

## RECORD OF PROCEEDINGS

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### MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE GREATROCK NORTH WATER AND SANITATION DISTRICT HELD DECEMBER 1, 2015

A regular meeting of the Board of Directors (referred to hereafter as "Board") of the Greatrock North Water and Sanitation District (referred to hereafter as "District") was convened on Tuesday, December 1, 2015 at 5:30 P.M., at United Power, 500 Cooperative Way, Brighton, Colorado. The meeting was open to the public.

#### ATTENDANCE

#### Directors In Attendance Were:

Robert W. Fleck (for a portion of the meeting)  
John D. Wyckoff  
Jeffrey Polliard  
Brian K. Rogers  
Dave Lozano

#### Also In Attendance Were:

Lisa A. Johnson; Special District Management Services, Inc.

Jennifer Gruber Tanaka, Esq.; White Bear Ankele Tanaka & Waldron, P.C.

Brad Simons; TZA Water Engineers

Matt Bruff; CEO- Altela, Inc. (for a portion of the meeting)

#### DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

Disclosures of Potential Conflicts of Interest: Ms. Johnson advised the Board that, pursuant to Colorado law, certain disclosures may be required prior to taking official action at the meeting. Ms. Johnson confirmed that disclosures of conflicts of interest were filed with the Secretary of State's Office and the Board at least 72 hours prior to the meeting for those Directors with potential conflicts of interest. The Board reviewed the Agenda for the meeting, following which, Directors Fleck, Polliard, Lozano, Rogers and Wyckoff each confirmed that they had no additional conflicts of interest in connection with any of the matters listed on the Agenda.

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### ADMINISTRATIVE MATTERS

**Agenda:** Ms. Johnson distributed for the Board's review and approval a proposed Agenda for the District's regular meeting.

Following discussion, upon motion duly made by Director Wyckoff, seconded by Director Polliard and, upon vote, unanimously carried, the Agenda was approved.

**Board of Directors' Report:** There was nothing new to report.

**Manager's Report:** Ms. Johnson presented and the Board reviewed the December Manager's Report. A copy of the report is attached hereto and incorporated herein by this reference.

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### COMMUNITY COMMENTS

**Community Comments:** There were no community comments.

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### CONSENT AGENDA

**Consent Agenda:** The Board considered the following actions:

- Approve Minutes of the November 3, 2015 regular meeting.
- Ratify approval of payment of claims through the period ending November 12, 2015, as follows:

General Fund	\$ 48,679.66
Debt Service Fund	\$ 302,485.00
Capital Projects Fund	\$ -0-
<b>Total Claims:</b>	<b><u>\$ 351,164.66</u></b>

- Accept cash position schedule and unaudited financial statements through the period ending October 31, 2015.
- Review operations and maintenance update and monthly work orders.
- Review monthly water quality report.
- Monthly water meter installations
- Approval of Third Addendum to the Independent Contractor Agreement with Lamp Rynearson d/b/a TZA Water Engineers regarding increase in hourly fees
- Approval of Continued Engagement Letter with Petrock & Fendel, P.C.

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Following discussion, upon motion duly made by Director Wyckoff, seconded by Director Polliard and, upon vote, unanimously carried, the Board approved the consent agenda items.

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**WATER MATTERS**

**Pending Water Court Cases:** Ms. Johnson gave a brief update on the District's pending water court cases.

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**ENGINEER'S REPORT**

**Engineer's Report:** Mr. Simons presented the Engineer's Report to the Board. A copy of the report is attached hereto and is incorporated herein by this reference.

*Altela Project:* Mr. Bruff addressed the Board. He informed them that, due to a dispute with Arizona State University regarding an intellectual property issue, Altela will not be able to proceed with the research and potential sale of the Altela Rain System to the district until the dispute has been resolved.

The Board asked additional questions and then Mr. Bruff left the meeting.

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**OPERATIONS/ MAINTENANCE MATTERS**

**GIS Mapping:** Mr. Simons and staff will continue to research options for GIS mapping services.

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**LEGAL MATTERS**

**Legal Matters:** There were no legal matters presented.

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**OTHER BUSINESS**

**Colorado Water Plan:** Director Polliard reported that he recently asked Attorney Poznanovic to provide a summary of the Colorado Water Plan and what affect, if any, it might have on the District. Attorney Poznanovic provided an explanation of the plan and informed Director Polliard that it is too early in the planning process to determine what effect the plan would have on the district.

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**ADJOURNMENT**

There being no further business to come before the Board at this time, upon motion duly made, seconded and, upon vote, unanimously carried, the meeting was adjourned.

Respectfully submitted,

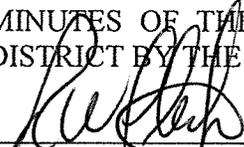
By 

Secretary for the Meeting

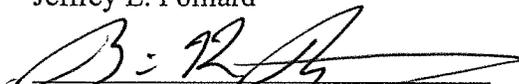
**RECORD OF PROCEEDINGS**

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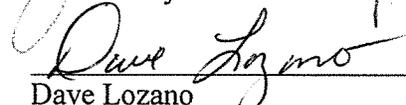
THESE MINUTES APPROVED AS THE OFFICIAL DECEMBER 1, 2015  
MINUTES OF THE GREATROCK NORTH WATER AND SANITATION  
DISTRICT BY THE BOARD OF DIRECTORS SIGNING BELOW:

  
\_\_\_\_\_  
Robert William Fleck

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Jeffrey L. Polliard

  
\_\_\_\_\_  
Brian K. Rogers

  
\_\_\_\_\_  
John D. Wyckoff

  
\_\_\_\_\_  
Dave Lozano



Date: November 23, 2015  
To: Greatrock North Water and Sanitation District, Board of Directors  
From: Lisa A. Johnson, District Manager  
Re: December 1, 2015 Manager's Report

**Agenda Action Items**

**II.A. Consent Agenda**

1. Review and approve the Minutes of the November 3, 2015 regular meeting
2. Consider ratifying approval of payment of claims through the period ending November 12, 2015
3. Consider acceptance of unaudited financial statements and statement of cash position for the period ending October 31, 2015
4. Operations and Maintenance update and monthly work orders
5. Review monthly water quality report
6. Review monthly water meter installations
7. Review and consider approval of Third Addendum to the Independent Contractor Agreement with Lamp Rynearson & Associates, Inc. regarding hourly rate increase
8. Review and consider approval of a continued engagement letter with Petrock & Fendel P.C. regarding hourly rate increase

**I recommend approval of the consent agenda items.**

**Review of monthly Water Resumes and Other Water Related Matters**

Attorney Poznanovic reviewed the September resume, and did not find any cases that he thinks the District would have an interest in opposing.

District Office  
for Greatrock North  
Water and Sanitation

141 Union Blvd., Suite 150 Lakewood, CO 80228-1898  
Phone (303) 987-0835



**Ramey Environmental Compliance, Inc.**  
 Management and Operation Solutions for  
 Water and Wastewater Treatment  
 303-833-5505

PO Box 99, Firestone, Colorado 80520  
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[www.RECinc.net](http://www.RECinc.net)

**Greatrock North W & S District  
 Monthly Activities  
 October 28<sup>th</sup> - November 13<sup>th</sup>**

**10/28/15:** Regular checks and readings. Worth Hydro onsite to replace the RO system.

**10/29/15:** Additional site visit while Worth Hydro was on site working on RO system.

**10/30/15:** Regular checks and readings. Pulled the aerator from the pond. Hauled old membranes offsite. Completed a locate at: 29950 E 167<sup>th</sup> Pl.

**11/2/15:** Regular checks and readings.

**11/4/15:** Regular checks and readings.

**11/6/15:** Regular checks and readings.

**11/9/15:** Regular checks and readings. Assisted Brad and John install fittings to the concentration line. Collected and delivered samples. Additional Operator on site for the annual exercising of valves and flushing of hydrants.

**11/10/15:** Additional Operator on site exercising valves and flushing hydrants. We unable to exercise roughly 60 valves due to being covered with tar from the crack sealing. Called into Adams County but am awaiting a response back. Will continue to call until we get this resolved.

**11/11/15:** Regular checks and readings. Installed fittings and hose on RO. Checked the transformer at Rocking Horse Farms. Tightened the connections on Rocking Horse Farms RTU. Completed locates at: 16245 Queensview and 16580 Umpire St.

**11/13/15:** Regular checks and readings.

**Status of valve box inserts and markers project – *still in progress***

**October 26<sup>th</sup> - November 13<sup>th</sup>**

RO Run Time Hrs	109.70 hrs
RO Concentrate Flow – 1 pond (North)	190,878 gallons

**11/9/15** *(results not complete as of 11/16/15 – will be available next report)*

Monthly Testing	TDS(mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Total Hardness(mg/L)
BE				
RHF				
GRN				

**Completed Work Order List Report**

11/16/2015

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<b>Completed</b>	<b>Equipment Number</b>	<b>Task</b>	<b>Priority</b>	<b>WO#</b>	<b>Type</b>
11/9/2015	Boxelder Pump Buildi	TDS and Hardness	1	577.01	Scheduled
11/9/2015	GRN Pump Building	TDS and Hardness	1	577.03	Scheduled
11/9/2015	RHF Building	TDS and Hardness	1	577.02	Scheduled
11/9/2015	Water Sampling	Bacti Bacti Sampling(069)	1	578.01	Scheduled
10/30/2015	Pond Aerator	Clean Clean	4	557.01	Scheduled
10/26/2015	North Concentrate Pond	EDOP Sampling	1	555.01	Scheduled
10/26/2015	South Concentrate Pond	EDOP Sampling	1	556.01	Scheduled

**GREATROCK NORTH WATER AND SANITATION DISTRICT  
ENGINEER'S REPORT  
NOVEMBER 23, 2015**

**Concentrate Management Options**

Discussion regarding the Altela technology and the Reverse Osmosis Asset Recovery Facility will occur under its own agenda item for the Board meeting.

As for the evaporation ponds, I will present information on the pond levels at the December Board meeting.

**Greatrock North Pump Station Improvements**

The design of the Greatrock North Pump Station Improvements has been put on temporary hold and may be combined for bidding purposes with the new water treatment facility being contemplated.

**Other Activities**

Water Quality and Hardness – TZA is tracking the water production data and water quality results from a series of sampling events. Below are tables summarizing the water production data, water quality results, and water treatment plant observations.

Month	RO Permeate	Unfiltered UKA Water	Unfiltered ALV Wells
November (11/21/15)	52%	38%	10%
October (10/25/15)	25%	36%	39%
September (09/20/15)	17%	34%	49%
August (08/24/15)	10%	33%	57%
July (07/19/15)	17%	35%	48%
June (06/28/15)	23%	37%	40%
May (05/25/15)	39%	42%	19%
April (04/27/15)	37%	39%	24%
March (03/22/15)	41%	40%	19%

**LAMP RYNEARSON COMPANIES**

**Engineer's Report**  
**November 23, 2015**  
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<b>Total Dissolved Solids (TDS)</b>			
<b>Date</b>	<b>BECR Tanks</b>	<b>RHF Tank</b>	<b>GN Tank</b>
11/09/15	275 mg/l	346mg/l	320 mg/l
10/14/15	414 mg/l	406 mg/l	385 mg/l
09/09/15	470 mg/l	471 mg/l	495 mg/l
08/19/15	469 mg/l	500 mg/l	482 mg/l
07/10/15	417 mg/l	449 mg/l	468 mg/l
06/11/15	369 mg/l	350 mg/l	341 mg/l
05/11/15	401 mg/l	347 mg/l	366 mg/l
04/13/15	386 mg/l	326 mg/l	322 mg/l
March 2015	274 mg/l	324 mg/l	302 mg/l
02/02/15	350 mg/l	394 mg/l	383 mg/l
01/14/15	350 mg/l	394 mg/l	417 mg/l
12/03/14	417 mg/l	552 mg/l	511 mg/l
10/01/14	538 mg/l	603 mg/l	594 mg/l
07/11/14	565 mg/l	597 mg/l	599 mg/l
03/05/14	586 mg/l	543 mg/l	566 mg/l
01/08/14	553 mg/l	559 mg/l	575 mg/l
10/28/13	677 mg/l	643 mg/l	594 mg/l

The total hardness results tabulated below reflect a moderately hard to hard water:

<b>Total Hardness (as CaCO3)</b>			
<b>Date</b>	<b>BECR Tanks</b>	<b>RHF Tank</b>	<b>GN Tank</b>
11/09/15	63.5 mg/l	103.3 mg/l	82.0 mg/l
10/14/15	134.1 mg/l	117.2 mg/l	118.7 mg/l
09/09/15	152.6 mg/l	164.3 mg/l	158.4 mg/l
08/19/15	159.1 mg/l	175.6 mg/l	173.1 mg/l
07/10/15	136.2 mg/l	158.8 mg/l	156.5 mg/l
06/11/15	92.0 mg/l	78.0 mg/l	80.1 mg/l
05/11/15	84.8 mg/l	72.6 mg/l	73.9 mg/l
04/13/15	99.6 mg/l	67.7 mg/l	68.6 mg/l
March 2015	53.7 mg/l	68.3 mg/l	59.1 mg/l
02/02/15	83.4 mg/l	113.8 mg/l	104.6 mg/l
01/14/15	105.2 mg/l	123.0 mg/l	111.7 mg/l
12/03/14	115.3 mg/l	194.5 mg/l	169.8 mg/l
10/01/14	188.8 mg/l	231.7 mg/l	225.6 mg/l
07/11/14	221.5 mg/l	222.7 mg/l	220.4 mg/l
05/16/14	165.2 mg/l	209.6 mg/l	198.1 mg/l

**Engineer's Report**  
**November 23, 2015**  
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For comparison, hardness values are generally classified as:

Classification	Mg/l
Soft	0 – 60
Moderately hard	61 – 120
Hard	121 – 180
Very hard	GTE 181

Storage Tank Rule – The Water Quality Control Division has adopted a new version of the Colorado Primary Drinking Water Regulations (Regulation 11). Effective April 1, 2016, the District will be required to have a written plan for finished water storage tank inspections. In addition to quarterly periodic (visual) inspections, the District will need comprehensive inspections to be scheduled at least every five years. Jeff Rabas has been securing proposals for the comprehensive inspections.

New Chlorine Residual Requirements – The Water Quality Control Division has adopted a new version of the Colorado Primary Drinking Water Regulations (Regulation 11). Effective April 1, 2016, the District will be required to maintain a minimum of 0.20 milligrams per liter chlorine residual throughout the distribution system. Ramey Environmental Compliance will record chlorine residuals at the extents of the distribution system for each subdivision on a periodic basis throughout the remainder of 2015, and Jeff Rabas and I will review the data in November of this year.

Warranty Inspections – Ramey Environmental Compliance is tracking the 11-month warranty inspections for the following projects:

- Rocking Horse Farms Pump Station – The warranty inspection was conducted by Jeff Rabas on July 18, 2014.
- Box Elder Creek Ranch Pump Station – The warranty inspection was conducted by Brad Simons on January 26, 2015.
- Rocking Horse Farms Tank Repainting – The improvements were inspected and accepted on June 11, 2014. A preliminary warranty inspection was conducted by Ramey Environmental Compliance on April 24, 2015 and Coblaco addressed some minor surface rust and some isolated coating repairs on August 5, 2015.

**Engineer's Report**  
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Utility Billings and Energy Costs – TZA is tracking the United Power utility bills and associated water operations on a monthly basis. Below are the monthly comparisons for October each year, as well as a summary of the ten-month periods for 2014 and 2015.

	October 2014 Billings				October 2015 Billings			
	On Peak	Off Peak	Total KWH	Billing	On Peak	Off Peak	Total KWH	Billing
<b>Alluvial</b>	3,789		3,789	\$439.61	4,141		4,141	\$478.96
<b>BECR</b>	1,280	10,000	11,280	\$809.45	2,040	12,760	14,800	\$1,092.04
<b>GN</b>	1,000	5,600	6,600	\$518.32	1,680	8,000	9,680	\$766.18
<b>RHF</b>	640	1,840	2,480	\$229.61	840	2,440	3,280	\$296.58
<b>Totals</b>			<b>24,149</b>	<b>\$1,996.99</b>			<b>31,901</b>	<b>\$2,663.76</b>

	YTD 2014 Billings (10 months)				YTD 2015 Billings (10 months)			
	On Peak	Off Peak	Total KWH	Billing	On Peak	Off Peak	Total KWH	Billing
<b>Alluvial</b>	34,311		34,311	\$3,995.96	34,455		34,455	\$4,012.06
<b>BECR</b>	25,240	116,480	141,720	\$10,752.18	32,120	142,880	175,000	\$13,680.20
<b>GN</b>	14,960	61,840	76,800	\$6,229.47	15,800	64,880	80,680	\$6,619.70
<b>RHF</b>	11,560	30,840	42,400	\$3,830.97	7,440	20,920	28,360	\$2,609.17
<b>Totals</b>			<b>295,231</b>	<b>\$24,808.58</b>			<b>318,495</b>	<b>\$26,921.13</b>

Well, Pump, and Motor Replacements – The District has initiated efforts to better understand its well infrastructure and the potential need for replacement of pumps and motors, as well as the well structures themselves. As a part of that effort, TZA Water Engineers will need to work with Bishop-Brogden Associates to compile the historical aspects of the wells constructed, the pumps installed, and any other improvements (i.e. water level measuring devices) integrated at each site. This information will be used to evaluate the benefits of a pump, motor, and well maintenance program to detect changes in well performance. Early detection of deterioration in well performance will allow less expensive repairs, rehabilitation, or treatment procedures in order to maximize production capacity. This preventative maintenance program will be discussed with the District's Manager, and a formal proposal will be brought to the Board if deemed appropriate.

**Engineer's Report**  
**November 23, 2015**  
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Control Valves Evaluation – During the 3<sup>rd</sup> Quarter Operational Review Meeting, conducted on August 17, 2015, it was determined the District should develop a control valve evaluation plan. As the Board may recall, the District contracted with iSiWest in 2014 (July 14-15 and September 19), to inspect and service five (5) control valves, including one (1) at the Box Elder Creek Ranch Pump Station, one (1) at Rocking Horse Farms Pump Station, and three (3) at the Greatrock North Pump Station. On March 6, 2015, the District contracted with Ramey Environmental Compliance's Equipment Services Division to service one (1) pressure relief valve at the Box Elder Creek Ranch Water Treatment Plant. Since the District has an assortment of valves in a variety of locations throughout the District, REC will update the valve inventory in the Allmax software and work with Lisa Johnson, TZA, and the budget committee to prioritize the efforts for 2016 and beyond. A sample of the valves that could be addressed in the Box Elder Creek Ranch Pump Station are tabulated below.

Valve Location	Valve Type	Valve Size
UKA-3 Check	Cla-Val Hytrol	2"
UKA-3 Air/Vacuum	Val-Matic	1/2"
UKA-3 CRL	Cla-Val Pressure Relief	1/2"
LFH-3 Check	Cla-Val Hytrol	3"
LFH-3 Pressure Relief	Cla-Val Series 50	1-1/2"
LFH-3 CRL	Cla-Val Pressure Relief	1/2"
LFH-3 Air/Vacuum	Cla-Val Series 35	1/2"
Alluvial Wells Air/Vacuum	Cla-Val Series 35	2"