mg/l TDS

Additional sampling is scheduled for late May to evaluate current blending practices.

Utility Billings and Energy Costs: TST continues to track the United Power utility bills and associated water operations. Year-to-date information for usage and billings for the last three years is presented in the attached summary (3 pages). Furthermore, information associated with water operations and energy usage/billings per 1,000 gallons of water is also presented.

Monthly Flow Reports: TST is developing graphs to depict the daily water accounting but there are a variety of formatting issues to be addressed for the final product. I have attached an accounting summary for water production and distribution for the April 6 to May 5 SCADA reporting period. It appears the magnetic flow meter for the Greatrock North Pump Station is out of calibration.

Rocking Horse Farms Pump Station: Ramey Environmental Compliance will schedule the 11-month warranty inspection.

Box Elder Creek Ranch Pump Station: Ramey Environmental Compliance will schedule the 11-month warranty inspection.

Greatrock North Pump Station: Options to reconfigure the pump station and type of pumping equipment is a 2015 budget discussion item.

Fire Pumps: This is a 2015 budget discussion item based upon information previously provided.

TTG TST
CONSULTING ENGINEERS

May 21, 2014

Ms. Lisa Johnson, District Manager
Greatrock North Water and Sanitation District
% Special District Management Services, Inc.
141 Union Blvd., Suite 150
Lakewood, CO 80228

RE: Recommendation of Award
2014 Fire Hydrant Extensions
Greatrock North Water and Sanitation District
TST Project No. 0148001.09

Dear Ms. Johnson:

TST Inc. of Denver has reviewed the proposals received for the "2014 Fire Hydrant Extensions" project. A tabulation of the proposals is attached. The apparent low bidder is Action Fire Hydrant Services LLC, a company referred to the District by Ramey Environmental Compliance.

This project was not included in the 2014 District budget, but the funds to complete the work are available as a result of the savings realized from the Box Elder Creek Ranch Pump Station Improvements and the Rocking Horse Farms Tank Exterior Painting. Those improvements were budgeted at $80,800, but should be completed for approximately $60,000.

I have spoken with Steve Hite, of Action Fire Hydrant Services LLC, and he has reviewed the form of agreement and indicates he can fulfill the insurance requirements. Therefore, I recommend awarding the contract to Action Fire Hydrant Services LLC for all 10 locations for a contract amount of $11,725.00.

Should you have any questions or comments, please contact me at 303-792-0557

Sincerely,

TST INC. OF DENVER

Bradley A. Simons, P.E.
/bas

Attachment: Tabulation of Proposals

TST INC. OF DENVER
Consulting Engineers

TABULATION OF PROPOSALS

Date: 05/20/14
Time: 1405

Client: **Greatrock North Water and Sanitation District**

Job No: 0148001.09

Project: **2014 Fire Hydrant Extensions**

By: BS

Item	Action Fire Hydrant Service LLC Rcvd 05/19/14 @ UNKNOWN Amount	Northern Colorado Constructors Rcvd 05/20/14 @ 1329 Amount
Location 1	$1,225.00	$3,800.00
Location 2	$1,225.00	$3,800.00
Location 3	$1,225.00	$3,800.00
Location 4	$1,225.00	$3,800.00
Location 5	$1,225.00	$3,800.00
Location 6	$1,225.00	$3,800.00
Location 7	$1,225.00	$3,700.00
Location 8	$1,050.00	$3,700.00
Location 9	$1,050.00	$3,700.00
Location 10	$1,050.00	$3,700.00
Total for All Locations	$11,725.00	$37,600.00
Acknowledged Addenda	N/A	N/A

Usage (KWH)

	Alluvial Wells			BECR			GN			RHF		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Jan	2970	2136	2341	13520	13680	15360	4200	5400	5440	3960	17520	2400
Feb	2177	1832	1972	12520	12240	14400	5040	4840	5160	3840	11520	2200
Mar	2724	1854	2329	11960	11400	11600	4200	5080	4720	3400	10720	2080
Apr	3663	2117	2617	15080	12960	9600	11360	5600	4200	16280	9840	1920
May												
Jun												
Jul												
Aug												
Sep												
Oct												
Nov												
Dec												
YTD	11534	7939	9259	53080	50280	50960	24800	20920	19520	27480	49600	8600

Billing Amount

	Alluvial Wells			BECR			GN			RHF		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Jan	$ 547.88	$ 358.98	$ 277.72	$ 1,651.60	$ 1,725.12	$ 1,108.54	$ 467.45	$ 670.70	$ 435.45	$ 372.28	$ 1,596.64	$ 226.87
Feb	$ 532.28	$ 341.31	$ 236.47	$ 1,621.27	$ 792.21	$ 1,057.09	$ 705.94	$ 364.19	$ 412.92	$ 512.12	$ 899.32	$ 208.26
Mar	$ 553.69	$ 223.28	$ 276.38	$ 1,645.34	$ 823.97	$ 862.64	$ 643.23	$ 422.21	$ 391.36	$ 520.05	$ 894.39	$ 202.38
Apr	$ 584.98	$ 252.68	$ 308.58	$ 2,396.93	$ 907.26	$ 739.18	$ 1,415.12	$ 447.69	$ 361.64	$ 1,664.58	$ 829.25	$ 188.77
May												
Jun												
Jul												
Aug												
Sep												
Oct												
Nov												
Dec												
YTD	$ 2,218.83	$ 1,176.25	$ 1,099.15	$ 7,315.14	$ 4,248.56	$ 3,767.45	$ 3,231.74	$ 1,904.79	$ 1,601.37	$ 3,069.03	$ 4,219.60	$ 826.28

Water Operations (gallons)

	Alluvial Wells			BECR			GN			RHF		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Jan			1,720,830			2,144,122			542,401			443,608
Feb			1,507,059			1,886,973			424,378			349,397
Mar			1,664,857			1,977,083			383,936			401,330
Apr			1,952,959			2,250,630			562,538			555,259
May												
Jun												
Jul												
Aug												
Sep												
Oct												
Nov												
Dec												
YTD			6,845,705			8,258,808			1,913,253			1,749,594

Water Operations (KWH/1000 gallons)

	Alluvial Wells			BECR			GN			RHF		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Jan			1.3604			7.1638			10.0295			5.4102
Feb			1.3085			7.6313			12.1590			6.2966
Mar			1.3989			5.8672			12.2937			5.1828
Apr			1.3400			4.2655			7.4662			3.4578
May												
Jun												
Jul												
Aug												
Sep												
Oct												
Nov												
Dec												
YTD			1.3525			6.1704			10.2025			4.9154

Water Operations ($/1000 gallons)														
	Wells			BECR			GN			RHF		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Jan			$ 0.1614			$ 0.5170			$ 0.8028			$ 0.5114
Feb			$ 0.1569			$ 0.5602			$ 0.9730			$ 0.5961
Mar			$ 0.1660			$ 0.4363			$ 1.0193			$ 0.5043
Apr			$ 0.1580			$ 0.3284			$ 0.6429			$ 0.3400
May												
Jun												
Jul												
Aug												
Sep												
Oct												
Nov												
Dec												
YTD	0	0	$ 0.1606	0	0	$ 0.4562	0	0	$ 0.8370	0	0	$ 0.4723

	A	B	C	D
1	SCADA Reporting Period: April 6, 2014 - May 5, 2014			
2				
3		GALLONS		
4				
5	Alluvial Wells	2,401,094		
6	RO Concentrate	237,600	Computed based upon 4 hours per day, 30 days, and 33 gpm	
7	Alluvial Wells to Tank	2,163,494	Computed - Alluvial Wells less RO Concentrate	
8	Uka Wells	836,425		
9	To BECR Tank	2,999,919	101%	of reported by SCADA
10				
11	To BECR Tank	2,960,657		
12				
13	RO Bypass	1,455,209		
14	RO Feed	945,885	Computed - Alluvial Wells less RO Bypass	
15	RO Permeate	708,285	Computed - RO Feed less RO Concentrate	
16	Uka Wells	836,425		
17	To BECR Tank	2,999,919	Computed and checks with B9	
18				
19	To GN/RHF Tanks	2,165,556		
20	To BECR Subdivision	788,358		
21	From Tank	2,953,914	100%	of water To BECR Tank reported by SCADA
22				
23	To RHF Tank	907,697		
24	To GN Tank	1,234,471		
25	To GN/RHF Tanks	2,142,168	99%	of water To GN/RHF Tanks reported by SCADA
26				
27	To RHF Subdivision	842,862	93%	of water To RHF Tank reported by SCADA
28				
29	To GN Subdivision	915,500	74%	of water To GN Tank reported by SCADA
30				
31	Billings (April 13 to May 12)			
32	BECR	864,858	110%	of water to BECR Subdivision reported by SCADA
33	RHF	861,361	102%	of water to RHF Subdivision reported by SCADA
34	GN	1,148,800	125%	of water to GN Subdivision reported by SCADA
35				
36	RHF	861,361	95%	of water to RHF Tank reported by SCADA
37	GN	1,148,800	93%	of water to GN Tank reported by SCADA