

Rural and Tribal Environmental Solutions



Lee Michalsky
Billings 406.534.6039
Wise River 406.832.3362
Cell: 406.861.7696

January 29, 2013

Leo Bogden
Public Works Director
PO Box 115
Broadview, MT 59015

SUBJECT: Technical Assistance Visit

Dear Mr. Bogden,

I recently completed an Operation and Maintenance Technical Assistance visit to the Town of Broadview's Municipal Water System. I enjoyed reviewing the water system facilities with you and discussing your future water system needs, and appreciate the time and information you provided me as well as the tour of the water system facilities. I want to commend you for your hard work, dedication, and determination to provide safe drinking water to customers in the community.

I believe your inquiries regarding funding for a new 100,000 gallon storage tank would best be accomplished under RATES Financial and Managerial Assistance (FMA) program that is funded by Montana's Department of Environmental Quality. I'll contact you in the near future about meeting with the town council to describe RATES assistance.

I am attaching a report of my observations and discussions from our visit. My services as Technical Assistance Provider are accessible to your community free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, RATES goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. I hope this TA visit and report accomplished that. Once again, thank you for your time and I will be following up with you on FMA requested during my visit.

Regards,

A handwritten signature in cursive script that reads "Lee A. Michalsky".

Lee A. Michalsky
RATES
1306 Patriot Street
Billings, MT 59105

CC: Robert Ashton, DEQ O&M Program

Montana Operation and Maintenance Technical Assistance Report

PWS Name: Town of Broadview
Owner: Town of Broadview
PWS ID Number: MT0000167
Systems Address: PO Box 115
Broadview, MT 59015
Date of TA Visit: December 13, 2012
Operator: Leo Bogden
Phone: (406) 855-8357
Service Connections: 202
Population: 200



Background:

Lee Michalsky contacted Leo Bogden, Broadview's Operator, to set up a site visit to the water system to explain RATES Operation and Maintenance program and offer on site or follow up assistance if requested by the Operator. Lee confirmed the visit for January 11, 2013 with Leo. Rob Ashton approved the site visit on January 8, 2013. Lee printed off a copy of the Source Water Delineation and Assessment Report, the systems monitoring status per SDWIS, and well information available through Montana's Ground-Water Information Center (GWIC) website prior to the visit in order to discuss those topics with the operator.

System Observations:

- Water for this water system is provided by two groundwater wells. The wells are controlled by a transducer located within the storage tank. Low and high set points determine when the pumps run and shut down. The system does not disinfect the water since the water system has consistent bacteriological (BacT) samples that have been negative.
- Michalsky reviewed system records and toured the water system and facilities with system Operator Leo Bogden.
- Two new wells have been drilled and are scheduled to be brought on line in the spring.
- System components appeared to be in good working condition at the time of the visit.
- The Operator is able to check the storage tank level daily through the Programmable Logic Controller (PLC) that is located within the well house.
- Water analyses are through Energy Lab in Billings.

- The system facilities are kept locked and appear to be secure. However, the perimeter of the storage tank is not fenced.

Technical Assistance:

- Michalsky and the Operator discussed water sampling requirements. Leo would like to have an easy to follow sampling guide to follow. Michalsky offered to develop a sampling guide.
- Michalsky and the Operator discussed an Emergency Response Plan for the water system. Leo believes the system is covered under the Emergency Operations Plan for Billings, Laurel, and Broadview and Yellowstone County. Michalsky reviewed Yellowstone's Emergency Operations Plan and believes an Emergency Response Plan tailored for Broadview's water system should be developed.
- Michalsky provided the operator with a copy of the Source Water Assessment and Delineation Report that was revised in February 2006. Since two new wells will be brought on line in the spring and the system plans to construct a new water tank, Michalsky offered to assist updating the SWADR when the construction projects are completed.

Follow-up:

I am sending the following documents with this letter and report for your review and consideration:

- Emergency Response Plan Template,
- Vulnerability Assessment Template,
- Protecting Drinking Water Sources in Your Community; Getting Started on Source Water Protection: Tools for Municipal Officials,
- MDEQ's Public Water Supply Contacts,
- Recommended websites and publications, and
- 2013 Training Calendar for Water, Wastewater, and other Environmental Professionals.

Lee will also meet with the town council and then request permission from Gary Wiens to open this project as an FMA project.

Rural and Tribal Environmental Solutions



Lee Michalsky
Billings 406.534.6039
Wise River 406.832.3362
Cell: 406.861.7696

January 31, 2013

Cory Fox
Treatment Plant Superintendent
PO Box 1177
Chinook, MT 59523

SUBJECT: Technical Assistance Visit

Dear Mr. Fox,

I recently completed an Operation and Maintenance Technical Assistance visit to the City of Chinook's Water Treatment Plant. I enjoyed reviewing the water system facilities with you and discussing your future water system needs. I appreciate the time and information you provided me as well as the tour of the water system facilities. I want to commend you for your hard work, dedication, and determination to provide safe drinking water to customers in your community.

As we discussed, I believe the town could save money when you replace your filter media by purchasing the media from Crow Agency, Montana. Of course, that depends on if the media meets specifications required in your filters. Please contact LeRoy Cummins, BIA Facilities Manager, at (406) 638-2390, or me, for information on the filter media. I'll also Email a list of the media they have on hand to you when I have a chance to see what they have in storage.

I am attaching a report of my observations and discussions from our visit. My services as Technical Assistance Provider are accessible to your community free of charge and remain available should you have further need of them. Keep in mind, as you review this report, RATES goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. I hope this TA visit and report accomplished that. Once again, thank you for your time and please feel free to contact me for operational and maintenance assistance or financial and managerial assistance.

Regards,

A handwritten signature in cursive script that reads "Lee A. Michalsky".

Lee A. Michalsky
RATES
1306 Patriot Street
Billings, MT 59105

CC: Robert Ashton, DEQ O&M Program

Montana Operation and Maintenance Technical Assistance Report

PWS Name: City of Chinook
Owner: City of Chinook
PWS ID Number: MT0000174
Systems Address: PO Box 1177
Chinook, MT 59523
Date of TA Visit: January 25, 2013
Operator: Cory Fox
Phone: (406) 357-2120
Service Connections: 738
Population: 1300



Background:

Lee Michalsky contacted Cory Fox, Water Treatment Plant Superintendent, to set up a site visit to the water system to explain RATES Operation and Maintenance (O&M) program and offer on-site assistance or follow up assistance if requested by water system personnel. Lee confirmed the visit for January 25th, 2013 with Cory Fox. Rob Ashton had approved the site visit on January 8, 2013. Lee printed off a copy of the Source Water Delineation and Assessment Report and the systems monitoring status per SDWIS. No monitoring violations were noted during review of the SDWIS report.

System Observations:

- Michalsky reviewed system with Cory Fox. Source water for this public water supply is provided by the Milk River. Water is treated utilizing conventional filtration and chlorine disinfection.
- The water system was funded, through Bear Paw Development Corporation, to upgrade the water treatment plant. Those plans include installation of UV disinfection to address the disinfection and disinfection by products rule.
- Upgrades to the plant also include changing out filter media.
- Backflow prevention devices are tested on an annual basis.
- System components appeared to be in good working condition at the time of the visit.
- Water analyses are through Energy Lab in Billings.
- The systems Emergency Response Plan (ERP) and Vulnerability Assessment (VA) were updated March 2011.

Technical Assistance:

- Michalsky and the plant superintendent discussed upgrades to the water treatment plant. Michalsky noted that the Bureau of Indian Affairs (BIA) plant located at Crow Agency recently changed out the filter media and had a lot of extra media on hand that they would probably sell. Since one of the main costs associated with the filter media is shipping, Michalsky thought the City of Chinook could save money purchasing the media from the BIA. Michalsky will contact the BIA and find out what filter media is on hand and send the information to Cory.

Follow-up:

I am sending a list of the filter media on hand at Crow Agency, Montana. I underlined and checked the media, in red ink, they have on the attached list. Also, please keep in mind that O&M assistance as well as FMA assistance is available to the water system on request.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 25, 2013

Jerry Griggs
Conrad Water Department
411 ½ S Main
Conrad, MT 59425

Re: **Technical Assistance Visit**

Dear Mr. Griggs,

I recently completed an Operation and Maintenance Technical Assistance visit to the Conrad Water Department public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

A handwritten signature in black ink that reads 'Jeff McCleary'.

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240-2229
ratesjeffm@gmail.com

Montana Operation and Maintenance Technical Assistance Report

PWS Name: Conrad Water Department
Owner: Conrad Water Department
PWS ID Number: MT00186
System Address: 411 ½ S Main St, Conrad, MT 59425
Date of TA Visit: 1/17/13
Operator: Jerry Griggs
Phone: 406-271-5821
Email: pwd@3rivers.net
Service Connections: 1300
Population: 2500
TA Provider: Jeff McCleary

Background:

This visit was scheduled with Operator Jerry Griggs and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- McCleary reviewed this public water supply plant with Operator Jerry Griggs.
- Water for the system is pumped from Lake Frances to the water plant. Here the water is treated with polymers to aid flocculation, filtered and disinfected with chlorine. Water then flows to two 1 million gallon storage tanks, from the storage tanks the water gravity flows through the distribution system. The distribution mains are mostly 12 and 16 inch C900 pipe with some asbestos cement pipe still in use. The system's service connections are metered.
- McCleary observed that good records are kept at the plant and at the Water Department Office.
- Most of the plant processes are controlled by computer interface and many of the records for the plant are recorded digitally.

- The Operator has good maps of the system available.

Technical Assistance:

- The Operator explained that the water coming from Lake Frances has a high level of dissolved oxygen. The dissolved oxygen is high enough to affect the flocculation process. In researching this problem, McCleary found that there several solutions used to remove dissolved oxygen from boiler water, where dissolved oxygen can have a corrosive effect. However, most of these processes involve heating the water or producing steam in some way. Such processes do not seem practical for a water plant which needs to produce water in volume. Oxygen scavengers and catalytic resins are also sometimes used to reduce dissolved oxygen as well as membrane contractors. Again, these are methods are typically used in the de-aeration of boiler water. More research would have to be done to determine if any of these approaches could be used in the de-aerating drinking water.
- McCleary noted that the system's Source Water Assessment and Delineation Report was completed in 2002. McCleary recommends that the system consider updating this document since conditions may have changed in the past 11 years. RATES staff would be glad to work with the system free of charge to help with the updating of this document. RATES staff would also be willing to assist with helping the system to develop a Source Water Protection Plan once the document is updated.
- McCleary gave the Operator a cd disk with files that outline the basics of asset management for water systems. In today's uncertain economic climate, the more self-sufficient a water system can be, the better off they are. Asset management is designed to promote good management of resources and funds as well as help the system to be less dependent on the uncertainty of grants and loans to keep the system running. RATES staff would be willing to assist the system with developing an asset management plan. RATES will also be offering training on asset management this spring in at least 2 locations in Montana.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.

Rural and Tribal Environmental Solutions



Lee Michalsky
Billings 406.534.6039
Wise River 406.832.3362
Cell: 406.861.7696

January 31, 2013

Donald Coffman
Treatment Plant Superintendent
PO Box 579
Harlem, MT 59526

SUBJECT: Technical Assistance Visit

Dear Mr. Coffman,

I recently completed an Operation and Maintenance Technical Assistance visit to the City of Chinook's Water Treatment Plant. I enjoyed reviewing the water system treatment plant and facilities with you and discussing the water system. I appreciate the time and information you provided me as well as the tour of your treatment facility.

I am attaching a report of my observations and discussions from my visit. My services as Technical Assistance Provider are accessible to your community free of charge and remain available should you have further need of them. Keep in mind, as you review this report, RATES goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. I hope this TA visit and report accomplished that. Once again, thank you for your time and please feel free to contact me for operational and maintenance (O&M) assistance or financial and managerial assistance (FMA).

Regards,

A handwritten signature in cursive script that reads "Lee A. Michalsky".

Lee A. Michalsky
RATES
1306 Patriot Street
Billings, MT 59105

CC: Robert Ashton, DEQ O&M Program

Montana Operation and Maintenance Technical Assistance Report

PWS Name: City of Harlem
PWS ID Number: MT0000239
Systems Address: PO Box 579
Harlem, MT 59526
Date of TA Visit: January 25, 2013
Operator: Donald Coffman
Phone: (406) 353-2361
Service Connections: 738
Population: 1300



Background:

Lee Michalsky contacted Donald Coffman, Water Treatment Plant Superintendent, to set up a site visit to explain RATES Operation and Maintenance (O&M) program and offer on-site assistance, or follow up O&M assistance, if requested by water system personnel. Lee confirmed the visit for January 25th, 2013 with Donald Coffman. Rob Ashton had approved the site visit on January 8, 2013. Lee printed off a copy the systems monitoring status per SDWIS, but the Source Water Assessment and Delineation Report was not located on Montana's DEQ website.

System Observations:

- Michalsky reviewed records and then toured the system with Donald Coffman. Source water for this public water supply is provided by the Milk River. Water is treated utilizing a Pall membrane unit that was installed in 2009.
- Spent wastewater is discharged to two ponds.
- Membrane integrity tests are conducted daily.
- System components appeared to be in good working condition at the time of the visit.
- Water analyses are through Energy Lab in Billings.
- The systems Emergency Response Plan (ERP) and Vulnerability Assessment (VA) were updated March 2011.

Technical Assistance:

- Michalsky and the plant superintendent discussed the waste water that is being sent to the backwash filter pond. Coffman is currently working with an engineering firm to conduct an evaluation of soil characteristics around the backwash ponds to determine if spent backwash water could eventually discharge into the Milk River. If a Discharge

Monitoring Report is required by DEQ based on results from the study, Michalsky could help Coffman with the Notice of Intent to discharge from the plant and NPDES permit if requested.

- Michalsky and Coffman discussed the systems Emergency Response Plan (ERP). An ERP exists for the system and appeared to be up-to-date.
- Michalsky will check with Joe Meek on the status of Harlem's Source Water Assessment and Delineation Report. Coffman thought the SWADR was recently updated and was possibly being reviewed by DEQ staff prior to being posted on DEQ's website.

Follow-up: O&M assistance as well as FMA assistance is available to the water system on request.

Rural and Tribal Environmental Solutions



Lee Michalsky
Billings 406.534.6039
Wise River 406.832.3362
Cell: 406.861.7696

January 31, 2013

Kelley Schafer
Treatment Plant Operator
PO Box 231
Havre, MT 59501

SUBJECT: Technical Assistance Visit

Dear Mr. Schafer,

I recently completed an Operation and Maintenance Technical Assistance visit to the City of Havre's Water Treatment Plant. I enjoyed reviewing the treatment plant with you and discussing your future water system needs. I appreciate the time and information you provided me as well as the tour of the plant. I want to commend you for your hard work, dedication, and determination to provide safe drinking water to customers in your community.

I am attaching a report of my observations and discussions from our visit. My services as Technical Assistance Provider are accessible to you free of charge and remain available should you have further need of them. Keep in mind, as you review this report, RATES goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. I hope this TA visit and report accomplished that. Once again, thank you for your time and please feel free to contact me for operational and maintenance assistance or financial and managerial assistance.

Regards,

A handwritten signature in cursive script that reads "Lee A. Michalsky".

Lee A. Michalsky
RATES
1306 Patriot Street
Billings, MT 59105

CC: Robert Ashton, DEQ O&M Program

Montana Operation and Maintenance Technical Assistance Report

PWS Name: City of Havre
PWS ID Number: MT0000524
Systems Address: PO Box 231
Havre, MT 59501
Date of TA Visit: January 21, 2013
Operator: Kelly Schafer
Phone: (406) 265-5215
Service Connections: 3,581
Population: 9,800



Background:

Lee Michalsky contacted Robert Presnell, Water Treatment Plant Superintendent, to set up a site visit to the water system to explain RATES Operation and Maintenance (O&M) program and offer on-site assistance or follow up assistance if requested by water system personnel. Lee confirmed the visit for January 21st, 2013 with Kelley Schafer since Robert would not be available on the day of the O&M visit. Rob Ashton had approved the site visit on January 8, 2013. Lee printed off a copy the systems monitoring status per SDWIS, and Source Water Assessment and Delineation Report. No monitoring violations were noted during a review of the monitoring report.

System Observations:

- Michalsky toured the water treatment plant with plant operator Kelley Schafer. Source water for this public water supply is provided by the Milk River. Water is treated utilizing conventional filtration followed by chlorine disinfection.
- Ferric chloride is used for coagulation followed by floc-aids, caustic soda for p.H. adjustment, and carbon for taste and odor problems.
- The water system utilizes Clor-Tec for on-site generation of sodium hypochlorite.
- The system was upgraded in 2008; two filters were installed doubling the capacity of the treatment plant.
- The treatment plant components and processes appeared to be in good working condition at the time of the visit.

Technical Assistance:

- Michalsky offered to help water system personnel update their Source Water Delineation and Assessment Report that was dated 2000, but on a follow up call with Robert Presnell, he said the SWDAR had recently been updated but probably had not been posted to the DEQ website yet.
- Michalsky and the Kelley discussed an Emergency Response Plan and Vulnerability Assessment for the system. The system has an ERP and VA in place. Michalsky offered to assist updating the plans if requested.
- Michalsky and Schafer discussed development of Source Water Protection Plans. Schafer noted that the north side of Havre has many residents on individual wells that the city could connect to the system. Michalsky will attempt to locate a contact on the north side and attempt to determine if residents may have an interest connection to Havre's system.

Follow-up: O&M assistance as well as FMA assistance is available to the water system on request.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 22, 2013

Karol Walker
Power Teton Water and Sewer District
PO Box 176
Power, MT 59468

Re: **Technical Assistance Visit**

Dear Mrs. Walker,

I recently completed an Operation and Maintenance Technical Assistance visit to the Power Teton Water and Sewer District public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240-2229
ratesjeffm@gmail.com

Montana Operation and Maintenance Technical Assistance Report

PWS Name: Power Teton Water and Sewer District

Owner: Power Teton Water and Sewer District

PWS ID Number: MT00311

System Address: PO Box 176, Power, MT 59468

Date of TA Visit: 1/16/13

Operator: Karol Walker

Phone: 406-463-2351

Email: NA

Service Connections: 78

Population: 167

TA Provider: Jeff McCleary

Background:

This visit was scheduled with Operator Karol Walker and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- McCleary reviewed this public water supply with Operator Karol Walker.
- Water for the system comes from an intake on Muddy Creek. Water is treated by a conventional Tonka package plant with 2 filter trains. Each train provides flocculation, sedimentation and filtration. Ferric chloride is used to assist in flocculation. The water is disinfected with calcium hypochlorite before entering the distribution system. From the treatment plant, water is pumped through the distribution system to a 150,000 gallon welded steel storage tank. Water from the tank gravity feeds the system. Distribution mains are 6 inch and 14 inch PVC pipe.
- The Operator keeps good records for the system.
- The system facilities are kept locked for security.

- The storage tank is exhibiting pinhole leaks.
- The Operator follows a daily maintenance routine and the sump and filter trains are cleaned on a routine basis.
- The each service connection is metered and has a backflow preventer in place.
- The fire department flushes the hydrants annually.

Technical Assistance:

- McCleary and the Operator discussed an Emergency Response Plan and Vulnerability Assessment for the system. The Operator has the number of the local DES person and other emergency numbers on file. McCleary explained that some funders require an ERP and VA to be written out in order to qualify for funding. If the need would arise, RATES staff would be able to help with putting together an ERP and/or VA for the system.
- McCleary and the Operator discussed the pin holes in the storage tank. The Operator explained they had the tank inspected and were told that the holes could be repaired, but the tank would have to be offline for 2 weeks or the tank could be fixed with the water in the tank but the water temperature would have to be at least 50 degrees. Neither of these options is very feasible. McCleary recommends that another company should be contacted to inspect the tank. It is known that other companies are able to do this type of repair work without the inconvenience previously described. McCleary suggests that the Operator talk to the Operator at the Town of Conrad. Their tanks recently had similar repairs made without the inconvenience of shutting down the tank for 2 weeks. McCleary also suggests that tank inspection and repair companies could be found on the internet and contacted. The situation could be described to them over the phone or by email before they come to the site to determine if they are able to deal with the work in an expeditious manner.
- McCleary discussed asset management with the Operator. McCleary explained that an asset management plan can be a useful tool to help small water systems become more self-sufficient. McCleary gave the Operator a cd with several files describing the basics of asset management. RATES staff are available to assist system with developing an asset management plan if requested.
- The Operator requested that McCleary send her a sampling schedule for the system that can be understood. The sampling schedule is being sent with this report.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

December 27, 2012

Robin Franzen
Town of Belt
PO Box 453
Belt, MT 59412

Re: **Technical Assistance Visit**

Dear Mr. Franzen,

I recently completed Operation and Maintenance Technical Assistance visits to the Town of Belt public water system. I enjoyed reviewing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240-2229
ratesjeffm@gmail.com

Montana Operation and Maintenance Technical Assistance Report

PWS Name: Town of Belt

Owner: Town of Belt

PWS ID Number: MT00138

System Address: PO Box 453, Belt, MT 59412

Date of TA Visit: 12/18/12

Operator: Robin Franzen

Service Connections: 275

Population: 700

TA Provider: Jeff McCleary

Background:

The visit with this system was scheduled and approved on December 10, 2012. Preparation for the site visit included review of the system's latest sanitary survey, review of the information on the Drinking Water Watch web site and a review of the system's Source Water Assessment.

System Observations:

- McCleary reviewed the system with Operator Robin Franzen.
- Water for this public water system is provided by 2 ground water wells which pump water through the distribution system. A 180,000 gallon concrete tank and a 100,000 gallon steel tank provide storage and pressure for the system.
- Both wells are metered.
- The Coke Oven Flats pump was in the process of being replaced by a submersible pump with a variable frequency drive at the time of the visit.
- The system's service connections are not presently metered. A flat rate is charged for water.
- It was noted that the concrete tank has some significant leaks. The steel tank has some leaks from bullet holes and some from rusting through. It was explained that the concrete tank was built in 1938 as part of a WPA project. The steel tank was built in 1960. Both tanks are in need of replacement.
- Each service connection is equipped with a pressure reducing valve.

- The well pumps are controlled by a timer.

Technical Assistance:

- McCleary and Mr. Franzen discussed the system's present rate structure. The users are presently paying \$38 per month for water and \$25 for wastewater. The monthly water rate is up from the \$20.90 per month reported at the last sanitary survey in April, 2010.
- The system has retained the services of an engineering firm and is looking for funding sources. RATES has staff that would be able to provide free assistance with looking for funding, applying for funding, etc.
- McCleary and Mr. Franzen discussed asset management for the system. McCleary explained that an asset management plan could help a system to gain self-sufficiency so as to be less dependent on the ability to qualify for grants and loans. McCleary gave Mr. Franzen a cd disk containing the following files: "Building an Asset Management Team," "Asset Management for Local Officials" and "Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems." These files are put out by EPA and provide good guidance for beginning an asset management plan. RATES staff persons would be able to help the system establish an asset management plan free of charge. RATES can also assist systems with budgeting and rate setting.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 22, 2013

Kelly Hirsch
City of Choteau
PO Box 619
Choteau, MT 59422

Re: **Technical Assistance Visit**

Dear Mr. Hirsch,

I recently completed an Operation and Maintenance Technical Assistance visit to the City of Choteau public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240-2229
ratesjeffm@gmail.com

Montana Operation and Maintenance Technical Assistance Report

PWS Name: City of Choteau

Owner: City of Choteau

PWS ID Number: MT00175

System Address: PO Box 619, Choteau, MT 59422

Date of TA Visit: 1/16/13

Operator: Kelly Hirsch

Phone: 406-868-3017

Email: NA

Service Connections: 780

Population: 1691

TA Provider: Jeff McCleary

Background:

This visit was scheduled with Operator Kelly Hirsch and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- McCleary reviewed this water system with Operator/Public Works Director Kelly Hirsch.
- Water for the system is provided by a series of shallow springs which are classified as ground water. Water from the Upper and Lower Richem Springs (wells 3 and 4 respectively) flow by gravity to the Main Water works well which is Well 1. Here the water is disinfected with sodium hypochlorite before entering distribution. Water from the Richem Spring (well2) is the primary source for the system. Water from this well is disinfected also before being pumped into the distribution system. Water flows through the distribution system to 2 partially buried storage tanks located north of town near the golf course; one (1) tank holds 250,000 gallons and the other tank holds 500,000 gallons.
- The system's service connections are metered.
- The Operator follows a maintenance schedule.

- System facilities are kept neat and clean.
- System facilities are kept locked for security.

Technical Assistance:

- McCleary and the Operator discussed an Emergency Response Plan for the system. The system has an ERP in place. McCleary suggests that the ERP should be reviewed and updated regularly in order for it to remain a useful document.
- McCleary gave the Operator a cd disk with files on discussing how to form an asset management plan. Documents included on the disc are: “Building an Asset Management Team,” “Asset Management for Local Officials” and “Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems.” These documents are put out by EPA and provide good general guidance for beginning an asset management plan. RATES staff are available to help if the City should wish to pursue its own asset management plan. McCleary explained that RATES will be putting on training for asset management for small water systems later this year.
- The cd disk also includes an EPA “Distribution System: Best Practices Guide,” and “Cross-Connection Control: Best Practices Guide.”
- McCleary is including with this report a Tech Brief on “How to Begin a Fire Hydrant Operation and Maintenance Plan.”

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 22, 2013

Susan Fleshman; Mayor
Town of Dutton
PO Box 156
Dutton, MT 59433

Re: **Technical Assistance Visit**

Dear Mayor Fleshman,

I recently completed an Operation and Maintenance Technical Assistance visit to the Town of Dutton public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you and your staff for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240-2229
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Montana Operation and Maintenance Technical Assistance Report

PWS Name: Town of Dutton

Owner: Town of Dutton

PWS ID Number: MT00204

System Address: PO Box 156, Dutton, MT 59433

Date of TA Visit: 1/16/13

Operator: Jeremiah Kjensmo

Phone: 406-476-3311

Email: townofdutton@tetonwireless.net

Service Connections: 191

Population: 500

TA Provider: Jeff McCleary

Background:

This visit was scheduled with Mayor Susan Fleshman and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- McCleary reviewed this public water supply with Operator Jeremiah Kjensmo.
- The system is served by a ground water well near the Teton River, 8 miles from town. Polyphosphate is injected at the well pump house to treat for iron and manganese. Water is pumped through an 8 inch distribution line to town. En route to town the water is disinfected with liquid chlorine at a chlorination station located in a vault prior to the system's first service connection. Water flows through the distribution system to the 500,000 gallon steel storage tank. Water is gravity fed from the tank to the distribution system.
- The well pumps and tank set points are controlled by a SCADA system.
- The system components appeared to be in good condition and operating properly at the time of the visit.

- The system facilities are kept locked for security.
- System records are kept by the town clerk.

Technical Assistance:

- McCleary met with Mayor Susan Fleshman, Clerk Sherry Fuhringer and Operator Jeremiah Kjensmo and discussed the system.
- McCleary and the Operator discussed the system's maintenance schedule. The Operator explained that the fire department flushes the system hydrants twice per year. The Operator is working on updating the system's maintenance schedule. The Operator visits pump house and chlorine station daily.
- The system is beginning an improvement project which will replace a lot of the system's main lines with C900 pipe, replace broken valves and refurbish the storage tank and telemetry.
- McCleary recommends that if there is money available, the chlorine station in the vault between the pump house and town be brought above ground. The current situation constitutes a confined space entry. The added danger of storing chlorine in a poorly ventilated vault make for a dangerous situation which should be addressed as a true safety concern for the Operator.
- The Operator is currently working on a temporary certification until he can take the certification test. McCleary offered to help the Operator in any way needed with help studying for the exam.
- The Operator explained that the Operator at Choteau could serve as a backup Operator in the event of an emergency.
- McCleary discussed the possibility of the system applying for an Organic Chemical Use Waiver. Such a waiver would be based on the inventory of synthetic organic contaminants found within the recharge area of the well. If few SOCs are used in the recharge area, this can be mapped and documented to DEQ along with the appropriate forms and a waiver application submitted. McCleary would be willing to help with this process free of charge under the FMA portion of RATES DEQ contract. The system's Source Water Assessment and Delineation Report could be updated as a part of this process. SWADRs are supposed to be reviewed and updated every 3 years.

- McCleary discussed Asset Management with the Mayor, Clerk and Operator. McCleary explained that an asset management program would include a list of the system's components or assets including wells, storage tanks, meters, etc. These items would be assigned a life expectancy and a replacement value. This information could be incorporated into the planning and budgeting for the system. This information could make a water system much more self-sufficient. McCleary gave the clerk a cd disk with files explaining the basics of asset management for small water systems. Files on the disc include "Building an Asset Management Team," "Asset Management for Local Officials" and "Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems." RATES staff would be willing and able to assist the system in developing an asset management plan if such assistance is requested.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 25, 2013

Alan Oakley
Town of Fairfield
PO Box 8
Fairfield, MT 59436

Re: **Technical Assistance Visit**

Dear Mr. Oakley,

I recently completed an Operation and Maintenance Technical Assistance visit to the Town of Fairfield public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
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Montana Operation and Maintenance Technical Assistance Report

PWS Name: Town of Fairfield

Owner: Town of Fairfield

PWS ID Number: MT00212

System Address: PO Box 8, Fairfield, MT 59436

Date of TA Visit: 1/17/13

Operator: Alan Oakley and Tom DeBolt

Phone: 406-467-2510

Email: cityshop@3rivers.net

Service Connections: 360

Population: 660

TA Provider: Jeff McCleary

Background:

This visit was scheduled with Operator Alan Oakley and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- The Town of Fairfield public water supply is served by 8 ground water wells. These wells pump water through the distribution system. The distribution system is made up of 4, 6 and 8 inch asbestos cement pipe with some PVC pipe. Storage and pressure for the system is provided by a 60,000 gallon elevated storage tank located next to the school. A 150,000 gallon elevated storage tank is located on the north edge of town which also provides storage and pressure to the system. The system has 5 entry points. The water from the wells is disinfected at each entry point prior to entering the system. Service connections are not presently metered.
- The Operator explained that he is gearing up for the system's anticipated improvement project to begin.

- System facilities are kept locked for security
- The Operators follow a routine maintenance schedule for system components.

Technical Assistance:

- The system is ready to begin an improvement project and will be going out for bids in February. The Operator explained that he hoped for the meters for the service connections to go in as soon as possible. These meters will be read by radio. This should represent substantial time savings for the Operators.
- The Operator explained that upgrades will be made to the system's telemetry, main lines will be replaced and a new section of line will be added to loop the system.
- McCleary noted that the system's Source Water Assessment and Delineation Report was completed in 2004 and has apparently not been updated since. RATES staff would be glad to assist in updating the SWADR for the system. RATES staff could also assist in developing a Source Water Protection Program for the system. These services could be provided free of charge under the FMA contract with DEQ.
- McCleary gave the Operator a cd disk with files entitled, "Distribution Systems: A Best Practices Guide" and Cross-Connection Control: A Best Practices Guide." These documents are put out by EPA and may provide useful information for maintaining the improvements being made to the system.
- Also on the Cd disk are the files "Building an Asset Management Team," "Asset Management for Local Officials" and "Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems." These files describe the basic concepts of developing an asset management plan for small water systems. An asset management plan can help a system manage the replacement and repair of system components and serve as a budget tool as well as help the system become more self-sufficient and less dependent on the ability to get grants and loans. In addition, if grants and loans are needed, the system has documentation of its ability to manage its components and its ability to repay a loan if necessary. RATES staff would be happy to assist the system with developing their own asset management plan. This service would be available free of charge through DEQ's Financial Management Assistance contract.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
Cell: 406.240.2229
ratesjeffm@gmail.com

January 23, 2013

Ken Holmes
Tri County Water and Sewer District
480 5th Rd NE
Fairfield, MT 59436

Re: **Technical Assistance Visit**

Dear Mr. Holmes,

I recently completed an Operation and Maintenance Technical Assistance visit to the Tri County Water & Sewer District public water system. I enjoyed reviewing and discussing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

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Montana Operation and Maintenance Technical Assistance Report

PWS Name: Tri County Water and Sewer District
Owner: Tri County Water and Sewer District
PWS ID Number: MT00351
System Address: PO Box 623, Great Falls, MT 59403
Date of TA Visit: 1/17/13
Operator: Ken Holmes
Phone: 406-467-2435
Email: kvholmes@3rivers.net
Service Connections: 174
Population: 470
TA Provider: Jeff McCleary

Background:

This visit was scheduled with Operator Kenneth Holmes and approved by Rob Ashton of DEQ on 1/10/13. In preparation for this visit the system's Source Water Assessment and most recent sanitary survey was reviewed, well logs located and downloaded and the Drinking Water Watch web site was reviewed to verify the system's compliance status.

System Observations:

- McCleary reviewed this system with Operator Ken Holmes.
- The Operator keeps good records of the system and has good maps of system.
- Water for the system is provided by 2 horizontal wells. The water is disinfected with chlorine gas before entering the distribution system. Water is pumped from the wells through the distribution system. A 190,000 gallon steel storage tank provides storage and helps with pressure for the system. The distribution system lines are made up of 2 inch, 4 inch and 6 inch PVC pipe. Each service connection is fitted with a flow restrictor and a check valve, but no meter. Water pumped by the wells is metered at the pump houses.
- The pump houses are kept neat and orderly.
- The storage tank has a leak at the base.

- The Operator follows a routine maintenance schedule on pump house components.
- The distribution system has valves intermittently so repairs can be made with minimal interruption to service.

Technical Assistance:

- Since the storage tank is leaking it is recommended that repairs be made as soon as possible. There are several companies that can do a good job of evaluating the leak and determining the best method of repair. If after the tank has been evaluated, if help is needed to find an outside funding source for grants or loans, RATES staff can provide assistance in finding financial resources and applying for them. This service is offered free of charge through the Financial Management Assistance contract RATES has with DEQ.
- The system has been having moderately high nitrate levels and has been put on quarterly monitoring. Nitrates figure significantly in the system's Source Water and Assessment in each of the areas of land use. The SWADR suggests that sources might be agricultural as well as domestic and/or local municipal wastewater systems. While treatment for nitrate is not imminent, RATES staff would be glad to help the district look at practical treatment options and costs. Once again, this service is available free of charge to the system.
- Since the Source Water Assessment and Delineation report is 8 years old, McCleary suggests that it might be a good idea to think about updating this document. This is especially suggested since nitrates are on the rise. Perhaps a specific source could be identified. McCleary would be glad to help the Operator with updating this document free of charge as part of RATES contract with DEQ.
- McCleary and the Operator discussed asset management for the system. McCleary explained that the Operator's contribution to an asset management plan would involve listing the system components, helping to determine a life expectancy for the components and what replacement costs might be. The Operator is also aware of the cost, month to month operating expenses. McCleary gave the Operator a cd disk with files that describe how an asset management plan could be put together to help a small water system become more self-sufficient.
- McCleary showed the Operator how to find and navigate around DEQ's Drinking Water Watch web site.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
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December 27, 2012

Scott Palmer
Vaughn Cascade County Water and Sewer District
PO Box 439
Vaughn, MT 59487

Re: Technical Assistance Visit

Dear Mr. Palmer,

I recently completed Operation and Maintenance Technical Assistance visits to the Vaughn Cascade County Water and Sewer District public water system. I enjoyed reviewing the system with you. I appreciate the time and information you provided me. I want to commend you for your hard work, dedication, and determination to provide safe and plentiful water to this community.

I am enclosing a report of the observations and discussions from our visit. My services as Technical Assistance Provider are accessible by you free of charge and remain available should you have further need of them.

Keep in mind, as you review this report, our goal is to assist in the improvement of your water system in a helpful, constructive, and non-regulatory manner. We hope the TA visit and subsequent report accomplish just that. Thank you for your time and cordial reception.

Regards,

Jeff McCleary
RATES (Rural and Tribal Environmental Solutions)
Cell: (406)240-2229

CC: Robert Ashton, DEQ O&M Program, Lee Michalsky RATES Director



RURAL AND TRIBAL ENVIRONMENTAL SOLUTIONS

Jeff McCleary
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Montana Operation and Maintenance Technical Assistance Report

PWS Name: Vaughn Cascade County Water and Sewer District

Owner: Vaughn Cascade County Water and Sewer District

PWS ID Number: MT00352

System Address: PO Box 439, Vaughn MT 59487

Date of TA Visit: 12/18/12

Operator: Scott Palmer

Service Connections: 234

Population: 585

TA Provider: Jeff McCleary

Background:

The visit with this system was scheduled and approved on 12/10/12. Preparation for the visit included Review of the system's most recent sanitary survey, a review of the system's Source Water Assessment and Delineation Report and a review of the system information available on the Drinking Water Branch web site.

System Observations:

- Water for the Vaughn Cascade County Water and Sewer District is provided by 2 ground water wells. The water is disinfected prior to entry into the distribution system. A 100,000 gallon concrete storage tank provides pressure and storage for the system.
- McCleary reviewed the system with Operator Scott Palmer.
- Scott Palmer is certified as a Class 3A4B Water System Operator.
- The system facilities are kept fenced locked and signed for security.
- The Operator keeps the system's sampling schedule posted in the district office.
- The Operator follows a routine maintenance schedule for system components.
- The Operator has worked hard to bring the system into compliance with state and federal drinking water regulations.

Technical Assistance:

- McCleary and the Operator discussed the need for a power valve turner. The Operator has an injury to his shoulder which makes the exercising of valves and hydrants quite difficult. The Operator has located a power valve turner for a reasonable price, but it is presently beyond the District's budget. McCleary will pass this information on to Sandy Kust of RATES to check for a possible funding source.
- The Operator explained that he has located most of the system's curb stops but not all. McCleary offered to come and help with locating more of the curb stops when the weather warms up and he is in the neighborhood.
- McCleary explained that the system may be eligible for waivers from some of the required chemical sampling. Having reviewed the system's Source Water Assessment, no chemicals were identified in the area as significant potential contaminants. If Mr. Palmer wishes, McCleary or other RATES staff would be able to assist with doing the inventory and helping fill out the necessary forms to apply for these waivers.
- Mr. Palmer and McCleary discussed the possibility of providing the District Board with training or assistance. McCleary gave the Operator a cd entitled "Small Utility Board Training" which was prepared by RATES under a grant from EPA for Montana State University.
- McCleary and Mr. Palmer briefly discussed asset management for the system. McCleary explained that an asset management plan could help a district achieve and maintain self-sufficiency if managed properly. McCleary gave the Operator a cd which has several documents detailing how to begin an asset management plan for small drinking water systems. Files included on the disk are "Building an Asset Management Team," "Asset Management for Local Officials" and "Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems," "Building an Asset Management Team," "Asset Management for Local Officials" and "Taking Stock of Your Water System, A Simple Asset Inventory for Very Small Drinking Water Systems." If the District is interested in developing an asset management program, RATES has staff who would be able to provide assistance free of charge.

Follow-up:

- If the system is interested in following up on any of the items discussed, Jeff McCleary of RATES can be contacted via the contact information listed above.

