

**CENTRAL WYOMING REGIONAL WATER SYSTEM  
JOINT POWERS BOARD**

**MEETING PROCEEDINGS**

January 17, 2017

A public meeting of the Central Wyoming Regional Water System Joint Powers Board (Board) was held Tuesday, January 17, 2017 at 11:30 a.m., in the Joint Powers Board Conference Room, Regional Water Treatment Plant, 1500 SW Wyoming Boulevard, Casper, WY.

**Board Members Present -** Chairman King, Vice-Chairman Keffer, Secretary Powell, and Board Members Murphy, Walsh, and Waters. Treasurer Lawson and Board Member Johnson were absent.

**City of Casper –** Powell, Murphy, Walsh, Andrew Beamer, Bruce Martin, Brian Schroeder, Clint Conner, Janette Brown, Scott Baxter, Michael McDaniels, Dan Raatz

**Natrona County –**

**Salt Creek Joint Powers Board –** King

**Wardwell Water & Sewer District –** Keffer

**Pioneer Water & Sewer District –** Waters

**Poison Spider Improvement & Service District –**

**Wyoming Water Development Office -**

**Sandy Lakes Estates -**

**Lakeview Improvement & Service District -**

**33 Mile Road Improvement & Service District –**

**Central Wyoming Groundwater Guardian Team (CWGG) –**

**Others —** Charlie Chapin – Williams, Porter, Day and Neville, P.C.; Steve Quail – HDR Engineering

The Board meeting was called to order at 11:31 a.m.

1. In Announcements, Mr. Martin introduced new Board Members Chris Walsh and Todd Murphy representing the City of Casper.

Mr. Martin also announced that there will be an addition to the agenda, Agenda Item 8b will be a discussion of the response from Engineering America Inc. (EAI).

Mr. Martin stated that Ms. Brown will have paperwork for the Board Officers to complete after the meeting.

2. Chairman King asked the Board for a motion to elect Board Officers.

Board Member Powell asked if the Board By-Laws allow for the Chairman to be re-elected. Chairman King stated that the Board By-Laws do allow re-election of officers. A motion was made by Board Member Powell and seconded by Board Member Walsh to retain Chairman King as Chairman. Motion put and carried.

A motion was made by Chairman King and seconded by Board Member Powell to retain Vice-Chairman Keffer as Vice-Chairman. Motion put and carried.

A motion was made by Board Member Waters and seconded by Board Member Walsh to appoint Board Member Powell as Secretary. Board Member Powell asked what the duties of the Board Secretary entail. Ms. Brown stated that mainly the Board Secretary attests the Chairman's signature on contracts and reimbursement requests to the State, and signs checks for the payment of approved vouchers. Motion put and carried.

A motion was made by Secretary Powell and seconded by Board Member Waters to retain Treasurer Lawson as Treasurer. Motion put and carried.

3. Chairman King asked for a motion to approve the minutes from the December 20, 2016 meeting. A motion was made by Vice-Chairman Keffer and seconded by Board Member Waters to approve the minutes from the December 20, 2016 meeting. Motion put and carried.

4. Mr. Martin asked the Board to reference the voucher listing handed out on this date. Mr. Martin stated that a correction was made to the dollar amount of voucher 7605 from \$2,816.42 to \$2,829.29; no vouchers were added to the listing. Mr. Martin recommended approval of the vouchers and offered to answer any questions the Board may have on the voucher listing.

Chairman King asked for a motion to approve the January 2017 vouchers. A motion was made by Vice-Chairman Keffer and seconded by Board Member Waters to approve the January 2017 voucher list to include voucher numbers 7600 through 7607 in the amount of \$288,511.53. Motion put and carried.

5. Mr. Martin asked the Board to reference the Gallons Produced table in their agenda packets. Mr. Martin stated that production for December 2016 was 171 MG compared to December 2015 of 162 MG. Mr. Martin stated that the 5-year average is 181 MG. Mr. Martin stated that total production for the fiscal year is down approximately 86 MG from the same time last year.

Mr. Martin asked the Board to reference page 2 of the December 2016 Financial Report. Mr. Martin stated that Water Sales is approximately \$48,000 less than last year. Mr. Martin stated that Operations Expense is approximately \$73,000 less than one year ago. Mr. Martin stated that Net Operating Income is approximately \$24,000 greater than last year. Mr. Martin stated that Water Production is down and so is the Operating Expense.

Chairman King asked for a motion to approve the December 2016 Financial Report. A motion was made by Board Member Waters and seconded by Vice-Chairman Keffer to approve the December 2016 Financial Report as presented.

Secretary Powell explained to the new Board Members that the Board is in the business of selling water, so when production is up, that is good. Secretary Powell stated that the well system is used year round, and when production is up in the summer, the surface plant is used.

Motion put and carried.

6. Chairman King turned the time over to Mr. Schroeder for the Operations Update.

Mr. Schroeder stated that last month he reported that the Instrumentation Technician had a heart attack and had to have by-pass surgery. Mr. Schroeder stated that the Instrumentation Technician is already back to work on a part-time basis and staff is happy he is back as this is a very important position at the WTP.

Mr. Schroeder stated that the WTP is in winter-time operations producing 5MGD to 6MGD.

Mr. Schroeder stated that the Maintenance Staff has several projects underway such as replacing filter meters, and repairing high service pumps. Mr. Schroeder stated that these projects must be completed while the surface water plant is off-line for the winter.

Mr. Schroeder stated that the Corrosion Inhibitor System will have to be replaced as it failed last night.

The time was turned over to Mr. Conner for the Transmission System Update.

Mr. Conner stated that the Wardwell Booster VFDs were discussed in the past few months. Mr. Conner stated that one pump is still off-line and a different VFD will be purchased that has more horsepower to run a bigger motor.

Mr. Conner stated that chlorine residuals came up nicely due to the cooler weather. Mr. Conner stated that Sandy Lake Tank is still low, but flushing will be completed to improve the residual.

Mr. Conner stated that quotes for the power for the PAX mixer that was purchased last year for Wardwell Tank are being obtained. Mr. Conner stated that included in the

quotes will be the conduit and cables for the antennae. Mr. Conner stated that during the cathodic protection testing in November, it was discovered that ice formed and the tank was drained to prevent damage. Mr. Conner stated that the ice damaged the antennae conduit and cables.

Mr. Conner stated that nitrification is almost gone in the system due to the cold weather.

Mr. Conner stated that staff is still waiting on quotes for the WTP backflow preventer.

Mr. Conner stated that staff is also waiting on a parts breakdown and cost to repair a pump at Mt. View Booster. Mr. Conner stated that the rotating assembly is \$12,000 and a new pump is \$14,000. Mr. Conner stated that he hopes the individual parts needed will cost much less.

7. There was no Public Comment.

8. In Old Business:

a. Mr. Martin turned the time over to Mr. Steve Quail with HDR Engineering for the presentation of the WTP Facilities Plan Update.

Mr. Quail thanked the WTP staff for supplying information during the last year for the report. Mr. Quail stated that the original project scope has been mostly completed with the exception of finalizing the report, which will be completed in February. Mr. Quail stated that the completed report was due in December, but was postponed due to water quality testing results, and so the new Board Members would be included in the presentation.

Mr. Quail stated that one item he wished to review with the Board is the existing SCADA, which is the computer system that makes the plant work. Mr. Quail stated that the SCADA monitors, controls, and records data for the WTP processes, wells, reservoirs, tanks, and booster stations. Mr. Quail stated that the SCADA equipment is approximately 18 years old; there are periodic loss of communications with remote sites; installation problems; it is a proprietary software so it is difficult for anyone else to make needed changes; there is a lack of "As-Built" documentation and incomplete and inaccurate P&IDs.

Mr. Quail stated that Larson Communications did an evaluation of the radio system telemetry. Mr. Quail stated that the master control is at the WTP; 28 radios relay through Sunrise III; it takes approximately 15 minutes to poll all 28 radio signals; whenever signal control is lost, all settings remain in the last position and there is no operator notification of signal loss. Mr. Quail stated that the radios for the well sites are no longer supported and parts are not available. Mr. Quail stated that the radios for the booster stations will have the same issue within two years.

Mr. Quail stated that recommendations for the radio telemetry are to have two

remote relays, one through Sunrise III and one through North Park Tank. Mr. Quail stated that this will make a faster signal refresh, approximately 30 seconds. Mr. Quail stated that whenever the signal is lost the PLCs will be programmed to continue normal operation with smart controllers and the operator will be notified of the signal loss.

Mr. Quail stated that the recommended SCADA improvements include upgrading the In-Plant PLC with non-proprietary software; upgrade the PLCs and radios for the boosters and Reservoir; upgrade PLCs and radios for the wellfields; replace/upgrade servers; updated documentation of the programming and P&IDs; have historian type software that stores and maintains records for long periods of time which will allow the operators to see what was done in previous years for certain issues. Mr. Quail stated that the estimated construction cost for these upgrades is \$1,563,000 to \$1,905,000.

Mr. Quail stated that currently the peak day production for the WTP is 29.22 MGD. Mr. Quail stated that using a 0.5% per year growth rate would put the peak day production at 35.7 MGD in the year 2045. Mr. Quail stated that currently the Surface Water Plant has a maximum pumping capacity of 27 MGD and a reliable pumping capacity of 13.5 MGD.

Mr. Quail stated that the Actiflo system is the weakest link in the Surface Water System. Mr. Quail stated that the following improvements are recommended for the Actiflo System: Replace hydrocyclone for improved sand/sludge separation; Draft Tube in Maturation Tank – recommended by Actiflo Company; Repair tube settler supports as they are settling; replace tube settlers with larger tubes; Improvements in feed water chemistry to reduce sludge production – staff updated and optimized the polymer feed system in 2016 and used half the polymer this past year compared to prior years – the Sulfuric Acid feed system is scheduled to be updated by staff in 2017.

Mr. Quail stated that the following are some of the high priority issues for the Surface Water System: Actiflo Capacity Improvements and Safety – staff is currently lifting pallets of sand 20 feet with a forklift to the sand hopper. Mr. Quail stated that a hoist to lift the sand needs to be installed for safety.

Mr. Quail stated that the Ozone System safety issues are as follows: restrain the 48” well water header 90 degree elbow to prevent water hammer; the room ventilation is insufficient as there is no way to evacuate ozone from the room; cooling water relocation.

Mr. Quail stated that the Gravity Filters are a confined space to clean. Mr. Quail stated that it is recommended to install a monorail and hoist plus safety harness over the filters and to modify the backwash waste discharge piping.

Mr. Quail stated that the Surface Water Discharge piping is corroded and needs

replaced.

Mr. Quail stated that the Sodium Hypochlorite Storage and Transfer Pumping vent needs to be larger.

Mr. Quail stated that a Wellfield Condition Assessment and Analysis was completed as part of the study. Mr. Quail stated that the existing Groundwater Operations have a maximum summer yield of 12 MGD and a maximum winter yield of 9 MGD. Mr. Quail stated that historically, the wellfield has produced 22+ MGD. Mr. Quail stated that this included the Infiltration Gallery which EPA mandated discontinued service in 2005. Mr. Quail stated this was a loss of 5 MGD. Mr. Quail stated that modifications to the wellfields were completed in 1996 – 1998. Mr. Quail stated that the Well Total Production was ~22.8 MGD in 1998, but declined over the past 20 years to the current capacity.

Mr. Quail stated that in order to maximize the well production it is recommended to install VFDs on the wells. Mr. Quail stated that it is also recommended to maintain the recharge water level basin through peak demand periods.

Mr. Quail stated that the wells are classified as Groundwater Under the Direct Influence, which is the same as surface water. Mr. Quail stated that Total Aerobic Spore (TAS) data is used as a Cryptosporidium surrogate. Mr. Quail stated that in 1999 the Interim Enhanced Surface Water Treatment Rule required a minimum of 99% removal of Cryptosporidium. Mr. Quail stated that EPA recognized Riverbank Filtration in 2005.

Mr. Quail stated that the Board is currently in the middle of a 2-year sample for Cryptosporidium in the river. Mr. Quail stated that last spring there was enough Cryptosporidium in the river sample to move the wellfield from Bin1 (99%) to Bin2 (99.9%), which requires additional treatment of the well water. Mr. Quail stated that 99% must be removal; the other 0.9% can be obtained by other means such as Ultraviolet Disinfection which inactivates Cryptosporidium.

Mr. Quail stated that the greatest risk events for the groundwater are if the TAS sampling is >10/100 ml and if the river flows  $\geq 5,000$  CFS.

Mr. Quail stated that the objective for Wellfield Management is to maintain 99% filtration credits through riverbank filtration; Continue TAS sampling and as wells are removed from service, continue sampling additional wells; During high demand periods, maintain recharge basins to be constantly full; clean recharge basins only when recharge is significantly reduced; when cleaning, only remove top layer of sediment.

Mr. Quail stated that Ultraviolet Disinfection will need to be added to the treatment of the groundwater due to the change to Bin2 by EPA. Mr. Quail stated that it is anticipated that EPA will issue a Notice of Change in Regulatory Statuses

by the end of 2017 or early 2018 and EPA expects the Board to comply with the additional requirements within approximately 3 years. Mr. Quail stated that EPA has not approved the use of Ultraviolet Disinfection (UV) yet for 99.9% Cryptosporidium inactivation. Mr. Quail stated that if UV is approved by EPA the preliminary budgetary cost for design, new structure, and continued TAS groundwater monitoring is approximately \$11.4M.

Mr. Quail stated that there are several recommended improvements that will need to be completed prior to construction of a UV System.

Out-Sourced Projects:

SCADA Improvements	\$1,915,000
Caisson Well VFD & Control	204,000
Abandon and Reconstruct	943,000
Caspar Well #14 & 2 others – Well #14 has been out of service for a long time and is located under a power pole.	
Actiflo Repairs and Upgrades	561,000
Ozone Heat Exchanger Cooling Water	152,000
Gravity Filter Improvements	293,000
High Service Pump Suction & Discharge Header Repair	170,000
Total	\$4,228,000

RWS Maintenance Staff Projects:

Well Water Header Pipe Restraint	\$ 16,000
Remove & Replace Raw Water Pump No. 5	157,000
Remove and Replace Raw Water Pump Air/Vacuum Valves	28,000
Replace Actiflo Settled Sand/Sludge Pump and Tank Mixer	107,000
Ozone Room Ventilation	285,000
Total	\$593,000

Mr. Quail stated that he hoped the estimated costs are high and reviewed the recommended budget outlay and preliminary Capital Improvement Project Summary. Mr. Quail stated that the report will be finalized in February and offered to answer any questions the Board might have.

Chairman King thanked Mr. Quail for his presentation.

Secretary Powell left the meeting at 1:03 p.m.

- b. In Other Old Business, Mr. Martin stated that the Board decided at the last meeting to send a letter to EAI regarding the Wardwell Zone IIIB Water Storage Tank. Mr. Martin stated that a reply from EAI was received and handed out to the

Board today. Mr. Martin stated that EAI does not agree with the findings that were in the letter sent to them and sent dates for a meeting to discuss solutions.

Mr. Chapin stated that he spoke to the Wardwell legal counsel and they would like to participate in the meeting with EAI. Mr. Chapin stated that this was not conveyed in the letter sent to EAI. Board Member Waters asked if it would be proper to respond to EAI's letter informing them that Wardwell would like to participate. Vice-Chairman Keffer stated that it might be more prudent to telephone EAI instead of sending another letter.

Mr. Martin asked the Board who they would like to attend the meeting with EAI. Mr. Chapin stated that his recommendation would be for Chairman King, Vice-Chairman Keffer, and Mr. Martin to attend the meeting along with Mr. Schroeder and Mr. Conner. The Board decided to have the meeting with EAI on February 9<sup>th</sup> at noon. Mr. Martin stated that he will call EAI and set up the meeting. Mr. Chapin recommended that the meeting participants make no commitments at the meeting but bring any information back to the Board for consideration.

Vice-Chairman Keffer asked if it would be prudent to bring another representative from Wardwell. Mr. Chapin stated that it might be more efficient to have two separate meetings, one for RWS and one for Wardwell, with EAI.

9. In New Business:

- a. Mr. Martin asked the Board to reference Amendment No. 3 to the WTP Preliminary Facilities Plan, Project No. 15-085. Mr. Martin stated that Amendments No. 1 and 2 were for the addition of the Wardwell Zone IIIB Tank issues to the project.

Mr. Martin stated that Amendment No. 3 is for time extensions only for the WTP Facilities Plan Update and the Wardwell Zone IIIB Tank issues. Mr. Martin stated that the completion date for the WTP Facilities Plan Update would be changed to March 31, 2017 as the Board requested the presentation date be moved to accommodate the new Board Members, and in order for a reply to be received from EPA.

Mr. Martin stated that the completion date for the Wardwell Zone IIIB Tank issues would be changed to December 31, 2017 in order to work out the tank issues with EAI.

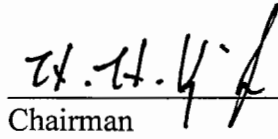
A motion was made by Board Member Waters and seconded by Board Member Walsh to approve the time extensions as stated in Amendment No. 3 to the WTP Preliminary Facilities Plan, Project No. 15-085. Motion put and carried.

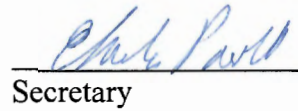
- b. There was no Other New Business.



10. In the Chairman's Report, Chairman King stated that the next regular meeting will be held on February 21, 2017.

A motion was made by Board Member Walsh and seconded by Board Member Murphy to adjourn the meeting at 1:19 p.m. Motion put and carried.

  
Chairman

  
Secretary