SPECIAL BIG PLAINS WATER SPECIAL SERVICE DISTRICT MEETING

1777 N Meadowlark Dr, Apple Valley
Thursday, October 26, 2023 at 9:00 AM

MINUTES

Chairman| Barratt Nielson
Board Members| Frank Lindhardt | Harold Merritt | Ross Gregerson | Andy McGinnis |

CALL TO ORDER- Chairman Nielson called the meeting to order at 9:08 a.m.
PLEDGE OF ALLEGIANCE
ROLL CALL
PRESENT
Chairman Barratt Nielson
Board Member Frank Lindhardt
Board Member Ross Gregerson
ABSENT
Board Member Harold Merritt
Board Member Andy McGinnis

PRESENT from State of Utah Department of Environmental Quality - Division of Drinking Water
Ryan Dearing
Tom McOmie

DECLARATION OF CONFLICTS OF INTEREST

None declared.

DISCUSSION

1. Meeting with State.

See Attachment (Attachment A – 6 pages)

ADJOURNMENT

MOTION: Board Member Lindhardt motioned to adjourn the meeting.
SECOND: The motion was seconded by Board Member Gregerson.
VOTE: Chairman Nielson called for a vote:

Board Member Gregerson - Aye
Board Member Lindhardt- Aye
Chairman Nielson - Aye

The vote was unanimous and the motion carried.

The meeting was adjourned at 11:03 a.m.

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Thursday, October 26, 2023 at 9:00 AM

MINUTES

Date Approved: 1-17-24

Approved BY: _____
Chairman | Barratt Nielson

Attest BY: _____
Recorder | Jenna Vizcardo

BIG PLAINS WATER SPECIAL SERVICE DISTRICT
SEAL
UTAH

State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF DRINKING WATER
Nathan Lunstad, P.E.
Interim Director

November 29, 2023

Barratt Nielson
Big Plains Water SSD – Apple Valley
1777 N Meadowlark Dr
Apple Valley, UT 84737

Subject: Technical Assistance Site Visit, Big Plains Water SSD UTAH27089

Dear Barratt Nielson:

I would like to thank you for meeting with Tom McOmie and myself on October 26, 2023 for a technical assistance site visit of the Big Plains SSD water systems. This site visit was in response to recent emergency response events, as well as compliance and operational challenges experienced by Big Plains SSD. The following is a summary report of this site visit.

1777 N Meadowlark Dr, Apple Valley
Thursday, October 26, 2023, at 9:00 AM

PRESENT
Ryan Dearing / Division of Drinking Water
Tom McOmie / Division of Drinking Water
Barratt Nielson / Chairman Big Plains SSD
Frank Lindhardt / Board Member Big Plains SSD
Ross Gregerson / Board Member Big Plains SSD

The Division of Drinking Water (Division) participated in a site visit meeting with Big Plains SSD on October 26, 2023, to discuss the recent emergency response events, water quality concerns, and compliance issues related to a recent Compliance Agreement/Enforcement Order (CA/EO).

Big Plains SSD consists of three separate water systems, each with their own operational and compliance challenges. Apple Valley UTAH27069, Cedar Point UTAH27089 and Canaan Ranch UTAH27093.

Ryan and Tom started the meeting off by expressing they were there to help provide technical assistance regarding the recent operational, water quality and compliance issues. They expressed the Division's primary goal is to provide safe and adequate drinking water to the residents of Big Plains SSD.

Topics of Concern Expressed by the Division

- Source capacity
- Improvement Priority System (IPS) deficiencies
- Water quality issues (radium, iron, turbidity, etc.)
- Certified operator
- Revised Total Coliform Rule (RTCR) requirements
- Cross Connection Control (CCC) Program deficiencies
- Compliance Agreement/Enforcement Order (CA/EO) requirements for Cedar Point (27089)
- Emergency Response Plan

Mayor Lindhardt expressed that they are aware of the challenges, but that all of the possible solutions require money that the water system does not have. He explained the history of Apple Valley and the Big Plains Water systems, talking at length about the financial challenges. How $5 million dollars was paid for the water rights, but they are having trouble repaying the money because the water system doesn't bring in enough revenue. Big Plains SSD is supposed to be paid back from Impact fees, but a waiver was given to new connections, so those impact fees aren't being collected. The revenue that comes into Big Plains SSD does not go toward maintaining their water system, rather it goes toward re-paying the debt. A total of $75,000 is collected from Big Plains residents by the Washington County Water Conservancy District, but that money does not benefit Big Plains SSD.

Big Plains SSD has had discussions with Washington County Water Conservancy District (WCWCD) about them taking over the Big Plains water systems, but WCWCD is hesitant because of an estimated $2 million dollars in needed upgrades. Big Plains SSD doesn't have the money to make the necessary repairs and upgrades. One project Big Plains would like to complete is a transmission pipeline from Apple Valley to Cedar Point, which would provide adequate supply to Cedar Point and hopefully improve water quality through blending.

We discussed reaching out to Michal Grange at the Division to investigate applying for State Revolving Fund (SRF) funding. We also suggested reaching out to Rural Water Association of Utah (RWAU) to see if the programs they are offering would be of assistance.

Source Capacity

The source capacity deficiency for Cedar Point 27089 was discussed. The issue is that the largest producing well, WS003, has been shut down due to water quality issues, namely high levels of radium and iron and multiple customer complaints regarding that taste, color and odor. Baratt and Ross expressed their frustration that without WS003, it is difficult to meet demand. The solution to this problem would be either treatment of the Cedar Point wells or replacement of those wells by constructing a supply line from Apple Valley 27069. Either solution would be expensive, and the addition of treatment would also require a certified water treatment operator.

IPS Deficiencies

We discussed their IPS points and showed them where to find that information on WaterLink. We discussed how Apple Valley was currently over the IPS point threshold, which could lead to the system becoming an unapproved drinking water system. We showed how deficiency corrections could be made directly from WaterLink and we sent in the corrections during the meeting for a CCC deficiency after they provided a copy of their public notification. We also discussed the need to complete a Level 1 assessment in accordance with the Revised Total Coliform Rule for Apple Valley and took the time to complete this assessment with Ross and Barratt during the site visit.

Water Quality
Issues with radium, turbidity, iron, and manganese levels were discussed and the Division emphasized the importance of ensuring the drinking water did ot exceed the Safe Drinking Water Act Maximum Contaminant Levels (MCL). Samples were collected from WS002, WS003, and WS004 for the following: RADs, inorganics and metals and field tests for pH, OPR, Conductivity and TDS.

Certified Operator
It was stated that the recently hired certified operator had resigned. Barrett and Ross are not certified water operators and don't have experience operating a water system. The need for certified operators, a Direct Responsible Charge (DRC) operator, and their role in safeguarding public health was stressed. Ross stated that they had a possible candidate who was willing to step into this role.

Revised Total Coliform Rule
As the majority of the current IPS points for water systems are related to RTCR monitoring violations, we discussed at length the need for proper sampling procedures following an approved sample site plan. We provided them with a copy of the sample site plan we had on file for Apple Valley and discussed how to create plans for Cedar Point and Canaan Springs. During the site visit we took the required Routine Total Coliform bacteriological samples for each system, training Baratt and Ross on proper sampling technique.

Cross Connection Control Program
The requirements for a cross connection control program were discussed. We explained what each part of the program means and how to comply. During the meeting, documentation of public education was provided, and the deficiency correction was submitted for M004 Documentation of annual public awareness and/or employee training for all three systems.
Emergency Response Plan
As a major reason for our site visit was related to a recent emergency response event where the Cedar Point system was de-watered, we discussed the need for a comprehensive Emergency Response Plan (ERP). While an ERP is not required for a system of this size, it is highly recommended. It was discussed that such a plan should address operational failures, natural disasters, manmade disasters, bacteriological issues and providing emergency water supply.

Site Visit Observations

After the meeting in the office, a site visit was conducted. This included taking routine bacteriological samples at all three water systems, inspection of and water sampling at the three operational wells in Cedar Point, and a Level 1 Assessment of Apple Valley.

Jessup Well WS002

- Water had a strong sulfur odor.
- Evidence of rodent droppings in the building.
- Iron deposits evident on piping, air-vac screens, etc.

New Cooke Well WS004

- Evidence of rodent droppings throughout the well house.
- The water was orange and had a strong odor.
- Large amounts of Iron deposits on air-vac.

Well 59 WS003

- The water was orange and had a strong odor.
- Has a filter installed in the room that is not plumbed into the system at this time.
- The air-vac lacks a screen.
- Valve to the system was open on arrival. Valving had to be changed to the pump-to-waste line. We noted the meter reading and emphasized that this is not an approved source. Any change in this reading will be evidence that the not approved source has been in use.

Apple Valley

Several deficiencies were identified during the Level 1 Assessment of this system, the details of which can be found in that report (see attached). The interior of the water tanks could not be inspected because Ross did not have the proper key. This has now been corrected and Ross will provide photographs of the hatch, gasket and tank interior.

Samples Taken

Big Plains SSD Site Visit								
Sample Location	PWSID	Facility ID	pH[1]	Temp[2]	TDS[3]	Conductivity[4]	ORP[5]	Turbidity[6]
Jessup Well	UTAH27089	WS002	7.4	18	454	690	-160	0.7
Well 59	UTAH27089	WS003	7.3	17	955	1401	-90	9.5[A] 1.1[B]
New Cooke Well	UTAH27089	WS004	7.3	17	668	998	-81	0.5
Apple Valley Home Office	UTAH27069	DS001	7.3	20	755	1129	270	-
Canaan Ranch Home	UTAH27093	DS001	7.6	20	88	145	84	-
Units: [1]-pH Units; [2]- Celcius; [3]-mg/L; [4]-µmhoa/cm; [5]-mV; [6]-NTU								
[A]-Sample Collected Prior to Flushing; [B]-Sample Taken Post 20 Min Flush								

Samples for inorganics and metals, iron, manganese and radionuclides were taken at Cedar Point WS002, WS003 and WS004. A complete set of source samples were also taken at WS003. These samples were delivered to Chemtech Ford Lab and the results are pending.

Conclusion

Big Plains SSD faces several major challenges regarding water supply, water quality and operation of the system. The water quality of the three Cedar Point groundwater wells is generally poor. The ultimate solution would likely require treatment to remove the high levels of metals and radium. Another solution would be to construct a pipeline to Cedar Point from Apple Valley. This project may cost around $2 million, which the water system expressed would be a challenge to obtain. Big Plains SSD would like to investigate the possibility of Washington County Water Conservancy District taking over ownership and/or operation of the system.

Requirements

Based on the conclusion of the site visit the following requirements need to be resolved to ensure compliance.

1. Obtain a certified water operator for Cedar Point, Apple Valley, and Canaan Ranch water systems.
2. Complete a bacteriological sample site plan for Cedar Point, Apple Valley, and Canaan Ranch water systems. Due January 31st, 2024. Template attached.
3. Follow all routine and repeat Total Coliform and E. coli sampling requirements for Cedar Point, Apple Valley, and Canaan Ranch water systems.
4. Conduct and record Cross-connection program enforcement for Cedar Point, Apple Valley, and Canaan Ranch water systems.
5. The air-vac on Well 59, WS003 needs to be screened for Cedar Point water system.
6. Cedar Point water system Well 59, WS003, is not an approved drinking water source. This source cannot be used until you receive approval from the Division to activate this source.

Recommendations

1. Seek financial assistance to help with upgrades to the water system.
2. Install treatment to improve water quality.
3. Install an approved transmission line to connect Apple Valley and Cedar Point.
4. Create and implement an Emergency Response Plan for Cedar Point, Apple Valley, and Canaan Ranch water systems.

Big Plains SSD IPS Report

Big Plains Water SSD-Cedar Point UTAH27089 *Total IPS Points:110*

DS001 Distribution System

- System Lacks more than 20% of required source capacity.
- CCC-lacks on going enforcement implementation.
- CCC-Lacks written records of CCC Activities.

ST001 Storage Facility

- The inside of the tank is deteriorating.
- WS002 Jessup Well
- Active source lacks approved updates to DWSP plan.

WS004 Well 59

- Unapproved source in service.
- Active source lacks an approved DWSP plan.

Big Plains Water SSD-Apple Valley UTAH27069 *Total IPS Points:120*

DS001 Distribution System

- CCC-lacks on going enforcement implementation.
- CCC-Lacks written records of CCC Activities.

ST001 220,000 gal Tank

- Storage tank sidewall has a small leak.

ST002 220,000 gal Tank

- Storage tank sidewall has a small leak.

WS002 Apple Valley Well #2

- Active source lacks approved update to DWSP plan.

WS003 Well #1 Replacement

- Active source lacks approved updates to DWSP plan.

Big Plains Water SSD-Canaan Ranch UTAH27093 *Total IPS Points:100*

DS001 Distribution System

- CCC-Lacks Local Authority Statement.
- CCC-Lacks on-going enforcement
- CCC-Lacks Written records of CCC activities.

WS001 Canaan Springs

- Spring Collection Area Not Fenced.

We ask that you take the necessary actions to comply with these requirements and recommendations. Please contact me at (801)-419-6785 or rdearing@utah.gov if you have any questions. Contact Jennifer Yee at (385) 515-1501 or ddwips@utah.gov if you need assistance resolving IPS deficiencies. Contact Paul Wright at pwright@utah.gov for assistance with engineering or plan approval.

Ryan C. Dearing
Field Services Section Manager

Enclosure

cc: Jeremy Roberts, Southwest Utah Public Health Department
Paul Wright, P.E., District Engineer