



Greatrock North Water & Sewer District Monthly Activities Report October 15, 2023 – November 15, 2023

Daily Operations Summary

Greatrock North (GRN): Record LFH Well #1, UKA Well #1, and distribution flow totalizers. Visual inspection of generator to record run hours and check for any active faults. Collect and analyze chlorine residual sample each visit. Collect entry point sample to analyze for pH and conductivity weekly. Complete walk through of pump station to inspect distribution pumps, distribution pressure/tank level, and verify operation of PRV.

Rocking Horse Farms (RHF): Record LFH Well #2, UKA Well #3, and distribution flow totalizers. Visual inspection of generator to record run hours and check for any active faults. Collect and analyze chlorine residual sample each visit. Collect entry point sample to analyze for pH and conductivity weekly. Complete walk through of pump station to inspect distribution pumps, distribution pressure/tank level, and verify operation of PRV. Adjust manual fill valve as needed to maintain tank levels.

Box Elder (BE): Check SCADA for any active alarms and record process numbers. Record flow totalizers for wells, RO skid, and distribution meters. Visual inspection of generator to record run hours and check for any active faults. Collect and analyze chlorine residual sample each visit. Collect entry point sample to analyze for pH and conductivity weekly. Complete walk through of pump station to inspect distribution pumps, distribution pressure/tank level, and verify operation of PRV. Complete walk through of RO building to verify proper operation and record equipment run hours. Check chemical feed systems for proper operation and refill day tanks, as necessary.

10/16/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Daily rounds, operations, and data recordings for BE, RHF, and GRN. Applied Ingenuity on site replacing ALV 1 well cap.

10/17/23 (4.0hr) Routine site visit. Rounds and checks at each facility.

10/18/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/19/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Checked heaters for functionality and added space heater to old RO building.

10/20/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Replacing meters on no read list. Troubleshooting high usage at customer's house determined to be a leak on the homeowner's service side.

10/23/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/24/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/25/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/26/23(4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/27/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. REC ESD on site for due to LFH 1 VFD fault. Determined issue to be a loose connection in the breaker box causing a low power supply to VFD, tight end connections and resumed normal operation. Worth Hydrochem on site working troubleshooting RO faults. Worth Hydrochem was able to correct the issues and resume normal operations.

10/30/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

10/31/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/01/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/02/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/03/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Started draining storage tanks for valve repair on south tank.

11/06/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Draining tank levels down for valve repair on Sout Tank

11/07/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/08/2023 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Started working on manual meter reads.

11/09/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Completed manual meter reads.

11/10/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/13/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility. Collected monthly compliance and water quality samples at each booster station.

11/14/23 (4.0hr) Routine site visit. Regular rounds and checks of each facility.

11/15/23 (4.0hr) Routine Site visit. Regular rounds and checks of each facility. Responded afterhours for ALV well comm fault, reset fault and resumed normal operations. NCC on site to begin berm work at evaporation ponds.

Oct 15th – Nov 15th, 2023

RO Run Time	348 hours
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RO Concentrate Flow: 1 Pond (South)	148,400
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Date	Permeate Flow (gpm)	Concentrate Flow (gpm)	% Recovery	Permeate Conductivity (μSeimens)	Hour Meter
10/16/23	197	55	78	11	9558
10/25/23	199	47	81	20	9776
10/31/23	200	54	79	14	9919
11/08/23	199	54	79	13	10112
11/09/23	200	49	80	17	10136



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**Greatrock North Water & Sewer District
ORC Report
December 5, 2023**

Rocking Horse Farms Tank Fill Valve

The RHF Tank fill valve is experiencing ongoing issues with automatic control. REC and TLECC verified the issues are not electrical or SCADA control problems. A local CLA-Valve representative was contacted to schedule a site visit to inspect the valve to determine the best course of action moving forward. In the meantime, tank fill is being manually controlled by REC.

Update – Local CLA-Valve Representative, Pipestone Equipment, onsite to access RHF fill valve. Pipestone Equipment believes the control issues are due to an internal pressure loss through the internal components of the valve. REC is coordinating with Element Engineering to develop a plan to isolate the valve for inspection. Presently there is no isolation valve within the PRV pit, and no valves are indicated on plant drawings. Repair and/or replacement will need to take place during low demand season due to the inability to fill the tank while the valve is out of service.

Update – Site walk-through is scheduled for the first week of January with Element Engineering to review site layouts and develop plans for repairs.

Update – Site walk-thru completed with Element Engineering and Moltz Construction. After reviewing of site layout and plans it is confirmed there is no known isolation valve for the RHF tank fill valve. Element Engineering and REC developing plans for repair, but it is likely an insertion-type isolation valve will need to be installed before the replacement of the RHF fill valve.

Update – Element Engineering is developing the scope of work for Moltz Construction to repair.

Update – Element Engineering has completed drawings for valve replacement work.

RO Building Decommissioning

REC, Element Engineering, and Moltz construction are working together to locate the currently unknown source of water that is supplying back-pressure to the old RO treatment building. The backpressure source will need to be located and isolated prior to being able to complete the decommissioning of the old RO building.

Update 11/16/2022 – Altitude Leak Detection onsite to determine if BECR storage tank valves are leaking water when closed. Altitude Leak Detection was able to determine the south storage tank isolation valve is leaking water by when closed.

Update 4/4/23 - American West Construction and REC completed site walk to review scope of work for American West Construction to provide an estimate.

Update 5/15/23 – Northern Colorado Constructors and REC completed site walk to review scope of work for NCC to provide an estimate.

Update 7/20/23 – Estimate from Northern Colorado Constructors submitted for approval, to be reviewed at August 1, 2023 board meeting.

Update 8/24/23 – Signed estimate sent to Northern Colorado Constructors for full execution.

Update 9/6/23 – Estimates have been fully executed working with Northern Colorado Constructors to schedule work when demands are lower to be able to tank the south tank offline while repairs are completed.

Update 10/25/23 NCC scheduled to complete work the first week of November.

Update 11/27/23 NCC onsite working on replace the leaking South Tank valve. Work anticipated to be completed by 11/30/23.

Augmentation

On 10/24/23 BBA Water requested augmentation be set to 130 gpm. Augmentation set to 130 gpm on 10/25/23.

On 10/31/23 BBA Water requested augmentation be shut off. Augmentation shut off on 10/31/23.

On 11/10/23 BBA Water requested augmentation be set to 30 gpm. Augmentation set to 30 gpm on 11/10/23.

On 11/15/23 BBA Water requested augmentation be set to 65 gpm. Augmentation set to 65 gpm on 11/15/23.

Additional Activities

Assisted NCC with berm construction on evaporation ponds and project completed second week of November.

Completed new service line inspections at 28650 E 159th Ave and 28405 E 159th Ave.

Met with CDPHE and Element Engineering to begin the process of getting a beneficial reuse permit to utilize water from the evaporation ponds for the construction of the new evaporation ponds.

Water Quality

Month	ALV 1		ALV2		BECR		RHF		GRN	
	TDS mg/L	Hardness mg/L	TDS mg/L	Hardness mg/L	TDS mg/L	Hardness mg/L	TDS mg/L	Hardness mg/L	TDS mg/L	Hardness mg/L
Nov-23					322	44	167	18	170	23
Oct-23	1283	646	1280	632	119	16	162	26	174	27
Sep-23					140	18	135	21	142	22
Aug-23					256	73	173	17	267	77
Jul-23	1230	559	1265	554	303	92	217	84	340	63
Jun-23					147	17	174	22	152	14
May-23					181	36	213	30	189	139
Apr-23	1002	537	1055	537	216	36	253	34	233	134
Mar-23					229	69	505	166	442	165
Feb-23	1095	552	988	549	341	122	326	106	322	113
Jan-23					360	103	369	126	387	131
Dec-22					677	318	423	184	494	181
Nov-22					185	45	200	62	237	61
Minimum	1002	537	988	537	119	16	135	17	142	14
Maximum	1283	646	1280	632	677	318	505	184	494	181
Average	1153	574	1147	568	267	76	255	69	273	88