

# **BUTTE-SILVER BOW MS4 2021 ANNUAL REPORT**



The City and County of  
**Butte-Silver Bow** Montana

**Prepared for:**

Butte-Silver Bow Metro  
800 Centennial Road  
Butte, MT 59701

Butte-Silver Bow Public Works  
126 W. Granite St.  
Butte, MT 59701

**Submitted by:**

Water & Environmental Technologies  
480 East Park Street  
Butte, MT 59701  
406 782 5220



## THE CITY-COUNTY OF Butte-Silver Bow

February 25, 2022

Water Quality Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

**RE: Butte-Silver Bow 2021 – MS4 Annual Report**

Thank you for your interest in Butte-Silver Bow's (BSB) MS4 program. We are proud of the accomplishments we have achieved and progress we have made with our program since the first generation MS4 permit was issued in 2005. Our MS4 is complex, topographically, geologically, historically, and politically. Impacts from historic mining, as well as ongoing surface mining activities that occur within our city, have profound ramifications on the difficulty of storm water management within our municipality and the resulting quality of our storm water. BSB has coordinated closely with continuing Superfund remedial efforts to reduce mining impacts and has attempted to focus our MS4 work in a manner that compliments Superfund efforts. BSB looks forward to working with MDEQ and the MS4 program to "think outside the box" and recognize the unique solutions our team has developed to improving our storm water quality.

A few notable details that have taken place within the MS4 are highlighted below.

- 1,646 tons of sediment removed, prior to discharge to receiving waters, from street sweeping and stormwater feature maintenance.
- BSB stormwater ordinances updated to include Low Impact Design (LID) and clean up language throughout.
- Updated Engineering Standards have been approved and implemented.
- New fillable forms supporting the updated Engineering Standards and construction inspections have been implemented.
- A Stormwater Master Plan has been completed for the areas of South Butte outside of the Butte Priority Soils Operable Unit (BPSOU).


The complete annual report is included with this letter. If you have any questions or concerns with this response, please contact me at [mneary@bsb.mt.gov](mailto:mneary@bsb.mt.gov) or 406.497.6519.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Neary".

Mark Neary  
Butte-Silver Bow Public Works Director



 <p>Montana Department of Environmental Quality</p> <p>WATER PROTECTION BUREAU</p>		Agency Use	
		MTR04 _____	
		Date Rec'd: _____	
		Amount Rec'd: _____	
		Check No.: _____	
		Rec'd By: _____	
<b>FORM</b> <b>MS4-AR</b>	<b>MPDES Storm Water Small MS4 Annual Report Form</b>		
	Reporting period is for the calendar year, January 1st through December 31st. Check one. Annual Report is due by March 1st of the following year.		
	<input type="checkbox"/> 2017	<input type="checkbox"/> 2018	<input type="checkbox"/> 2019
<p><b>Instructions:</b> This Annual Report Form is to be completed by each permittee and co-permittee authorized to discharge storm water under the General Permit for Storm Water Discharges Associated with Small Municipal Separate Storm Water Sewer Systems (MS4s). All authorized permittees and co-permittees are required to complete this Annual Report Form for each calendar year reporting period. For co-permittees authorized under one permit authorization or for co-permittees with multiple authorizations, you are required to complete this form and submit separate required documents/information exclusively for your respective regulated Small MS4 area(s). This completed Annual Report Form must be electronically submitted to the Montana Department of Environmental Quality, Water Protection Bureau. Electronic submission is required through the web-based tool: NetDMR. Additional information is located on DEQ's website: <a href="http://deg.mt.gov/Water/WQINFO/ctss/netdmr">http://deg.mt.gov/Water/WQINFO/ctss/netdmr</a>.</p>			
Small MS4 Authorization Number: MTR04 _____			
Small MS4 Classification	<input type="checkbox"/> Traditional		<input type="checkbox"/> Non-Traditional
Small MS4 Name: _____			
Small MS4 Mailing Address: _____			
City, State, and Zip Code: _____			
Small MS4 Contact Person (and Title): _____			
Mailing Address: _____			
City, State, and Zip Code: _____			
Phone Number: (    ) _____		E-mail address: _____	
_____			

<b>Storm Water Management Team:</b> Attach an organizational chart identifying a primary SWMP coordinator and the positions responsible for implementing each minimum measure.				
<b>Requested above chart:</b>	<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached		
Has the permittee established and executed a formalized mechanism for regular communication between storm water management team members?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<b>Permittee's SWMP Resources:</b> How many FTEs does the permittee designate to the MS4 permit? ____ If needed, provide an explanation.  If more space is needed, submit on an additional page with corresponding reference or on a data storage device.				
<b>Answer the following five (5) questions on an additional page with corresponding reference or on a data storage device. See attached Attachment B for answers to these financial questions.</b>  (1) What are the source(s) of funding for implementation of the MS4 permit and the estimated percentage of the total budget allocated from each source listed?  (2) Specific to the annual reporting calendar year, how did the permittee justify commitment of resources or budget allocations to the implementation of the MS4 permit to decision-makers and the public? Provide a summary of meetings and outcomes held with decision-makers and the public.  (3) Has the permittee demonstrated program effectiveness to obtain budget allocations for this annual reporting calendar year or previous years? Why or why not? If so, what program effectiveness metrics were presented?  (4) How was this annual reporting calendar year's approach to allocate resources different than the previous year's approach?  (5) Was the permittee successful in their request for budget allocations? Describe the outcome and factors that affected or resulted in that outcome.				
<b>Illicit Discharge Detection &amp; Elimination:</b> Per the IDDE MCM requirement (Part II (3)(c.i)), has the permittee reviewed, and updated if needed, the storm sewer map during the calendar year? <b>BSB Maintains GIS Maps of the SW infrastructure</b>			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Per the IDDE MCM requirement (Part II (3)(e.i)), has the permittee dry weather inspected and screened outfalls during the calendar year?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<b>Fill in the blanks with numbers.</b> The permittee has inspected ____ outfalls during this calendar year. Since authorization under the 2017 General Permit, the permittee has inspected ____ total outfalls out of the ____ total MS4 outfalls.				



Per the Illicit Discharge Detection & Elimination MCM (Part II (3)(e.i)), the permittee will complete the requirement to inspect and screen all outfalls during dry weather by the end of the permit cycle.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Construction Site Storm Water Management:</b> During the calendar year, how many construction storm water management plan reviews were completed (Part II (4)(b))? _____		
During the calendar year, how many construction projects were inspected for their storm water management controls (Part II (4)(c))? _____		
<b>Pollution Prevention/Good Housekeeping for Permittee Operations:</b>		
Has the permittee reviewed, and updated if needed, the inventory of permittee-owned/operated facilities and activities (Part II (6)(a.i))?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has the permittee reviewed, and updated if needed, the map that identifies the locations of facilities and known locations of activities (Part II (6)(a.ii))?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has the permittee conducted annual storm water pollution prevention training for permittee staff during the next permit year after development of each standard operating procedure (Part II (6)(a.v))?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<small>*Not applicable during calendar year 2017, 2018, and 2019. Check "No" during these years.*</small>		
<b>Training:</b> According to Part II (B) Training requirements, has the permittee conducted applicable training during the 1 <sup>st</sup> and 4 <sup>th</sup> calendar years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<small>*Not required during calendar year 2018, 2019, and 2021. Check "No" during these years.*</small>		
According to Part II (B) Training requirements, has the permittee conducted applicable new employee training within 90 days of the hire date? <small>Appendix C</small>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Special Conditions: Per Pre-TMDL Approval (Part III.A) requirements,</b> attach the required information regarding identification of all outfalls that discharge to impaired waterbodies, the impaired waterbodies, and the associated pollutants of impairments. Summarize the BMPs implemented over the reporting period and a schedule of BMPs planned for the following year.		
<input type="checkbox"/> Attached <small>Superfund Reports - Appendix D</small>	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<small>See Silver Bow Creek Consent Decree linked below at the bottom of this page for planned SW Improvements.</small>		
<b>Special Conditions: Approved TMDLs (Part III.B) requirements per calendar year below.</b>		
<b>Calendar Year 2017:</b> The permittee has attached a Sampling Plan that includes strategy rationale, monitoring frequency, monitoring parameters, and monitoring locations.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable

<https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.scs&id=0800416&doc=Y&colid=39487&region=08&type=SC>

<b>Calendar Year 2017:</b> The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<b>Calendar Year 2018:</b> The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<b>Calendar Year 2019:</b> The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<b>Calendar Year 2020:</b> The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<b>Calendar Year 2020:</b> The permittee has attached the TMDL section of the SWMP that identifies the measures and BMPs it plans to implement, describes the MS4's impairment priorities and long term strategy, and outlines interim milestones for controlling the discharge of the pollutants of concern and making progress towards meeting the TMDL.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not Applicable
<b>Calendar Year 2021:</b> The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
<input type="checkbox"/> Attached	<a href="#">Figures with Outfalls - Appendix E</a>	<input type="checkbox"/> Not Attached
<b>Calendar Year 2021:</b> The permittee has evaluated the TMDL section of the SWMP based on monitoring results. The section has been revised, if needed, and is attached.		
<input type="checkbox"/> Attached	<a href="#">Consent Decree Outlines Plan</a>	<input type="checkbox"/> Not Attached
<b>Monitoring:</b> Per requirements in Part IV (B), has the permittee attached monitoring results, calculations, and evaluations?		
<input type="checkbox"/> Attached	<a href="#">Appendix F</a>	<input type="checkbox"/> Not Attached

<https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.scs&id=0800416&doc=Y&colid=39487&region=08&type=SC>

**INSTRUCTIONS: The permittee will only fill out the Annual Report Attachments section below that corresponds to the calendar in which an Annual Report is being submitted for. Attach the requested documents/information.**

<b>2017 Annual Report Attachments (1<sup>st</sup> Calendar Year)</b>		
<b>Public Education and Outreach:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding key target audiences and associated pollutants.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Public Involvement and Participation:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding the public involvement approach and schedule of each key audience.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Illicit Discharge Detection &amp; Elimination:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements f.i in the referenced MCM, attach the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Construction Site Storm Water Management:</b>		
Per requirements a.iii in the referenced MCM, attach progress towards an Enforcement Response Plan and associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements b.i in the referenced MCM, attach the construction storm water management plan review checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements b.iii in the referenced MCM, attach the construction storm water management plan review checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Traditional MS4s and per requirements c.i in the referenced MCM, attach the construction storm water management inspection form or checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements c.ii in the referenced MCM, attach the construction storm water management inspection form or checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable



<b>Post-Construction Site Storm Water Management in New and Redevelopment</b>		
Specific to Traditional MS4s and per requirements b.i in the referenced MCM, attach the post-construction storm water management plan review checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements b.ii in the referenced MCM, attach the post-construction storm water management plan review checklist.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Per requirements in b.iii in the referenced MCM, attach the performance standards and associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	

<b>2018 Annual Report Attachments (2<sup>nd</sup> Calendar Year)</b>		
<b>Public Education and Outreach:</b>		
Per requirements b.i in the referenced MCM, attach the required information regarding outreach messages.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements c.i in the referenced MCM, attach the required information regarding a description of formats, distribution channels and schedule for key target audiences.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Public Involvement and Participation:</b>		
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Illicit Discharge Detection &amp; Elimination:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements d.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to prohibit illicit discharges.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements d.ii in the referenced MCM, attach the summary of legal authority to prohibit illicit discharges.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Per requirements d.iii in the referenced MCM, attach the required summary of the cooperative agreements.		

<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached
Per requirements d.iv in referenced MCM, attach the Enforcement Response Plan and associated documents.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached <input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached <input type="checkbox"/> Not applicable
<b>Post-Construction Site Storm Water Management in New and Redevelopment</b>	
Specific to Traditional MS4s and per requirements c.i in the referenced MCM, attach the post-construction storm water management inspection form or checklist.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached <input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements c.ii in the referenced MCM, attach the post-construction storm water management inspection form or checklist.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached <input type="checkbox"/> Not applicable
Per requirements in c.iii in the referenced MCM, attach the inventory of all new permittee-owned and private post-construction storm water management controls.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached
Per requirements in c.vi in the referenced MCM, attach an inspection frequency protocol.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached
Specific to Traditional MS4s and per requirements c.vii, attach the developed inspection program.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached <input type="checkbox"/> Not applicable
<b>Pollution Prevention/Good Housekeeping for Permittee Operations</b>	
Per requirements in a.iii in the referenced MCM, attach completed Standard Operating Procedures.	
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached

<b>2019 Annual Report Attachments (3<sup>rd</sup> Calendar Year)</b>		
<b>Public Education and Outreach:</b>		
Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Public Involvement and Participation:</b>		
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Illicit Discharge Detection &amp; Elimination:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements e.iii in referenced MCM, attach the required summary of screening results.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
<b>Construction Site Storm Water Management:</b>		
Specific to Traditional MS4s and per requirements a.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to require construction storm water controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements a.ii in the referenced MCM, attach the legal authority summary.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Per requirements a.iii in the referenced MCM, attach the adopted Enforcement Response Plan and associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Post-Construction Site Storm Water Management in New and Redevelopment</b>		



Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
<b>Pollution Prevention/Good Housekeeping for Permittee Operations</b>		
Per requirements in a.iii in the referenced MCM, attach the completed Standard Operating Procedures.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	

<b>2020 Annual Report Attachments (4<sup>th</sup> Calendar Year)</b>		
<b>Public Education and Outreach:</b>		
Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Public Involvement and Participation:</b>		
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Illicit Discharge Detection &amp; Elimination:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements e.iii in referenced MCM, attach the required summary of screening results.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge		

Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
<b>Post-Construction Site Storm Water Management in New and Redevelopment</b>		
Specific to Traditional MS4s and per requirements a.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to require post-construction storm water controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements a.ii in the referenced MCM, attach the legal authority summary.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Per requirements in a.iii in the referenced MCM, attach the Enforcement Response Plan and associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Per requirements in d.i in the referenced MCM, attach a summary of the discussion outcomes.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	
<b>Pollution Prevention/Good Housekeeping for Permittee Operations</b>		
Per requirements in a.iii in the referenced MCM, attach the completed Standard Operating Procedures.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	

<b>2021 Annual Report Attachments (5<sup>th</sup> Calendar Year)</b>		
<b>Public Education and Outreach:</b>		
Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.		
<input type="checkbox"/> Attached <b>Appendix G</b>	<input type="checkbox"/> Not Attached	
<b>Public Involvement and Participation:</b>		
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.		
<input type="checkbox"/> Attached <b>Appendix G</b>	<input type="checkbox"/> Not Attached	
<b>Illicit Discharge Detection &amp; Elimination:</b>		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		

<input type="checkbox"/> Attached <b>Appendix H</b>	<input type="checkbox"/> Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
<input type="checkbox"/> Attached <b>Appendix H,</b>	<input type="checkbox"/> Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
<input type="checkbox"/> Attached <b>Appendix F, I</b>	<input type="checkbox"/> Not Attached	
Per requirements e.iii in referenced MCM, attach the required summary of screening results.		
<input type="checkbox"/> Attached <b>Appendix F, I</b>	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached <b>Appendix I</b>	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
<b>Post-Construction Site Storm Water Management in New and Redevelopment</b>		
Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
<input type="checkbox"/> Attached <b>Appendix I, K</b>	<input type="checkbox"/> Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
<input type="checkbox"/> Attached <b>Appendix I, K</b>	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable
<b>Pollution Prevention/Good Housekeeping for Permittee Operations</b>		
Per requirements in a.iii in the referenced MCM, attach completed Standard Operating Procedures.		
<input type="checkbox"/> Attached <b>Appendix M</b>	<input type="checkbox"/> Not Attached	
<b>Attach any updates, changes, or improvements to the Small MS4 Storm Water Management Program per requirements in Part IV (E).</b>		
<input type="checkbox"/> Attached	<input type="checkbox"/> Not Attached	<input type="checkbox"/> Not applicable

**BSB Flats Stormwater Master Plan Attached in Appendix L.**



### Annual Report Form Signature

This Annual Report Form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

### All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA].

*Certification of this form indicates conformance with the 2017 General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer Systems and the required Annual Reporting upon receipt of permit coverage.*

Name (Type or Print)

Mark Neary

Title (Type or Print)

Public Works Director

Phone Number

406-497-6519

Signature

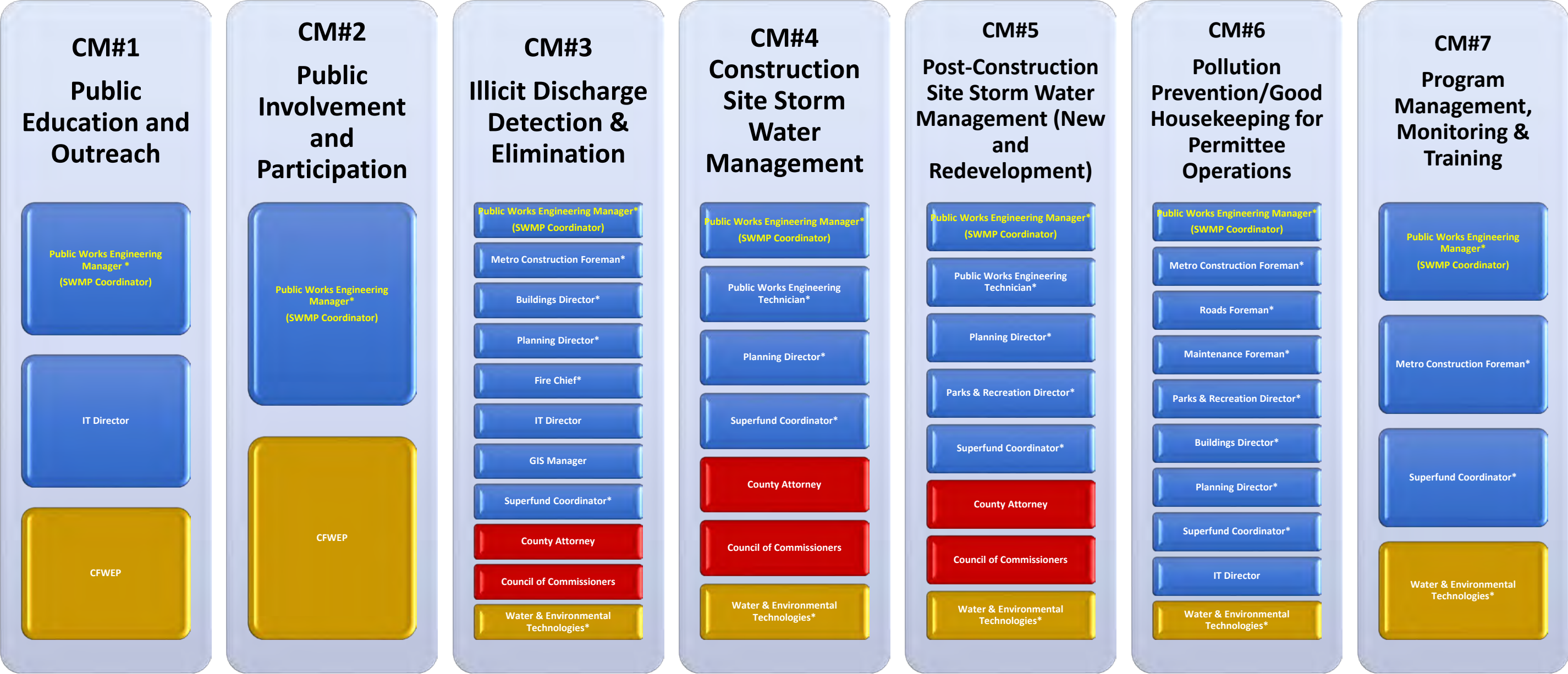
SMH my

Date Signed

2/28/22

**Appendix A**  
**Butte Silver Bow**  
**Stormwater Management Program**  
**Organization Chart**

**Butte-Silver Bow  
MS4 Stormwater  
Control Measure Responsibility  
Organizational Chart**



Legend:



\* SWMP Team Member



**Appendix B**  
**Financial Information**

# 1. PERMITTEE'S SWMP RESOURCES

BSB currently employs 1.35 FTE within the storm water budget. Other Budget sources provide approximately .5 FTE additional hours to support the utility. Approximately .85 FTE is dedicated to permit compliance with the remainder used labor related to maintenance. BSB has entered into a contract with Water and Environmental Technologies (WET) to assist in permit compliance.

City-County of Butte-Silver Bow 2021-2022 Annual Budget - Detail of Expenditures							
Fund	5330	Storm Water					
Dept	103	Public Works					
Activity	4306.50	Storm Water					
Obj Description	Actual		2020 - 2021		2021 - 2022		
	2018-2019	2019-2020	Budget	Actual	Request	Approved	
110 Salaries & Wages	128,807	127,165	154,666	154,666	76,093	76,093	-51%
120 Salaries & Wages Overtime	17,353	2,935	6,661	6,132	10,000	10,000	50%
122 Salaries & Wages Special Pay	500	500	500	500	500	500	0%
130 Salaries & Wages Longevity	254	500	1,500	1,500	500	500	-67%
131 Salaries & Wages Other Pay	0	0	360	0	360	360	0%
135 Salaries & Wages Clothing Allow	235	235	235	235	235	235	0%
136 Salaries & Wages Hazard Pay	0	0	600	306	0	0	-100%
140 Employer Contributions	72,371	68,284	77,254	77,254	43,934	43,934	-43%
190 On-behalf Payments	1,403	1,397	0	0	0	0	0%
195 Pension	322	901	0	0	0	0	0%
210 Office Supplies	157	0	150	0	150	150	0%
220 Operating Supplies	3,723	4,220	5,215	5,213	5,000	5,000	-4%
230 Repair & Maint. Supplies	11,128	30,504	42,816	7,063	69,900	69,900	63%
260 Non-capital Fixed Assets	1,053	0	0	0	0	0	0%
320 Printing- Duplicating-Etc	1,417	1,545	500	0	500	500	0%
330 Publicity- Subscr. & Dues	168	0	2,000	132	2,000	2,000	0%
340 Utility Services	456	434	182	180	3,000	3,000	1548%
350 Professional Services	125,730	260,408	230,645	155,189	195,500	142,500	-38%
360 Repair & Maint. Services	279	0	6,682	0	8,000	8,000	20%
370 Travel	0	0	2,000	0	2,000	2,000	0%
380 Training Services	0	800	2,000	1,455	2,000	2,000	0%
390 Other Purchased Services	275	200	3,000	0	3,000	3,000	0%
470 Fabricated Materials	0	0	2,860	2,859	0	0	-100%
510 Insurance	1,458	1,848	3,990	3,990	4,757	4,757	19%
530 Rent	0	0	1,276	1,275	0	0	-100%
830 Depreciation	27,008	28,065	0	0	0	0	0%
852 Payroll Charges	996	696	884	884	815	815	-8%
854 Personnel Charges	1,963	1,372	1,742	1,742	2,019	2,019	16%
858 GIS Charges	3,000	3,000	3,000	3,000	3,000	3,000	0%
930 Improv other than Bldgs	0	0	0	0	281,286	281,286	0%
950 Construction in Process	0	0	109,704	39,603	0	0	-100%
Total	\$400,056	\$535,009	\$660,422	\$463,178	\$714,549	\$661,549	0%

**City-County of Butte-Silver Bow 2021-2022 Annual Budget - Detail of Expenditures**

**Budget Commentary**

This fund was created to account for expenditures related to the maintenance of the new Storm Water System in accordance with the Butte-Silver Bow Storm Water Ordinance.

**Personnel**

Position Description	FTE	Budgeted Salary
Cell Phone	0.00	360
Engineer Technician	0.35	15,518
Laborer	1.00	54,139
Overtime	0.00	10,000
Rate/Budget Analyst	0.13	7,671
<b>Total</b>	<b>1.48</b>	<b>87,688</b>

**Fixed Assets**

Description	Requested	Approved
Flats Stormwater Infrastructure	281,286	281,286
<b>Total</b>	<b>281,286</b>	<b>281,286</b>

PERMITTEE'S SWMP RESOURCES CONTINUED

1.1 What are the sources of funding for implementation of the MS4 permit and the estimated percentage of the total budget allocated from each source?

- Figure 3. details the storm water budget for the 2022 fiscal year. The non-capital budget is \$380,263 of that approximately \$178,723 will be used in implementation of the MS4 permit. This is 47% of the budget, the remaining 53% will be used for maintenance and repair to the system.

1.2 Specific to the annual reporting calendar year, how did the permittee justify commitment of resources or budget allocations to implementation of the MS4 permit to decision-makers and the public?

- In 2017 Butte-Silver Bow entered into a contract with WET to provide MS4 Permit services. This is a five-year contract with MS4 permitservices.

1.3 Has the permittee demonstrated program effectiveness to obtain budget allocations for this annual reporting calendar year or previous years?

- As this an annual report for the calendar year 2022, responses will be specific to the 2022 calendar year. For information pertaining to previous years, please see those annual reports.
- Yes, the permittee has demonstrated the ability to set rates deemed appropriate by the BSB Council of Commissioners in order to comply with the MS4 general permit.

1.4 How was this annual reporting calendar year's approach to allocate resources different from previous year's approach?

- The primary difference is the substantial increase in requirements in the new permit versus the previous permit. BSB allocated additional budget in the Capital line items to address stormwater compliance problem areas in the flats of Butte.

1.5 Was the permittee successful in their request for budget allocations?

- Yes, the requested budget is virtually equal to the approved budget.

**Appendix C**  
**SWMP Training Information**



# THE CITY-COUNTY OF Butte-Silver Bow

## STORM WATER IN BUTTE-SILVER BOW

### Regulatory Background

The City and County of Butte-Silver Bow (BSB) is covered by a *General Permit for Storm Water Discharges Associated with Small Municipal Separate Storm Sewer Systems (MS4s)*. In 1972 the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit that determined urban runoff was impacting national waterways. In 1990 medium and large cities >100,000 population (like New York City) were required to manage their storm water. Then in 1999, small urban areas >10,000 population had to follow suit. The Environmental Protection Agency (EPA) authorized the Montana Department of Environmental Quality (MDEQ) to administer the MS4 program in our state. Butte, along with 6 other cities (Billings, Missoula, Kalispell, Great Falls, Helena, Bozeman), 3 counties (Yellowstone Co, Cascade Co, Missoula Co) and 3 untraditional permittees (Malmstrom Air Force Base, Montana State University, and the University of Montana) are required to manage their storm water.

### Receiving Waters

Butte-Silver Bow has identified the following streams (defined as “receiving waters” in the MS4 permit) within its permit boundary:

- 1.) Silver Bow Creek
- 2.) Blacktail Creek
- 3.) Sand Creek
- 4.) Basin Creek
- 5.) Grove Gulch Creek

All identified receiving waters receive storm water from the BSB storm sewer system; as a result, they must be protected from potential storm water pollutants.

### MS4 Program Goals

The overall goal of the MS4 program is to “...reduce the discharge of pollutants from the permitted Small MS4s to the maximum extent practicable (MEP) to protect water quality...” Butte complied with this goal by developing a Storm Water Management Program (SWMP). BSB’s SWMP works to reduce pollutants in storm water by addressing six Control Measures:

1. Public Education & Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)



# THE CITY-COUNTY OF Butte-Silver Bow

4. Construction Site Storm Water Runoff Control
5. Post-Construction Site Storm Water Runoff Control
6. Pollution Prevention/Good Housekeeping for Municipal Operations

## Legal Authority

BSB has legal authority to manage their storm water because in May 2011 the Ordinance No. 10-13 was passed by the BSB Council of Commissioners.

Ordinance highlights include:

- Objectives & definitions provide BSB with the legal authority to require storm water controls.  
*This is important because it provides a way to make the offenders address pollutant discharges.*
- Lists permit requirements and defines review times.  
*This is important because all development projects are required to follow the same set of rules.*
- Establishes Engineering Standards.  
*This is important because engineers need to know what rules to follow.*
- Prohibits illegal discharges/illicit connections.  
*This is important because we do not want wastewater, paint, motor-oil, antifreeze, or concrete wash-out to comingle with stormwater.*
- Established a Storm Water Utility Fund.  
*This is important because it costs money for infrastructure to ensure our waterways are clean. BSB residents are charged a flat fee of \$15/year per parcel. Commercial and industrial sites are charged a per square-foot fee.*

## Employee Responsibilities

As a new BSB employee what do you need to know and understand about storm water?

1. Stormwater runoff is transported through the BSB storm sewer system and discharges **untreated** into area receiving waters.
2. If sediment (dirt, soil, road sand, etc.) or pollutants (paint, motor-oil, antifreeze, concrete wash-out) enter the storm system they discharge **directly** into area receiving waters.





## THE CITY-COUNTY OF Butte-Silver Bow

3. When streets are flushed without covering the storm inlet, sediment and garbage is transported through BSB storm sewer systems and discharges **untreated** storm water into area receiving waters.
4. When drain inlets are paved over without covering, asphalt accumulates in the bottom of the inlet and makes maintenance difficult, allowing storm water to co-mingle with the asphalt and discharges **directly** into area receiving waters.
5. When water leaks are fixed without containing the discharge water, sediment laden water is transported through BSB storm sewer system and discharges **untreated** storm water into area receiving waters.
6. When a construction project disturbs soil and storm water controls and BMP's are not used, sediment laden water gets into the storm drain and discharges **directly** into area receiving waters.

As a new employee of BSB, you are now part of the STORMWATER TEAM. If you have a storm water concern, idea for improvement in your daily work tasks, or if you observe illegal discharges/illicit connection, please contact: Justin Thatcher at (406) 431-2011.

*Help us protect our \$1 Billion (\$1,000,000,000) investment in the restoration of Silver-Bow/Clark Fork corridor.*



## Storm Water Management Team (SWMT) Meeting, Q1 2021

April 13, 2021 | 11:00am-12:00am

Name	Department
Forrest Jay	WET
Pat Cunneen	BSB - Public Works
Kyle West	BSB - Public Works
PAT Holland	BSB - Buildings Dept
Pete Schonsberg	Parks Dept.
Tom Loggins	Road Dept
Eric Hassler	Reclamation
Mark Nery	Public Works
STEPHEN COE	WET



---

**City of Butte Municipal Separate Storm Sewer System (MS4)  
Storm Water Management Team (SWMT) Meeting, Q1, 2021  
April 13, 2021, 11:00-12:00  
Public Works-Conference Room (3rd Floor), Butte, MT**

NAME	ORGANIZATION	Phone #	Email
JP Gallagher	BSB Chief Executive	406-497-6200	<a href="mailto:jgallagher@bsb.mt.gov">jgallagher@bsb.mt.gov</a>
Mark Neary	BSB PW Director	406-497-6519	<a href="mailto:mneary@bsb.mt.gov">mneary@bsb.mt.gov</a>
Pat Cunneen	BSB PW Engineer	406-497-6563	<a href="mailto:pcunneen@bsb.mt.gov">pcunneen@bsb.mt.gov</a>
Lori Casey	BSB Planning Director	406-497-6250	<a href="mailto:lcasey@bsb.mt.gov">lcasey@bsb.mt.gov</a>
Pat Holland	BSB Gov't Buildings Director	406-497-6573	<a href="mailto:pholland@bsb.mt.gov">pholland@bsb.mt.gov</a>
Bob Lazzari	BSB P & R Director	406-497-6571	<a href="mailto:blazzari@bsb.mt.gov">blazzari@bsb.mt.gov</a>
Pete Schonsberg	BSB P & R Park Superintendent	406-497-6571	<a href="mailto:pschonsberg@bsb.mt.gov">pschonsberg@bsb.mt.gov</a>
Eric Hassler	BSB Superfund Operations Manager	406-497-5042	<a href="mailto:ehassler@bsb.mt.gov">ehassler@bsb.mt.gov</a>
Brian Wilkins	BSB Water Manager	406-497-6539	<a href="mailto:bwilkins@bsb.mt.gov">bwilkins@bsb.mt.gov</a>
Tom Loggins	BSB Roads	406-497-6567	<a href="mailto:tloggins@bsb.mt.gov">tloggins@bsb.mt.gov</a>
Justin Thatcher	BSB Metro Maintenance	406-431-2011	<a href="mailto:jthatcher@bsb.mt.gov">jthatcher@bsb.mt.gov</a>
Jonathan Bargmann	BSB Engineering	406-497-6532	<a href="mailto:jbargmann@bsb.mt.gov">jbargmann@bsb.mt.gov</a>
Rayelynn Brandl	CFWEP	406-496-4898	<a href="mailto:rbrandl@mtech.edu">rbrandl@mtech.edu</a>
Kayla Lappin	CFWEP	406-496-4898	<a href="mailto:klappin@mtech.edu">klappin@mtech.edu</a>
Josh Vincent	WET	406-723-1534	<a href="mailto:jvincent@waterenvtech.com">jvincent@waterenvtech.com</a>
Stephen Coe	WET	406-299-9858	<a href="mailto:scoe@waterenvtech.com">scoe@waterenvtech.com</a>

- 1. 2020 Annual Report**
  - Submitted
- 2. MS4 Workgroup**
  - Review
- 3. Ordinance/Engineering Standard Updates**
  - Review
- 4. Questions/Comments**
- 5. Next meeting – June 8, 2021 Tuesday @ 11:00 – 12:00 am**



Water & Environmental  
TECHNOLOGIES



# MS4: Review of Changes to Engineering Standards and Ordinances

Stephen Coe P.E. Forrest Jay P.E.







Water & Environmental  
TECHNOLOGIES

# Ordinance Changes

The following are ordinance changes made to Chapter 32 of Title 13 of the Butte Silver Bow Storm Water Management Code.

**RED** text is what has been added and/or altered.

# Ordinances - Summarized

- Section 10 (1) – Purpose:
  - Establish storm water management requirements and controls for the welfare of the public from site development **and redevelopment.**
- Section 10 (2) – Minimize Impacts From Storm Water By:
  - C - Reducing runoff rates and volumes, soil erosion and nonpoint pollution through storm water management controls **and encouragement of Low Impact Development (LID) practices.**
  - E - Prohibiting illicit connections and **illegal** discharges to the MS4



# Ordinances - Summarized

- Section 30 (3) – Definitions; the following have been added:
  - Low Impact Development (LID) means systems and practices that use or mimic natural processes resulting in the infiltration, evapotranspiration, or use of storm water to protect water quality and associated aquatic habitat.
  - Non-structural BMP means any institutional and pollution prevention practice designed to prevent or minimize pollutants from entering runoff. They do not involve fixed permanent facilities and typically consist of changing behavior through administrative regulation, persuasion, and/or economic means.
  - Structural BMP means any stationary or permanent BMP that is designed, constructed, and operated to prevent or reduce the discharge of pollutants to storm water.

# Ordinances - Summarized

- Section 30 (4) (C)
  - **Residential** land disturbance activities < 1 acre are exempt from construction and post construction storm water requirements
- Section 220 (5)
  - Landowners or responsible parties shall not receive any of the building, **excavation**, or other land development permits required for a land disturbance activity without first meeting the requirements of this chapter.
- Section 220 (5) (A)
  - Land disturbance activities > 1 acre shall comply with requirements of the **current** MPDES general permit for the storm water discharge associated with the construction activity.
- Section 220 (5) (B) (i)
  - Three copies of the Storm Water Management permit applications **and accompanying information** shall be filed with the Butte-Silver Bow Public Works Department on any regular business day.
- Section 220 (5) (B) (vi)
  - If the permit application is disapproved the **Butte-Silver Bow Public Works Department will provide a letter detailing the application deficiencies and** the applicant may revise **and resubmit the application**. If additional information is submitted, the Butte-Silver Bow Public Works Department shall have ten business days from receiving said information to inform applicant of approval or disapproval of application.

# Ordinances - Summarized

- Section 220 (5) (C) [added]
  - Application Review Fee – There will be no fee associated with the first submittal and review of a storm water management application. If application deficiencies are not addressed or further deficiencies are identified upon resubmittal a \$130.00 review fee will be charged to the applicant and must be paid before final application acceptance. Each subsequent resubmittal shall be charged this review fee.
- Section 310 (1)
  - The following are no longer exempt from discharge prohibitions:
    - foundation or footing drains
    - sump pumps
    - non-commercial or charity car washes
    - swimming pools (if dechlorinated)
  - \*UNLESS written permission from the Butte Silver Bow Public Works Department is obtained (Section 310 (2)).

# Ordinances - Summarized

- Section 310 (2)
  - A discharge from waterline flushing or disinfection that contains no harmful **quantity** of residual chlorine or other chemical used in line disinfection is exempt from discharge prohibition with the written consent of BSBPW.
- Section 330 (A)
  - The BSBPWD **or its designated representative** shall be permitted to enter and inspect facilities subject to regulation as often as may be necessary to determine compliance.

# Ordinances - Summarized

- Section 340 (8)
  - Requirement to Prevent, Control, and Reduce Storm Water Pollutants by the Use of Best Management Practices **and/or Low Impact Development (LID)**.
- Section 340 (8) (A)
  - **Best Management Practices (BMPs)** The Butte Silver Bow Public Works Department may require BMPs for any activity, operation or facility...The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials, **pollutants** or other wastes... through use of BMPs. Further, any person responsible for a property or premise, which is or may be the location of a source of an **illegal** discharge may be required to implement BMPs

# Ordinances - Summarized

- Section 340 (8) (B) [added]
  - Low Impact Development (LID) This section provides additional and optional stormwater management techniques beyond the standard BMPs listed in Section 340 (A). LIDs strive to mimic pre-disturbance hydrological processes.
- Section 360 (9) [added]
  - No construction or alteration of a watercourse is allowed without meeting the requirements of this chapter, as well as all required permits from other local, state, and federal jurisdictions.



# Ordinances - Summarized

- Section 420 (10) (H)
  - Assessment, stormwater application and engineering report reviews, stormwater construction permit reviews, inspection and enforcement activities.
- Section 430 (11)
  - Except as provided in Section 13.32.210, fees for collection and conveyance of storm water shall be imposed on the owners of all parcels...

*Vacant and agricultural property is no longer exempt from this fee.*



Water & Environmental  
TECHNOLOGIES



# Engineering Standards Changes

The following are the revisions to the Butte-Silver Bow Municipal Storm Water Engineering Standards.

# Variance from Engineering Report and Construction of Permanent Stormwater Infrastructure

Revision allows for a variance from the requirement to construct permanent stormwater infrastructure if the increase in impervious area is  $<1,500 \text{ ft}^2$  and the project is in a *regulated area* or  $<2,500 \text{ ft}^2$  if in a *non-regulated area*

## Regulated Area

located within the Butte Urban Limit Boundary and is not within 1,000 ft of surface water

## Non-Regulated Area

located outside the Butte Urban Limit Boundary and is not within 1,000 ft of surface water

If a construction project is within 1,000 ft of surface water, a variance will not be granted

# Storm Water Control at Construction Sites

- **<1 Acre Disturbances  
Must Submit:**

- Construction Project Best Management Practice Plan
- Maintenance Agreement

- **>1 Acre Disturbances  
Must Submit:**

- MPDES General Permit for Storm Water Discharge Associated with a Construction Activity Notice of Intent (NOI)
- Storm Water Pollution Prevention Plan (SWPPP)
- NOI Confirmation Letter from DEQ
- Maintenance Agreement

# Precipitation Design Storms

- Precipitation from one weather station (Butte-9S) will be used for the entire City-County of Butte-Silver Bow. 24-hour design precipitation storm depths at 2, 10, 25, 50, and 100 year recurrence intervals are provided in the revised BSB-MSWES Table 9-2. Shorter duration depths and intensities are also included for the rational method.

BSB-MSWES	Recurrence Interval, Storm Duration	Previous Rainfall Depth (within Butte Urban Limits)	Previous Rainfall Depth (outside Butte Urban Limits)	2019 Revision Rainfall Depth (City-County of Butte-Silver Bow)
		(inches)	(inches)	(inches)
Retention	6-mo, 24-hr	0.78	—	0.5
	2-yr, 6-hr	—	0.75	
Stream bank protection	2-yr, 24-hr	1.07	1.20	1.26
On-site inlets, lateral piping & conveyances	10-yr, 24-hr	1.66	1.80	1.70
Municipal trunk main piping & conveyances	25-yr, 24-hr	2.25	2.20	1.92
On-site detention & floodplain delineation	100-yr, 24-hr	2.51	2.80	2.24

# Precipitation Design Storms Cont.

- Retention rainfall total depth in and outside the Urban Limit Boundary has been reduced to **0.50-inches**
- Detention rainfall total depth in and outside the Urban Boundary Limit has been reduced to **2.24-inches**



# Detention Requirement

- The following design storms must be detained for runoff control on the entire parcel:
  - 24-hr
  - 2-yr
  - 10-yr
  - 25-yr
  - 100-yr

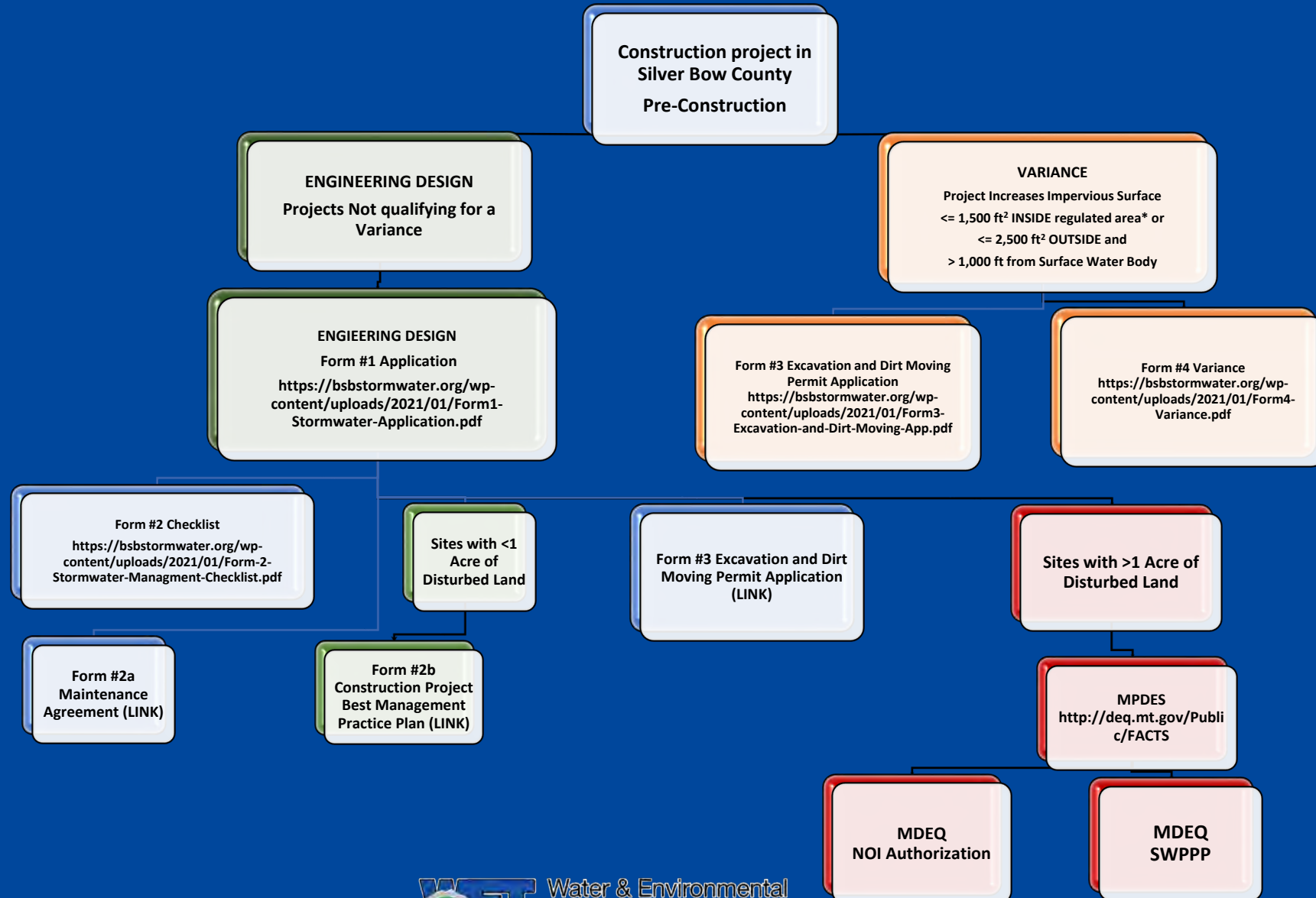
# General Design Recommendations

- The design engineer is allowed to use sound engineering judgement for site specific designs applying to:
  - Retention/detention pond dimensions
  - Safety
  - Conveyance pipe materials
  - Pollution treatment devices


# General Design Recommendations

- Infiltration
  - A design engineer is required to perform an infiltration test or complete a Geotechnical Report when specifying an infiltration system.
- Utility Clearances
  - Only water and sewer utility clearances are specified. The design engineer must verify site specific utility clearances for other utilities found onsite with each utility owner.

# Forms Flow Chart



# Form #1: Example

**Butte-Silver Bow Public Works Department**

**FORM #1—APPLICATION**  
**STORM WATER MANAGEMENT PERMIT**  
**APPLICATION (PRE-CONSTRUCTION)**  
Instructions for Applicant:  
Construction projects that do not qualify for variance (Form #4), the following forms must be submitted to Butte-Silver Bow:

- Form #2—Checklist
- Form #2a—Maintenance Agreement
- Form #2b—Construction Practice BMP Plan (for sites with <1-acre of disturbed land)
- MPDES NOI Authorization Letter (for sites with ≥1-acre of disturbed land)

Land disturbance is not permitted on any project site without an approved Butte-Silver Bow Storm Water Management Permit.

**CONTACT INFORMATION**  
**Project Owner**  
Contact Person: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
☐ Preferred Contact  
Company: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_  
**Contractor**  
Contact Person: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
☐ Preferred Contact  
Company: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_  
**Engineer**  
Contact Person: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
☐ Preferred Contact  
Company: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_

**PROJECT INFORMATION**  
Project Address: \_\_\_\_\_  
Lot Number: \_\_\_\_\_  
Subdivision (if applicable): \_\_\_\_\_  
Project Disturbance Size: ☐ Less than one acre ☐ Greater or equal to one acre  
**Storm Water Engineering Plan (Form #1) BSB Review**

Completeness/1 <sup>st</sup> Technical Review*	No Charge
Additional Review	\$130/hour If Required To be Invoiced

\*Plus \$130/hour for review in excess of the completeness and 1<sup>st</sup> technical review will be invoiced at the completion of the review prior to issuing an approval.

**NATURE OF CONSTRUCTION**  
Check the appropriate box(es) or provide a brief description that indicates the general nature of the construction activities.  
☐ BSB Project ☐ Multi-Family Residential ☐ Highway/Road ☐ Commercial/Industrial  
☐ Subdivision ☐ Single Family Residential ☐ Utility ☐ Other: \_\_\_\_\_  
Description of Work: \_\_\_\_\_

January 2020Page 1 of 3

**Butte-Silver Bow Public Works Department**

**PROJECT SCHEDULE**  
Start Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
Final Stabilization Date: \_\_\_\_\_

**WATER BODIES AND STORM CONVEYANCE SYSTEMS**  
List water bodies within 200' of project.  
Stream: \_\_\_\_\_ Lakes: \_\_\_\_\_  
Wetlands: \_\_\_\_\_ Rivers: \_\_\_\_\_  
Sloughs: \_\_\_\_\_ Other: \_\_\_\_\_  
Does storm water runoff from the project site discharge to an impaired water?  
☐ Yes ☐ No Water Body: \_\_\_\_\_  
If yes, what are the impairments?  
☐ Sediment ☐ Nutrients ☐ Dissolved Oxygen ☐ Temperature ☐ Other: \_\_\_\_\_  
List storm conveyance systems within 100' of project.  
Ditches: \_\_\_\_\_ Swales: \_\_\_\_\_  
Detention Facilities: \_\_\_\_\_ Storm Drain Inlets: \_\_\_\_\_  
Pipe Inlets/Outlets: \_\_\_\_\_ Gutter: \_\_\_\_\_  
Is the project in a floodplain?  
☐ Yes ☐ No  
If yes, is a permit...  
☐ Required ☐ Pending ☐ Issued  
If yes, is the site/will the site be...  
☐ Delineated ☐ Staked ☐ Perimeter BMPs Installed

**ACKNOWLEDGMENT CERTIFICATE**  
*I certify that I am the Owner or Owner's authorized agent. If acting as an authorized agent, I further certify that I am authorized to act as the Owners agent regarding the property at the above-referenced address for the purpose of filing applications for decisions, permits, or review under the Butte-Silver Bow Storm Water Ordinance and have full power and authority to perform on behalf of the Owner all acts required to enable the City to process and review such applications.*  
*I certify that the information on this application is true and correct and understand that I shall not start this project until this application is approved. I shall comply with the laws of the State of Montana and the ordinances of Butte-Silver Bow.*  
*I acknowledge that reviews of this application in excess of the initial completeness and 1<sup>st</sup> technical review will be invoiced at the completion of the review prior to issuing an approval.*  
Signature of Legally Responsible Person: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: \_\_\_\_\_ Title: \_\_\_\_\_

January 2020Page 2 of 3

**Butte-Silver Bow Public Works Department**

**FOR OFFICIAL USE ONLY**  
The remainder of this application is for official use only.

Greater or Equal to One Acre	Received?	Less Than One Acre	Received?
MPDES NOI Authorization Letter	Yes No	Form #2—Checklist	Yes No
MPDES SWPPP	Yes No	Form #2a—Maintenance Agreement	Yes No
Form #2—Checklist	Yes No	Form #2b—Construction Project BMP Plan	Yes No
Form #2a—Maintenance Agreement	Yes No		

**REPORT OF TECHNICAL REVIEW**  
☐ After full review, the Storm Water Engineering Report, Plans, and Specifications **meet** the intent of the BSB Storm Water Engineering Standards as identified in the above checklist.  
☐ After full review, the Storm Water Engineering Report, Plans, and Specifications **do not meet** the intent of the BSB Storm Water Engineering Standards as identified in the above checklist through failure to include the following (additional reviews will be invoiced at a rate of \$130/hour for every hour over 4 hours/plan):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reviewed By**  
Name: \_\_\_\_\_ Title: \_\_\_\_\_ Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**STORM WATER ENGINEERING PLAN REVIEW HISTORY**  
Name of Project: \_\_\_\_\_ Total Project Acres: \_\_\_\_\_  
Total Disturbed Acres: \_\_\_\_\_ Date Submitted to BSB: \_\_\_\_\_  
Date Received by Reviewer: \_\_\_\_\_ Date of Completeness Review: \_\_\_\_\_  
Comments: \_\_\_\_\_

**First Review**  
Plan Received On: \_\_\_\_\_ Review Completed On: \_\_\_\_\_  
Reviewed By: \_\_\_\_\_ ☐ Approved ☐ Denied  
Comments: \_\_\_\_\_

**Second Review**  
Plan Received On: \_\_\_\_\_ Review Completed On: \_\_\_\_\_  
Reviewed By: \_\_\_\_\_ ☐ Approved ☐ Denied  
Comments: \_\_\_\_\_

**Third Review**  
Plan Received On: \_\_\_\_\_ Review Completed On: \_\_\_\_\_  
Reviewed By: \_\_\_\_\_ ☐ Approved ☐ Denied  
Comments: \_\_\_\_\_

January 2020Page 3 of 3



# Form #2: Example



Butte-Silver Bow Public Works Department

## FORM #2—CHECKLIST STORM WATER MANAGEMENT PERMIT CHECKLIST (PRE-CONSTRUCTION)

BSB Permit No.: \_\_\_\_\_  
MDEQ SWPPP No. MTR: \_\_\_\_\_  
Excavation Permit ☐ Yes ☐ No

**NOTE:** This form must accompany Form #1—Storm Water Management Permit Application

Site Name/Address: \_\_\_\_\_

Please check the appropriate box: **I**=Included, **N/A**=Not Applicable (if N/A is checked, an explanation must be entered).

Storm Water Management Requirements	I	N/A	BSB Chk'd
<b>1 Engineer Report Requirements</b>			
A Cover Sheet			
B Table of Contents			
<b>C General</b>			
a Proposed Project Description			
b Physical Address of the Site Where the Work is Proposed (Legal Description, Subdivision Name)			
c Name and Address of Owner			
d Total Project Area			
e Total Disturbed Area			
<b>D Extent of Storm Drainage</b>			
a Location of Storm Water Conveyance System(s) Within 100' of Project (Ditch, Swale, Detention Facility, Storm Drain Inlet, Drywell, Gutter, and Pipe Inlet/Outlet)			
b Describe Existing Conditions Including Structures, Basins, Bypass Areas, Flow Type and Flow Paths, Pervious/Impervious Areas, Slopes, Vegetation/Surface, Soil Type(s), etc.			
c Describe Proposed Developed Conditions Including Structures, Basins, Bypass Areas, Compensatory Areas, Flow Type and Flow Paths, Pervious/Impervious Areas, Slopes, Vegetation/Surface, Source Control, BMPs Runoff Control, Runoff Treatment, etc.			
d Drainage Basin Maps are Provided Which Clearly Label the Following: - Existing Basin Boundaries - Existing Time of Concentration Flowpaths for Each Basin - Post-Development Basin Boundaries - Post-Development Time of Concentration Flowpaths for Each Basin - Discharge Location(s) - Receiving Waters Within 200' of Project are Identified			
e State Runoff Control/Treatment Design Assumptions			
f For Flows That Originate Outside the Project Area, Show That These Flows Will Not Flood Storm Water Facilities			
g For Flows That Originate Within the Project Area, Show Provisions for Detaining or Retaining These Flows			

January 2020

Page 1 of 4



Butte-Silver Bow Public Works Department

Storm Water Management Requirements (Continued)	I	N/A	BSB Chk'd
h Where Storm Drainage is Intended to be Discharged into the Ground, Show Locations of the Wells and Drainfields (Within 200') That May be Impacted, Include Geotechnical or Infiltration Test Report			
i Culvert, Pipe, and/or Ditch System Capacities and Velocities			
j Show Calculations/Figures Required to Support the Design			
k FEMA Floodplains Identified			
l Permits, Easements, Setbacks, and Discharge Agreements			
m Professional Engineers Stamp			
<b>2 Plans</b>			
<b>A General Layout</b>			
a Title			
b Name of Entity Responsible for Maintaining Storm Water Facilities, if Other Than BSB (Note: Must Receive Approval for BSB to Assume Maintenance of Facilities)			
c Scale			
d North Arrow			
e Name of Designer and Date of Design			
f Legible Prints			
g Location, Nature, and Size of Existing Storm Drainage Facilities (If Any)			
h Professional Engineers Stamp			
<b>Drainage Plan Content</b>			
1 Plan and Profile of Each Permanent Storm Water Control			
2 Location and Details of Each Permanent Storm Water Control/ Any Proposed Structures			
3 Size, Types, Slope, Invert Elevations, Minimum Cover, and Lengths of all Culverts and Any Proposed Pipes			
4 Location and Details of Any Proposed Detention or Retention Ponds			
5 Invert Elevations, Slopes, and Lengths of Storm Drain Facilities			
6 Location, Size, Length, and Slope of any Proposed Storm Drain Lines			
7 Topographic Map of Existing and Finished Grade Contours at 2-Foot Max Intervals			
8 Direction of Drainage Flow Paths With Slope, Flow Types, Surface Type, and Run Length			
9 Site Property Boundary, Wetlands, Basin/Sub-Basin/By Pass Area, Setbacks, Easements, 2-foot Contours, etc			
<b>Calculations and Design Documentation</b>			
<b>1 Hydrology Calculations</b>			
A State Runoff Method Used (Rational, SCS, etc)			

January 2020

Page 2 of 4





Water & Environmental  
TECHNOLOGIES

# Questions?

[waterenvtech.com](http://waterenvtech.com) • (406) 782-5220





## **Pre-Test - MS4 TRAINING**

### **April 13, 2021**

**Name:** \_\_\_\_\_

- 1. The permitting agency in charge of authorizing the General Permit for Storm Water Discharges Associated with Small Municipal Separate Storm Sewer Systems (MS4) in Montana is:**
  - a. Environmental Protection Agency
  - b. Montana Department of Public Health and Human Services
  - c. Montana Department of Environmental Quality
  - d. US Army Corps of Engineers
  
- 2. Butte is one of the seven (7) *traditional* MS4's, circle the other six (6):**

a. Great Falls	h. Dillon
b. Belgrade	i. Kalispell
c. Havre	j. Hardin
d. Missoula	k. Anaconda
e. Helena	l. Billings
f. Bozeman	
g. Whitefish	
  
- 3. The MT Department of Transportation (MDT) is one of the *non-traditional* MS4s; is the MDT, Butte Division, a co-permittee?**
  - a. Yes
  - b. No
  
- 4. Who is the authorized signer of the MS4 permit?**
  - a. BSB County Commissioners
  - b. Dave Palmer
  - c. Mark Neary
  
- 5. The overall goal of the permit is to keep \_\_\_\_\_ out of surface water.**
  - a. fuel (diesel, gas)
  - b. sediment
  - c. wastewater
  - d. pollutants
  - e. all of the above



**6. Is sediment a pollutant?**

- a. Yes
- b. No

**7. Circle three pollutants present within the BSB MS4.**

- |                                     |                  |
|-------------------------------------|------------------|
| Gasoline, oil, grease, & lubricants | Copper           |
| Wastewater                          | Sediment         |
| Debris                              | Concrete Washout |
| Fertilizer                          | Paint            |
| Pet Waste                           | Solvents         |

**8. Circle the five surface waterbodies within the BSB MS4.**

- |                      |                   |
|----------------------|-------------------|
| Clark Fork           | Silver Bow Creek  |
| Blacktail Deer Creek | Grove Gulch Creek |
| Sand Creek           | Big Hole River    |
| Blacktail Creek      | Basin Creek       |
| Beaverhead River     |                   |

**9. Is storm water within the BSB MS4 treated at the Waste Water Treatment Plant?**

- a. Yes
- b. No

**10. Circle the six Control Measures addressed in the MS4 Permit.**

- |   |  |
|---|--|
| Pollution Prevention/Good Housekeeping        | Storm Water Sampling                       |
| Training                                      | Total maximum Daily Load (TMDL) Monitoring |
| Public Involvement and Participation          | Public Education and Outreach              |
| Post-Construction Site Storm Water Management | Construction Site Storm Water Management   |
| Illicit Discharge Detection & Elimination     | Storm Water Management Plan (SWMP)         |

**11. Define an outfall: \_\_\_\_\_**

**12. How many outfalls are within the BSB MS4 boundary?**

- a. 10-50
- b. 50-100
- c. >100

**13. Name one action as a BSB employee you can do to support compliance.**

\_\_\_\_\_

**14. Name one storm water issue the BSB citizens need to understand.**

\_\_\_\_\_

**Appendix D**  
**Monthly Superfund Reports**





# THE CITY-COUNTY OF Butte-Silver Bow

## Reclamation & Environmental Services

Abby Peltomaa, Data Manager

Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

February 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: January 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for January 2021.

Please contact me (497-6264) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – January 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during January 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In January, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 155 - Fencing and signage were installed to prevent damage from vehicles accessing the site.
- Staged and stockpiled EPA approved cover soil at various locations in the BPSOU in preparation for the 2021 construction season.
- Staged and mixed EPA approved cover soil with topsoil to amend the soil.
- Removal of snow from walkways, MWR, and the Granite Mountain Memorial.

**BRES Program.** BSB Staff submitted the 2020 BRES Evaluation Summary and Technical Recommendations Report in December 2020 and awaits Agency comments.

**Vegetation and Weed Controls.** In January 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 5 Excavation and Dirt-Moving Permits during the month of January; 3 within the BPSOU:

- 700 Blocks of Main and Maryland along East Aluminum Street – utility repairs and maintenance
- 600 Block of Maryland and 100 Block of East Aluminum Street - utility repairs and maintenance
- 1200 Blocks of West Diamond and West Porphyry and 300 to 400 Blocks of South Western Avenue - utility repairs and maintenance

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.



- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During January 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- CB8 - By-pass screen cleaned daily. Removed sediment from inlet outlet structure and disposed of at the MWR.

**Superfund Storm Water Structures Inspections:** BSB Staff submitted the 2020 Stormwater System Inspection Report in December 2020 and awaits comments.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in January 2021:

- Received and reviewed EPA Comments on the Montana Bureau of Mines and Geology's (MBMG) 2021 Quality Assurance Project Plan, Butte Mine Flooding Operable Unit and Butte Priority Soils Operable Unit, Private Well Monitoring Program, dated December 2020.
- Received and reviewed December 2020 Monthly Activity Report for BNSF and Union Pacific.
- Attended Montana Technological University's Public Lecture Series - Revegetation of Mine Wastes: Lessons Learned and Stakeholder Communication (1/13/2021).
- Provided MBMG with a letter of support from the Water Quality District to replace Monitoring Well MBMG-4719.
- Received and reviewed MBMG's Butte Mine Flooding December 2020 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Updated AGOL Parcel feature for January 2021.
- Created map template of the Peterson property at Silver Bow Creek and Fairmont. Exported maps of Peterson property at Silver Bow Creek and Fairmont for Greenway Services District.
- Exported the Civic Center area of Silver Bow Creek Lower Area One LiDAR survey for Public Works.
- Inquiry of subdivision of lots, geocodes, and addresses in vicinity of Virginia Street for RMAP.
- Oxford/Orford mining claim, search for record or location for Land Records.

- Created section map book of all Silver Bow County sections for Land Records.
- Updated and exchanged scanned mine plans, stops, and sites into KML/KMZ for MBMG.
- Created selection of stormwater, sewer, and water infrastructure feature for Holland Street Area for Eric Hassler/Reclamation.
- Updated and exported tax coverage from BSB to State of Montana State Library for update to cadastral website.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Comments from EPA on the *Draft Final Community Engagement Plan for Remedial Work* were received in January for review. Butte-Silver Bow, Atlantic Richfield, and partners are currently responding to comments and adapting the Community Engagement Plan.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

March 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: February 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for February 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

A handwritten signature in blue ink, appearing to read "Abby Peltomaa".

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – February 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during February 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In February, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 80 – Removal of snow from public walkways and thoroughfares.
- BRES 2330 - Removal of snow from public walkways and thoroughfares.
- BRES Site 78 - Removal of snow from public walkways and thoroughfares.
- Staged and stockpiled EPA approved cover soil at various locations in the BPSOU in preparation for the 2021 construction season.
- Staged and mixed EPA approved cover soil with topsoil to amend the soil.
- Removal of snow from walkways, top soil staging areas, MWR, and the Granite Mountain Memorial.

**BRES Program.** BSB Staff received comments back from the Agency on the 2020 BRES Evaluation Summary and Technical Recommendations Report in February 2021 and are currently drafting a response.

**Vegetation and Weed Controls.** In February 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 16 Excavation and Dirt-Moving Permits during the month of February; 7 within the BPSOU:

- N. Montana and Boardman – utility repairs and maintenance, line pole replacement
- Three blocks north of Caledonia and N. Franklin - utility repairs and maintenance, light pole replacement
- W. Quartz and N. Alabama - utility repairs and maintenance, light pole replacement
- W. Quartz and N. Jackson - utility repairs and maintenance, light pole replacement
- 17 and 29 Fortune Circle – 2 Lot Duplex
- 64 W. Mercury - utility repairs and maintenance, install new gas service

- 800 Block S. Arizona - utility repairs and maintenance

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During February 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- CB8 - By-pass screen cleaned daily. Removed waste from inlet outlet structure and disposed of at the MWR. Removal of snow from inlet outlet structure and sediment trap.
- Removal of snow and ice from approximately 15 drop inlet and outlet stormwater conveyance structures to allow for proper stormwater flow.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and is drafting a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in February 2021:

- Responded to an inquiry from the Butte-Silver Bow Health Department, in coordination with the Montana Bureau of Mines and Geology (MBMG), regarding a parcel undergoing a Department of Environmental Quality (DEQ) relocation of boundary.
  - The parcel is undergoing a relocation of boundary so that it can be developed with a new home.
  - The parcel was not located within any controlled groundwater areas, however, MBMG was able to provide additional information on the parcel to the Health Department to aid the DEQ with the review.
- Received and reviewed updated BPSOU/BMFOU/MT Pole Private Well QAPP from MBMG.
  - The updated QAPP incorporates the agencies comments and suggestions submitted on January 20, 2021.

- Received and reviewed Draft Final Quarterly Operations and Maintenance Report Butte Treatment Lagoon System – Fourth Quarter 2020.
- Received and reviewed Butte Priority Soils Operable Unit (BPSOU) Groundwater Management Plan.
- Received and reviewed January 2021 Monthly Activity Report for BNSF and Union Pacific.
- Received and reviewed Montana Bureau of Mines and Geology’s Butte Mine Flooding– January 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Import and edit webmap and feature instructions for BSB parcels and feature information for Accela permitting system.
- Updated AGOL parcel coverage.
- Create a webmap for excavation permit address querying to determine if properties are within BPSOU or Excavation Control District.
- Upload stormwater inlets to AGOL; edit Public Works/Metro Sewer water infrastructure webmap to include stormwater inlets.
- Update metro webmap with early 2000s water service boundary for SID Administrator.
- Edit and share water, sewer, stormwater utility webmap for review for Paddy Stoy, Woodard Curran, to utilize for future design file requests.
- Plotted map of BSB Butte Anaconda and Pacific Right of Way for Public Works Roads Division at 400 block of Virginia Street.
- Import updated CD BPSOU boundary and expanded RMAP boundary into BSB GIS Server and imported to AGOL.
- Create map of RMAP expansion area for future poster printing.
- Import and printed expanded RMAP area map for Chad Anderson, RMAP.
- Recreate quadrant map for BRES.
- Updated and exported tax coverage from BSB to State of Montana State Library for update to cadastral website.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners continue to respond to comments and adapt the Community Engagement Plan.





# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

April 9, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: March 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for March 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – March 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during March 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In March, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 116 – Removal of snow from stormwater diversion structure.
- BRES 2330 - Removal of snow from public walkways and thoroughfares. Removal of snow from Little Minah parking lot entry. Sand and salted under bridges to reduce icy conditions.
- BRES Site 29 - Removal of snow from entry way of the Lexington Mineyard.
- BRES Site 29N – Removal of snow from Lexington North gate to control future runoff.
- BRES Site 60 – Removal of snow from Mountain Con parking area.
- BRES Site 70 – Removal of trash from site and disposed of at landfill.
- Staged and stockpiled EPA approved cover soil at various locations in the BPSOU in preparation for the 2021 construction season.
- Subsidence investigation between CB8 and the Emma Dump. Required the removal of a small amount of waste and backfilled.
- Removal of snow from walkways, top soil staging areas, MWR, and the Granite Mountain Memorial.

**BRES Program.** BSB Staff received comments back from the Agency on the 2020 BRES Evaluation Summary and Technical Recommendations Report in February 2021 and are currently drafting a response.

**Vegetation and Weed Controls.** In March 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 41 Excavation and Dirt-Moving Permits during the month of March; 24 within the BPSOU:

- 2540 Placer - utility repairs and maintenance

- 1308 W. Aluminum St. - utility repairs and maintenance
- 845 W. Mercury - utility repairs and maintenance
- 318 N. Alabama - utility repairs and maintenance
- Alley from 700 block S. Emmett to 1100 block W. Steele - utility repairs and maintenance
- Roadway northeast of 818 S. Arizona - utility repairs and maintenance
- 1124 Oregon Avenue - utility repairs and maintenance
- 700 block Maryland and 100 block E. Iron - utility repairs and maintenance
- 56 E. Mercury St. – demolish portion of commercial building
- Alexandria Road - utility repairs and maintenance
- 130 Calhoun – new steel building
- 600 W. Gold - utility repairs and maintenance
- 809 S. Washington - utility repairs and maintenance
- 43 Missoula Ave - utility repairs and maintenance
- 2511 Washoe - utility repairs and maintenance
- 937 Sutter - utility repairs and maintenance
- 208 S. Washington - utility repairs and maintenance
- 122 E. Daly - utility repairs and maintenance
- 709 N. Main - utility repairs and maintenance
- 745 Centennial - utility repairs and maintenance
- 831 N. Wyoming - utility repairs and maintenance
- 1007 Placer - utility repairs and maintenance
- 1345 Kaw Avenue - utility repairs and maintenance
- 401 N. Wyoming - utility repairs and maintenance

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During March 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD3 – Removal of snow from inlet outlet structure.
- DD4-Performed opportunistic inspection, removed two tires from from stormwater structure.
- DD8-Performed ditch inspection which identified the need for grass and sediment removal.
- DD9 – Removal of snow from ditch.
- CB8 - By-pass screen cleaned daily. Removed snow from inlet outlet structure. Removal of sediment from inlet outlet and diverter structures and disposed of at MWR. Eighty pounds of trash removed from the catch basin and disposed of at the landfill.
- CB9 – Installation of new screen and steel over opening of the outfall of the vault. Markers were installed on manhole covers on the trunk line from Montana Street to CB9.
- Waddles were laid down on the drop inlet structure located below the new Dairy Queen construction to prevent sediment from getting into the stormwater system.
- Removal of snow and ice from drop inlet and outlet stormwater conveyance structures to allow for proper stormwater flow.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and is drafting a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in March 2021:

- Received Conditional Approval Letter from Environmental Protection Agency (EPA) on BPSOU/BMFOU/MT Pole Private Well QAPP submitted in partnership with the Montana Bureau of Mines and Geology (MBMG).
  - Final Version of the QAPP which incorporated EPA additional comments, along with the cross walk and letter of transmittal were submitted to the agencies on 3/23/2021.
- Received and reviewed Butte Alluvial and Bedrock Controlled Groundwater Area Monitoring, 2019 and 2020 Data Summary Report from MBMG.
- Received and reviewed Natural Resource Damage Program's (NRDP) response to EPA comment letter (EPA letter dated December 9, 2020) regarding the Butte Area One Waste Removal Project – Final Groundwater Well Abandonment/Replacement Work Plan.
- Received and reviewed February 2021 Monthly Activity Report for BNSF and Union Pacific.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding–February 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Update of urban growth boundary and streets shapefile for Public Works.
- ArcGIS Server Installation and Finalization project administration.
- County Attorney inquiry of parcels adjacent to AR land near Seal Terrace.
- Columbia Plaza area lot lines and parcels map for Eric Hassler.
- Update of AGOL parcels for March 2021, update the Accella parcel template, shapefile, and parcel features for AGOL.
- Research and catalogue ORION links for regular parcel editing for Land Records.
- Export February 2021 worklog for Reclamation Dept.
- Update AGOL zoning map for March 2021.
- Generating query of GIS/Land Records hours in worklog for annual budgets.
- Updating login for BRES Survey 123 for Brandon Warner.
- Update to Planning, GIS webmaps on BSB website with updated links to cadastral, land use/infrastructure, and commissioner districts.
- Updated a map of property ownership with BRES Sites for Land Records customer request.

- Import KMZ for Bordeaux, Bordeaux Extension, and Frenchman No. 2 extension for Montana Tech, Anthony Roth.
- Meeting to discuss ArcGIS capabilities for Survey 123 and Collector as it relates to database collection and spatial representation.
- Ownership inquiry from DOR for mining claims 5351 Cleveland and 9233 Merchant.
- Update webmap for viewing BSB parcel updates for State Library for Land Records.
- Meeting for RMAP Database and updated progress with Woodard and Curran.
- Meeting with ESRI team to pre-plan for final GIS Enterprise setup.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners continue to respond to comments and adapt the Community Engagement Plan.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

May 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: April 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for April 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve



# **Monthly Report – April 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during April 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In April, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 12 – Removal of trash from Top of the World walking trail and disposed of at landfill.
- BRES 2310 - Removal of trash from ditch and disposed of at landfill.
- BRES Site 78 – Collapsed abandoned utility tunnel, removed waste from tunnels and disposed of at MWR. Tunnels were backfilled with concrete and EPA approved fill and compacted.
- BRES Site 70 – Removal of trash from site and disposed of at landfill.
- BRES Site 159 – Removal of trash from site and disposed of at landfill.
- BRES Site 71 – Removal of waste from site and disposed of at MWR.
- Staged and stockpiled EPA approved cover soil at various locations in the BPSOU in preparation for the 2021 construction season.
- Removal of snow from walkways, topsoil staging areas, MWR, and the Granite Mountain Memorial.

**BRES Program.** BSB Staff received comments back from the Agency on the 2020 BRES Evaluation Summary and Technical Recommendations Report in February 2021 and continue to draft a response.

**Vegetation and Weed Controls.** In April 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 50 Excavation and Dirt-Moving Permits during the month of April; 16 within the BPSOU:

- 424 N. Alabama – post footings
- 115 W. Quartz St. – sidewalk
- 155 W. Quartz St. – sidewalk
- 614 S. Jackson - utility repairs and maintenance

- 535 S. Idaho St. - utility repairs and maintenance
- 100 S. Montana St. - utility repairs and maintenance
- 520 S. Dakota St. - utility repairs and maintenance
- 501 S. Dakota St. - utility repairs and maintenance
- 221 W. Daly St. – demolition of house
- 22 W. Daly St. – demolition of house
- 600 block of Nevada St. and 100 block of E. Aluminum - utility repairs and maintenance
- 1223 W. Granite – home addition foundation
- 1311 Farrell St. – demolition of burned residence
- 227 E. Mercury – tree removal
- 1007 W. Diamond - utility repairs and maintenance
- 803 W. Copper St. - utility repairs and maintenance

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During April 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD5 – Repaired stormwater concrete structure by applying polyurethane to cracks in the concrete.
- CB8 - By-pass screen cleaned daily. Removal of sediment from inlet outlet and diverter structures and disposed of at MWR.

**Superfund Storm Water Structures Inspections:** Department of Reclamation staff have begun the spring bi-annual inspections of storm water structures. Approximately 25 percent of the storm water structure inspections were completed in April and the remaining inspections will be completed in May.

BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in April 2021:

- Received and reviewed Draft Butte Priority Soils Operable Unit Copper Mountain Recreational Complex Area Site Characterization Quality Assurance Project Plan.
- Received and currently reviewing Silver Bow Creek/Butte Area NPL Site Butte Priority Soils Operable Unit 2020 Draft Site-Wide Surface Water Monitoring Data Summary Report.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Alluvial and Bedrock Controlled Groundwater Area Monitoring, 2019 and 2020 Data Summary Report.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding—March 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Import and store Silver Bow County shapefile and road shapefile for BSB GIS.
- Create April 2021 Parcel File for upload to AGOL and Accella permitting system. Edit permitting webmap for minimal layers and clear interface. Zip April 2021 parcel file, export and email to Sidwell.
- Prepare for ArcGIS Enterprise setup, permissions, and scheduling with BSB MIS. Discussions of login credentials. Develop remote access upgrade to current software and installation of ArcGIS Enterprise and Server. Transition selected files to ArcGIS Enterprise and Server.
- Generate a webmap of generalized superfund sites within the region of Butte-Silver Bow for Reclamation and to provide to CFWEP and CTEC.
- Developed an Excavation District webmap for the Planning Department to allow review of address location relative to BPSOU.
- Draft spatial analysis requirements and requests for the RMAP database; edit and comment on draft memorandum.
- Attend meeting to discuss ArcGIS Server capability between existing GIS servers.
- Demonstrate the ArcGIS Online, Survey 123, Collector systems relationship to GIS public website for Public Works.
- Anthony Roth, MBMG, provided a variety of digitized stope maps (KMZ) including the Philadelphia lode KMZ to GIS for import into the BSB reclamation shapefile database.
- Create a land records webmap which includes claims, addressed structures, and parcels.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners continue to respond to comments and adapt the Community Engagement Plan.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

June 7, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: May 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for May 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

A handwritten signature in dark ink, appearing to read "Abby Peltomaa".

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – May 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during May 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In May, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 159 – EPA approved fill added to land slump identified in previous BRES evaluations identified along the stormwater channel to increase stability. Broadcast seeding of the repaired land slump areas on the site. Removal of fence and trash from site and disposed of at landfill. ‘No Trespassing’ sign installed on the site to prohibit traffic on vegetation.
- BRES Site 71 – Staging and stock piling of 12-inch minus on site. Addition of limerock, 12- inch minus, EPA approved fill, and soil to ditch area where waste was previously removed. Area was then broadcast seeded using the EPA approved seed mix.
- BRES Site 2330 – Removal of trash from ditch and disposed of at landfill.
- BRES Site 70 – Removal of stormwater diversion structure and trash and disposed of at landfill.
- BRES Site 76 – Removal of trash from site and disposed of at landfill.
- BRES Site 79 – Removal of trash from site and disposed of at landfill.
- BRES Site 53 – Removal of trash from site and disposed of at landfill.
- BRES Site 174 – Removal of trash from site and disposed of at landfill.
- BRES Site 150 - Removal of fence and trash from site and disposed of at landfill. ‘No Trespassing’ sign installed on the site to prohibit traffic on vegetation.
- Staged and stockpiled EPA approved cover soil at various locations in the BPSOU in preparation for the 2021 construction season.

**BRES Program.** BSB Staff revised the 2020 BRES Evaluation Summary and Technical Recommendations Report in response to EPA comments and submitted the revision to the agency.

**Vegetation and Weed Controls.** In May 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository.

BSB personnel issued 34 Excavation and Dirt-Moving Permits during the month of May; 14 within the BPSOU:

- 100 E. Front St. - driveway
- 945 W. Granite St. - foundation
- 328 E. Broadway - basement
- Corner of Montana and Galena - utility repairs and maintenance
- 513 N. Montana - utility repairs and maintenance
- 210 W. Woolman - utility repairs and maintenance
- 644 S. Wyoming – driveway and sidewalk
- 1005 W. Diamond – demolition
- 1927 S. Montana. – demolition of shed
- 1250 W. Platinum – post holes for deck
- 1759 S. Montana – sidewalk
- 155 W. Granite – utility repairs and maintenance
- 408 N. Main - utility repairs and maintenance
- 107 W. Daly - utility repairs and maintenance

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During May 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD2 – Removal of trash from ditch and disposed of at landfill.
- HD3 – Removal of sediment from HDD and taken to the LAO drying beds.
- HD4 – Removal of sediment from HDD and taken to the LAO drying beds.
- CB8 - By-pass screen cleaned daily. Removal of sediment from inlet outlet and diverter structures and disposed of at MWR.

**Superfund Storm Water Structures Inspections:** Department of Reclamation staff have completed the spring bi-annual inspections of storm water structures.

BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.



- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

### **C. Water Quality District Activities**

Water Quality District Completed the following tasks in May 2021:

- Finalized Butte Controlled Groundwater-Domestic Well Program Memorandum of Understanding between Montana Bureau of Mines and Geology and Butte-Silver Bow for fiscal year 2021-2022.
- Drafting of the Water Quality District Annual Report which will be submitted to Montana Department of Environmental Quality.
- Received and currently reviewing Draft Final Preliminary 30% Remedial Design Report for the Butte Reduction Works (BRW) Smelter Area.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding–April 2021 Monthly Report.

### **D. GIS Activities**

Primary work in the reporting period included:

- Three Meetings with ESRI to review and set-up Enterprise and SDE upload methodology.
- Map of selected Montana Pole parcels for review for County Assessor.
- Import parcels, additions, lots, and claims into SDE via ArcPro.
- Import Mohawk Lode kmz, Pine No. 2 lode kmz, Illinois No. 2 lode, H-25 kmz, I-23 kmz, Excelsior Lode kmz, and Duluth Lode Lode kmz created by Anthony Roth, MBMG.
- Map of waterlines near 109 Bell for County Attorney's Office.
- Research legacy gis server connections for MIS and Planning.
- Create a land records webmap which includes claims, addressed structures, and parcels.
- Setup a Land Records group on AGOL and include appropriate features for land records work.
- Update linework and geocode for property transactions.
- Update the zoning map to incorporate recent zone changes.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners finalized the elements of the Community Engagement Plan for submittal in June.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

July 9, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: June 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for June 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – June 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during June 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In June, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 71 – Waste removed from ditch and disposed of at the MWR. Addition of ¾" washed rock to access road of the Anselmo mineyard.
- BRES Site 155 – Weed eating and mowing on site to enhance site vegetation.
- BRES Site 120E – Weed eating on site to enhance site vegetation.
- BRES Site 18 – Weed eating on site to enhance site vegetation.
- BRES Site 120 – Removal of sediment from the Bonanza snow storage site and disposed of at the MWR.
- BRES Site 117 – Removal of sediment from the Anderson Shaft snow staging area and disposed of at the MWR.
- BRES Site 30 – Removal of sediment from the site edge and inlet outlet structure and disposed of at the MWR. EPA approved fill and cover soil and limerock added to amend a barren area on site.
- BRES Site 32 – Removal of sediment from the sediment trap and disposed at the MWR. Addition of road mix to sediment trap for erosion control.

**BRES Program.** BSB Staff submitted the final 2020 BRES Evaluation Summary and Technical Recommendations Report. Staff also submitted the Corrective Action Plans which were approved by EPA and DEQ on June 30<sup>th</sup>.

**Vegetation and Weed Controls.** In June 2021, weed control activities were performed by the Butte-Silver Bow Weed Department on the following sites:

- BRES Site 17
- BRES Site 18
- BRES Site 19
- BRES Site 29
- BRES Site 30

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 35 Excavation and Dirt-Moving Permits during the month of June; 11 within the BPSOU:

- 1102 S. Wyoming St. - utility repairs and maintenance
- 954 Caledonia St. - utility repairs and maintenance
- 29 W. La Platte St. - utility repairs and maintenance
- 23 E. Center - utility repairs and maintenance
- 1300 W. Park St. - utility repairs and maintenance
- 40 Fortune Circle – foundation of duplex
- 8 S. Montana St. – utility repairs and maintenance
- 315 S. Washington - foundation
- 329 S. Washington – demolition of shed
- 1064 W. Mercury - driveway
- 108 W. Gold – foundation

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During June 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- CB8 - By-pass screen cleaned daily. Removal of sediment from inlet outlet and diverter structures and disposed of at MWR.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in June 2021:

- Received and reviewed 2021 BPSOU Final Interim Site-Wide Groundwater Monitoring QAPP, Revision 1.
- Received and reviewed Butte-Silver Bow Closed Landfill-Clark Tailings Semi-Annual Groundwater Monitoring March 2021.
- Received and reviewed Montana Bureau of Mines and Geology's DRAFT-BMFOU 2020 Data Summary Report.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding–May 2021 Monthly Report.
- Attended the Rocker Controlled Groundwater Area Replacement Well Request Meeting.

## **D. GIS Activities**

Primary work in the reporting period included:

- ESRI meetings to set up Enterprise and SDE upload methodology.
- Parcel updates to AGOL.
- Land Records workflow, methods, and software needs.
- Rarus address information to Building Department
- Complete State GIS Coordination Survey for Planning.
- Create 2021 BRES folder and template location for 2021 BRES work and submissions.
- Troubleshooting filtering capabilities for 2016 and earlier data in ArcCollector.
- Recreate map template for land records property edits and requests.
- Import Marion, Badger, Willow Placer, Hercules, Achilles, and Ajax KMZ for Anthony Roth at Montana Tech.
- Create June 2021 backup of parcels for July update and editing.
- Meet with ESRI to review setup of Enterprise, user creation, data update edits and proxy troubleshooting.
- Create 2021 webmap for CFWEP performance of BRES evaluations.
- Create BRES 2021 webmap with 2017 and earlier records hidden.
- Create BRES 2021 webapp for 2021 BRES crew.
- Parcel SDE, update parcel shapefile, and upload to AGOL.
- Accela link to ArcGIS parcel SDE and GIS Enterprise services for permitting software.
- Coordination of workflow to respond to AR and MR file requests and maps.
- Enterprise permission setting, upload and user protocol, and relational tables meeting with ESRI.
- Import MR AOI boundaries for requested shapefiles for MR including contours.
- Edited and settings of CFWEP BRES webmap.
- Map of greenway and Petersen property with DEQ parcel designations for Greenway Services District.
- Provide 2-ft contour shapefile of Dexter and Star West BRES sites to Bradford Watson.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners finalized the elements of the Community Engagement Plan for submittal in summer 2021. BSB and AR officials presented the repository siting kick-off at the June 28<sup>th</sup> EPA Community Discussion.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

August 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: July 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for July 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve



# **Monthly Report – July 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during July 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In July, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 32 – Addition of road mix, EPA approved cover soil, and 6-inch minus to ditch for erosion control and repair of eroded areas. Twelve-inch minus placed along edge of site to prohibit vehicular access onto site. Fence removed from site.
- BRES Site 158 – EPA approved cover soil added to barren area located in the south-central part of the site. Road mix added to access road for erosion control. Twelve-inch minus placed along edge of site to prohibit vehicular access onto site.
- BRES Site 76 – Removal of sediment from sediment trap and disposed of at the MWR.
- BRES Site 79 – Removal of sediment from sediment trap and disposed of at the MWR.
- BRES Site 70 – Addition of millings asphalt to berm on road for erosion control.
- BRES Site 2330 – Addition of 6-inch minus, EPA approved fill, and EPA approved cover soil to convey stormwater to newly constructed catch basin from walking trail for erosion control.
- BRES Site 20 – Addition of EPA approved cover soil to barren area located on the north slope of the site.
- Staging and stock piling of EPA approved cover soil at various sites for future projects.

**BRES Program.** CFWEP completed the 2021 field evaluations of Quad 2. BSB Staff is in the process of QA/QC on the data and shape files. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In July 2021, weed control activities were performed at the following sites:

- BRES Site 5
- BRES Site CB08
- BRES Site 21
- BRES Site 70
- BRES Site 71
- BRES Site 81
- BRES Site 132
- BRES Site 172
- BRES Site 2330
- BRES Site 2350
- BRES Site 2360

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 33 Excavation and Dirt-Moving Permits during the month of July; 8 within the BPSOU:

- 1300 W. Steele St. - foundation
- 1207 W. Platinum St. – yard excavation
- 100 and 200 block of E. Platinum and alley of 100 block of Upton St. – installation of gas main and services
- 200 and 400 blocks of W. Woolman and 200 block of James St. – installation of gas main and services
- 1109 W. Mercury – home addition
- 407 Virginia St. – excavation of property
- 601 W. Silver St. – utility repairs and maintenance
- W. Mercury St. – footing, foundation, driveway, landscaping, sidewalk

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During July 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD1 – Addition of road mix and EPA approved fill to swale and berm for erosion control. Removal of sediment from ditch and disposed of at the MWR.
- CB8 - By-pass screen cleaned daily. Removal of sediment from inlet outlet structure, sediment trap and diverter structures and disposed of at MWR.
- Sediment removal occurred in numerous stormwater structures throughout the BPSOU including: the Idaho Diversion, the Kaw Avenue stormwater pipe, the Buffalo Gulch outfall, and along the Uptown Trail Channel.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires

that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

### **C. Water Quality District Activities**

Water Quality District Completed the following tasks in July 2021:

- Drafting of the Water Quality District Annual Report which will be submitted to Montana Department of Environmental Quality.
- Received and reviewed the Response to Agency Comments on the 2020 Butte Priority Soils Operable Unit (BPSOU) 2020 Draft Groundwater Monitoring Data Summary Report January 2020-December 2020, dated April 8, 2021.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding-June 2021 Monthly Report.

### **D. GIS Activities**

Primary work in the reporting period included:

- ESRI meetings to set up Enterprise and SDE upload methodology.
- Create a map of Clark Tailings area for Eric Hassler.
- Import Anthony Roth work of I-25 kmz to BSB system.
- Parcel updates to AGOL.
- Accela user permissions for Reclamation Div. Data Manager.
- Meeting with Woodard and Curran to discuss GIS/RMAP database needs, rest URL to property parcels layer.
- Edit BRES overview webmap/webapp for Pioneer.
- Create bsuser4 and credentials for access to AGOL BRES Data.
- Export, generalize, and zip BPSOU quads, operable units, and excavation area to Blackjack Silver.
- Export, zip, and provide mine claim polyline to TREC.
- Discuss RMAP database finalization via meeting with TREC.
- Meeting to review and discuss BRES/Reclaimed area shapes and ID schema with Pioneer Technical regarding boundary adjustment memo.
- Import Louise Placer, Leggat No. 1, Ulrich, Jelly Ma, JMW, T4N R7W S31, T4N R8W S36, and T3N R8W S1 KMZs for Anthony Roth.
- Review of reclamation files and maps with public works GIS specialist.
- Inquiry into sinkhole found at Praxis LLC parcel at Park and Wyoming for URA.
- Update AGOL structure feature for Planning.
- Clark Fork Controlled Groundwater Area (CGWA) shapefile and PDF to Public Works.
- Provide excavation area footprint to Aland Gilda, Blackjack Silver.
- Inquiry to St. James area subsidence zones from Francois Long request at Davis Partnership for Eric Hassler.
- Email BSB parks shapefiles to Pioneer Technical and Jesse Schwarzrock.

- Upload controlled groundwater area shape files to common file locations and AGOL; prepare webmap and webapp of controlled ground water aeras for Pat Cunneen, Public Works.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners submitted the Community Engagement Plan on July 30, 2021. BSB and AR officials met with the Repository Siting Study Committee on July 26, 2021.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

September 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: August 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for August 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – August 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during August 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In August, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 70 – Addition of asphalt millings to access road for erosion control. Removal of sediment from the inlet outlet structure and disposed of at the MWR.
- BRES Site 2330 – Staging and stock piling road mix. Addition of road mix to walking trail parking area for erosion control. Addition of EPA approved cover soil to the edge of the walking trail for erosion control. Addition of 6-inch minus to ditch for erosion control.
- BRES Site 32S – Removal of sediment from ditch and disposed of at the MWR.
- BRES Site 120 – Addition of road mix to ditch for erosion control.
- BRES Site 174 – Removal of sediment from the inlet outlet structure and disposed of at the MWR.
- BRES Site 35 – Removal of sediment from sediment trap and disposed of at the MWR.
- BRES Site 76 – Removal of sediment from sediment trap and disposed of at the MWR.
- BRES Site 38 – Staging and stock piling of limerock to be used on the site. Limerock was added to a barren area that was caused by exposed waste on slope adjacent to the site. EPA approved fill was added after.

**BRES Program.** CFWEP completed the 2021 field evaluations of Quad 2. BSB Staff is in the process of QA/QC on the data and shape files. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In August 2021, weed control activities were performed at the following sites:

- BRES Sites 60, 60A, 60B, 60C, 60D, 60E, 60F
- BRES Sites 61N, 61W, 61E, 61S
- BRES Site 2330
- BRES Site 2340
- BRES Site 2350
- BRES Site 2360
- BRES Site 2370
- BRES Site 2380
- BRES Site 2390



**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 23 Excavation and Dirt-Moving Permits during the month of August; 8 within the BPSOU:

- 1023 W. Gold – new house foundation
- 615 N. Excelsior – replace sidewalk and driveway
- 8 S. Montana St. – replace sewer service, build construction wall
- 66 W. Park – replace sidewalk
- 16 and 24 Windfall – town home foundation
- Main and Copper St. – removal of concrete
- 345 Anaconda Rd. – excavation for site work and tanks, new sanitary line

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During August 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- HD4 – Addition of road mix for erosion control.
- CB8 – By-pass screen cleaned daily. Removal of sediment from ditch and inlet outlet structure and disposed of at MWR. Addition of 12-inch minus to ditch for erosion control.
- Sediment removal occurred in numerous stormwater structures throughout the BPSOU.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the

City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

### **C. Water Quality District Activities**

Water Quality District Completed the following tasks in August 2021:

- Coordinated with Montana Bureau of Mines and Geology regarding private well sampling as part of the Butte Controlled Groundwater Area monitoring.
  - Sampling activities will be conducted this fall, and an additional five domestic wells will be sampled.
- Finalized Water Quality District Annual Report for Fiscal Years 2019 and 2020. This report will be submitted to Montana DEQ in early September.
- Received and reviewed BPSOU Draft 2020 Site-Wide Surface Water Monitoring Data Summary Report.
- Received and reviewed BNSF Railway Company and Union Pacific Railroad's July 2021 monthly activity report for the Butte Priority Soils Operable Unit.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding–July 2021 Monthly Report.

### **D. GIS Activities**

Primary work in the reporting period included:

- Created a webmap of all BRES Sites in Quads 1 and 2 for Reclamation Department.
- Verification of GIS Database objectives for Reclamation Department.
- Imported KMZs of lodes, mines, and placer claims from Anthony Roth/MBMG.
- Blackjack request for BPSOU Quad 1 and 2 BRES Area shapefiles.
- Created 2018 RMAP sample and abatement maps with census tract information for Reclamation Dept.
- Fulfilled Land Records inquiry into Kelley Headframe original mine claim name.
- Created shapefile of BPSOU quads 1 and 2 and BRES sites in quads 1 and 2 and export, zip, and email to Blackjack Silver.
- Inquiry into concept presented by Fred Nobile who is interested in a Google request to map underground mining activity via stope maps and Anthony Roth data.
- Edited conceptual agreement webapp/storymap permissions for public viewing, sharing link with Pioneer Technical and Atlantic Richfield in support of further story map development.
- Meeting with Pioneer Technical to review BRES Site boundaries and update names and site numbers for Boundary Adjustment Memo.
- Imported BRES Shapefiles from Pioneer for Boundary Adjustment Memo.
- Imported and uploaded BRES Shapefiles to AGOL.
- Imported updated kmz files and Lackawanna kmz from Anthony Roth/MBMG.
- Imported and emailed kmz files from T1N 7W Sec. 17-19 from Anthony Roth.
- Meeting with Woodard Curran and Agencies to discuss progress on the RMAP Database progress.
- Meeting to discuss updating the inventory and planting plans for community forest with Reclamation, GIS, and Parks.
- Updated address inquiry template with SDE parcel layer.
- Meeting with Woodard Currant to discuss GIS Progress and workflow in RMAP program.
- Pioneer request for georeferenced early LDI Silver Bow Creek end land use images.
- Pioneer request for uncontrolled ground water area shapefile.
- Inquiry to BRES CFWEP QC/QA and data completeness for Data Division of Reclamation.
- GIDS Software updates for ArcGIS Pro and Portal.

- Meeting with Woodard Curran on RMAP database progress.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners received comments back from the Agency in August 2021 and are currently editing the document for resubmittal. BSB and AR officials met with the Repository Siting Study Committee on August 3, and August 26, 2021. BSB and AR officials met with a number of small groups of different constituents in August to foster dialogue and discussion, provide the opportunity for two-way dialogue, identify new and improved opportunities for engagement, and provide a window in the issues that may be currently perceived.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

October 11, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: September 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for September 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – September 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during September 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In September, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 38 – Addition of EPA approved fill and cover soil to barren area on site. Addition of EPA approved fill to build up berms for erosion control. Staging and stock piling of EPA approved cover soil.
- BRES Site 53 – Reconstruction of rock-lined stormwater ditch along site edge. Sediments were screened from the rock-lined ditch and disposed of at the Mine Waste Repository. The rock-lined ditch was then reconstructed to adequately capture sediment along site edge.
- BRES Site 158 – Addition of EPA approved fill to berms for erosion control.

**BRES Program.** BSB Staff is in the process of QA/QC on the data and shape files. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In September 2021, weed control activities were performed at the following sites:

- BRES Sites 60, 60A, 60B, 60C, 60D, 60E, 60F
- BRES Sites 61N, 61W, 61E, 61S
- BRES Site 2330
- BRES Site 2340
- BRES Site 2350
- BRES Site 2360
- BRES Site 2370
- BRES Site 2380
- BRES Site 2390

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository.

BSB personnel issued 23 Excavation and Dirt-Moving Permits during the month of September; 3 within the BPSOU:

- 9 N. Main St. – demolition and removal of fire debris of M and M Bar and Cafe
- Quartz, Waukesha, Hornet, Alabama, Zarelda, and Clark – install sewer services
- 920 W. Platinum St. – dig out and rebuild basement foundation

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During September 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD16 – Removal of sediment from ditch and disposed of at the MWR.
- CB8 – By-pass screen cleaned daily. Removal of sediment from ditch and inlet outlet structure and disposed of at MWR.
- Sediment removal occurred in numerous stormwater structures throughout the BPSOU.
- Addition of 6-inch minus to numerous ditches for erosion control.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in September 2021:

- Coordinated with Montana Bureau of Mines and Geology regarding private well sampling as part of the Butte Controlled Groundwater Area monitoring.
  - Fall sampling is ongoing - four wells have been sampled in the Clark Tailings/Old Landfill Controlled Groundwater Area.
- Submitted Water Quality District Annual Report for Fiscal Years 2019 and 2020 to Montana Department of Environmental Quality.
- Received and reviewed BNSF Railway Company and Union Pacific Railroad's August 2021



- monthly activity report for the Butte Priority Soils Operable Unit.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding–August 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Created a map of property in the vicinity of 229 W. Boardman for local citizen.
- Worked on the Land Records parcel edits and annotation for the Land Records ArcPro template and map template for data driven page mapping update.
- Updated BSB trails features including CDT and Thompson Park for OnX/Ross Carlson.
- Imported Q-29, P-23, Q-23, R-23, Spcoe, Emily, Extension, Laddie, Sally Anne, Fraction, Little Chief, Golden Grove, Golden Side, Ella Mac and Bessie mine kmz for Anthony Roth. Imported the D19 and F25 overlays for Anthony Roth.
- Created map of interstate corridor trail connection for Parks and Recreation.
- Created map of Fr. Sheehan and Montana Pole sites.
- Imported the Montana Pole CAMU boundary received from Tetra Tech. Includes .dwg and .xml files.
- Inquiry of BRES overview webmap and comments for Billie Marinovich and Pioneer Technical.
- Scanned mine claim 575 Pacific, geo-reference, and created overlay map for Land Records/Patsy Coates.
- Exported select features from BRES Overview webmap, zip, and email to Pioneer Technical.
- Fairy Mining Claims for Art Dick.
- Meeting with Pioneer Technical to review BRES Site boundaries and update names and site numbers for Boundary Adjustment Memo.
- Meeting with Woodard Curran and CDM Smith to discuss status attributes for RMAP Database.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners received comments back from the Agency in August 2021 and is pending resubmittal. Staff has been attending monthly meetings to keep apprised of updates.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

November 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: October 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for October 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – October 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during October 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In October, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 31 – Removal of sediment from the inlet outlet structure and disposed of at the MWR. Addition of 12-inch minus to inlet outlet structure for erosion control.
- BRES Site 30 – Preparation of the site for seeding by disking. Hydroseeding of EPA approved seed mix to the site.
- BRES Site 32 – Preparation of the site for seeding by disking. Hydroseeding of EPA approved seed mix to the site.
- BRES Site 175 – Staging and stock piling of boulders and large river rock to be used to rock armor the inlet outlet structure and prevent access onto the site. Rock armoring of the inlet outlet structure and placement of boulders on site to prevent vehicle access onto site.
- BRES Site 159 – Preparation of the site for seeding by disking. Installation of jack leg fence to prohibit vehicular access onto the site.
- BRES Site 5 – Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 20 – Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 38 – Hydroseeding of EPA approved seed mix to the site.
- BRES Site 29 - Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 53 – Hydroseeding of EPA approved seed mix to the site.
- BRES Site 18 - Hydroseeding of EPA approved seed mix to the site.
- BRES Site 42 - Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 41 - Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 39 - Hydroseeding and broadcast seeding of EPA approved seed mix to the site.

**BRES Program.** BSB Staff is in the process of QA/QC on the data and shape files. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In October 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 26 Excavation and Dirt-Moving Permits during the month of October; 12 within the BPSOU:

- 739 Bernie's Way – Butte Blackjack Portal repair, rock dump, and drill pad
- Greenwood Ave. – utility repairs
- 641 Granite St. – replace water service
- Colorado and E. Mercury St. – install electric primary and services
- 517 W. Daly St. – driveway
- 1327 Farrell St. – install new underground electric service in alley
- 601 S. Washington St. – repair water service
- 1033 Hornet – garage foundation
- Lexington and Grove Creek – install electric utilities
- 1145 Montana St. – monoslab foundation for cold storage building
- 2805 S. Montana St. – install sewer service

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off utilizing the D7 dozer.

## **B. Storm Water Operations and Maintenance Activities**

During October 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD5 – Installation of pressure treated jack leg fence material to prohibit vehicular access onto the site. Preparation of the site for seeding by disking.
- CB8 – By-pass screen cleaned daily.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in October 2021:

- Coordinated with Montana Bureau of Mines and Geology regarding private well sampling as part of the Butte Controlled Groundwater Area monitoring.
  - Fall sampling is ongoing with four wells having been sampled in the Clark Tailings/Old Landfill Controlled Groundwater Area.
  - Continued fall sampling is occurring for other domestic wells in controlled groundwater areas
- Received and reviewed Butte-Silver Bow Old Landfill/Clark Tailings CWMA SOW and associated response, QAPP, and Crosswalk comments.
- Received and reviewed BNSF Railway Company and Union Pacific Railroad's September 2021 monthly activity report for the Butte Priority Soils Operable Unit.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding September 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Imported the Butte Copper, Goddess, Mount Pleasant, Paying Copper, Prince, Elsie, and Dan Patch mine kmz prepared by Anthony Roth/MBMG to geodatabase.
- Meeting with Seth Cornell to develop a GIS story map utilizing existing Superfund webmaps and webapps for orientation materials for Environmental Health RN at Health Department.
- Imported the William J. Bryan and Queen of May mine kmz prepared by Anthony Roth/MBMG for the geodatabase.
- Imported Alaska, Balkan, and Telegraphy kmz prepared by Anthony Roth/MBMG to geodatabase.
- Imported Morel Mine kmz prepared by Anthony Roth/MBMG to geodatabase.
- Meeting between BSB Reclamation and Woodard and Curran staff for RMAP Database status update.
- Inquiry regarding parcel layer features on RMAP collector.
- Troubleshoot Enterprise outage and permissions for AGOL access.
- Meeting with Seth Cornell and Julia Crain on superfund and BRES features for story map.
- Imported Rosemary and Silver Queen mine kmz prepared by Anthony Roth/MBMG to geodatabase.
- Prepared a map of the 130-acre AR parcel showing utilities, BRES sites, parks, shafts, and roads, zoning, and dedicated and developable land for Planning.
- Created map template for additional features to upload to Enterprise and link to AGOL through portal. Repaired water, sewer, and stormwater layers.
- Inquiry of AR owned parcel shapefiles.
- Created map of Lexington Gardens area on Granite and Broadway for staging and planning of Butte Hoops.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners await comments from EPA.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

December 10, 2021

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: November 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for November 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – November 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during November 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In November, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 29 – Repair of gully with addition of EPA approved cover material and topsoil.
- BRES Site 29N – Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 31– Hydroseeding of EPA approved seed mix to the site.
- BRES Site 43 – Hydroseeding and broadcast seeding of EPA approved seed mix to the site.
- BRES Site 158 – Hydroseeding of EPA approved seed mix to the site.
- BRES Site 70 – Broadcast seeding of EPA approved seed mix to the site.
- BRES Site 71 – Broadcast seeding of EPA approved seed mix to the site.
- BRES Site 72S -Broadcast seeding of EPA approved seed mix to the site.
- BRES Site 2390- Broadcast seeding of EPA approved seed mix to the site.
- Hauling and stockpiling of EPA approved topsoil. Topsoil hauled from Kaw Avenue to the Ryan Road staging area to be utilized for upcoming Operations Maintenance activities.

**BRES Program.** BSB Staff is in the process of QA/QC on the data and shape files from the 2021 BRES evaluations. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In November 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 21 Excavation and Dirt-Moving Permits during the month of November; 8 within the BPSOU:

- Dakota and Clay St. – curb and gutter
- Wyoming St. at Alley south of Galena St. – utility repairs and maintenance
- 51 Windfall Place – footing, foundation, landscaping, driveway
- 47 Windfall Place – new multiple family residential building



- 101 W. Quartz St. – removing and repairing wall
- 933 W. Broadway St. – replace water service
- 2302 S. Dakota St. – install new water and sewer service
- Montana and Galena – replace gas main

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The shaker rack was disassembled, and the accumulated sediment was removed and disposed of at the Mine Waste Repository. The shaker rack has been reassembled and is functioning properly to remove sediment from vehicles exiting the mine waste repository.

## **B. Storm Water Operations and Maintenance Activities**

During October 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD8 – Repair of washout and sediment removal from rock lined ditch.
- CB8 – By-pass screen cleaned daily.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in November 2021:

- Coordinated with Montana Bureau of Mines and Geology regarding private well sampling as part of the Butte Controlled Groundwater Area monitoring.
  - Fall sampling is ongoing with four wells sampled in the Clark Tailings/Old Landfill Controlled Groundwater Area.
  - Continued fall sampling is occurring for other domestic wells in controlled groundwater areas.
  - The data from domestic well sampling is in the data validation stage. Sample result letters will be prepared and sent to property owners upon validation.
- Received and reviewed 2022 QAPP for the BMF/BPS/MT Pole Private Well Monitoring Program and the 2021 Cross Walk.

- Received and currently reviewing Grove Gulch Sedimentation Bay Remedial Element 60% Preliminary Design Submittal.
- Received and reviewed BNSF Railway Company and Union Pacific Railroad's October 2021 monthly activity report for the Butte Priority Soils Operable Unit.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding October 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Department of Reclamation and Woodard-Curran update meeting to discuss GIS and database capability and options.
- Inquiry from Nate Watson to land ownership of area around Sioux Park.
- Imported ARCO property features to be transferred.
- Imported ARCO property features to AGOL.
- Created webmap and webapp for ARCO to BSB property parcel transfers.
- Meeting to discuss next steps of ARCO to BSB property transfers.
- Progress check-in meeting with RMAP.
- GIS, MIS, ESRI, follow-up with server engagement, troubleshooting, and Portal error ticket.
- Request from WET for all new stormwater features and parks parcels.
- MIS, GIS, ESRI assign technically callers with authorization to speak with ESRI technical services for service login error.
- Inquiry from Planning Department about Anaconda Road Ownership.
- Imported of P-27 kmzs from Anthony Roth.
- Researched evidence of Timber Butte repository kmz.
- Request from Newfield for Op Unit. shapefiles for BSB.
- GIS, MIS, submit ticket to restore GIS Coord. access and restrict outside access to GIS plotter.
- Meeting with RMAP to discuss database progress and integration into workflow, field collection, and GIS.
- Imported Q-27 kmzs from Anthony Roth.
- Request from DEQ for clarification of City of Butte's urban boundary.
- Imported N-25 kmzs from Anthony Roth.
- Imported Basin Perimeter zip from Pioneer/ARCO and emailed to WET.
- Zipped and emailed BMFOU, BPSOU, and Active Mining boundaries for Newfield.
- GIS and ESRI meeting and discussion with new ESRI service contact. Discussed downed server issues.
- Imported BMFOU with full area for CDM Smith.
- Zipped and emailed BMFOU expanded area for Newfield.
- Calculated the total acreage of Greenway Authority ownership for URA.
- GIS meeting with ESRI account and technical representatives to discuss GIS/MIS meeting and suggested maintenance issues and training for IT Department.
- Inquiry to status of BSB parcels rest URL for RMAP database link by Woodard Curran.
- Edited Reclamation and Superfund storymap.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners revised and resubmitted the Final Butte Priority Soils Operable Unit Community Engagement Plan (CEP) for Remedial Work.



# THE CITY-COUNTY OF Butte-Silver Bow

Department of Reclamation &  
Environmental Services

Abby Peltomaa, Manager, Data Management Division  
Ph: 406-497-5045 E-Mail: [apeltomaa@bsb.mt.gov](mailto:apeltomaa@bsb.mt.gov)

January 10, 2022

Nikia Greene  
EPA Region 8, Montana Office  
Baucus Federal Building  
10 West 15<sup>th</sup> Street, Ste. 3200  
Helena, MT 59624

Daryl Reed, State Project Officer  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Erin Agee  
Senior Assistant Regional Counsel  
CERCLA Enforcement Section  
Office of Regional Counsel  
US EPA Region 8 Montana Office  
1595 Wynkoop Street  
Denver, CO 80202

Jonathan Morgan  
Chief Remediation Counsel  
Remediation Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

RE: December 2021 Monthly Report of Activities  
Butte Priority Soils Operable Unit  
2020 Butte Priority Soils Operable Unit Consent Decree – Civ. Action No. 89-039-BU-SEH

Ladies and Gentlemen:

Pursuant to Appendix D to the BPSOU Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, Butte-Silver Bow submits the attached Monthly Report for activities performed at the Silver Bow Creek/Butte Area Superfund Site. This monthly report covers work activities for December 2021.

Please contact me (497-5045) if you have any questions about the information in the report or need additional information about Butte-Silver Bow's work activities.

Sincerely,

Abby Peltomaa

Attachment: Monthly Report

CC: Josh Bryson, AR Project Manager  
BSB Personnel  
E-Mail version sent to List-Serve

# **Monthly Report – December 2021**

## **Butte Priority Soils Operable Unit**

### **Silver Bow Creek/Butte Area Superfund Site**

#### **Civ. Action No. 89-039-BU-SEH**

As required by Appendix D to the Consent Decree, BPSOU Statement of Work, Section 5.0 Reporting, the City and County of Butte-Silver Bow provides this monthly report on work activities. The work activities described in this report are consistent with the directives contained in the Remedial Action Work Plan, and cover those efforts performed by Butte-Silver Bow during December 2021.

## **I. Operations and Maintenance Activities**

### **A. Source Areas/Butte Reclamation Evaluation System (BRES)**

**Routine O&M.** In December, Source Area maintenance crews continued performing maintenance activities across reclaimed areas of the Butte Hill. This past month, BSB Crews completed routine O&M tasks including trash pickup and disposal, fence repairs, and stormwater sediment basin, culvert, and inlet cleanout. Specific site work that was performed included:

- BRES Site 60 – Removal of building that was vandalized by fire at Foreman’s Park. Dead trees removed from Foreman’s Park as well and disposed of at the landfill. Broadcast seeding of EPA approved seed mix to the site.
- BRES Site 46 – Repair of fence rails that were broken from an accident.
- BRES Site 134 – Removal of trash from illegal dumping on site and disposed of at the landfill.
- BRES Site 160S – Removal of trash from ditch and disposed of at the landfill.
- BRES Site 174 – Removal of large tree that had blown over in recent storms and disposed of at the landfill.
- Hauling and stockpiling of various size rock for future projects.
- Removal of snow from walkways, MWR, and the Granite Mountain Memorial.

**BRES Program.** BSB Staff is in the process of QA/QC on the data and shape files from the 2021 BRES evaluations. A technical summary and recommendations report will be submitted once completed.

**Vegetation and Weed Controls.** In December 2021, no weed control activities were performed.

**Institutional Controls (ICs).** Butte-Silver Bow continues to manage its responsibilities to the Institutional Controls Program through education and training in Best Management Practices for stormwater and sediment controls, excavations of hazardous waste, and providing access to the Mine Waste Repository. B-SB personnel work closely with local utility companies including NorthWestern Energy, Charter/Spectrum, Qwest, and others to coordinate Street Opening permits, Excavation & Dirt-Moving permits, and others.

**Excavation Review and Oversight.** BSB personnel continue to monitor excavation and dirt-moving activities throughout the basin, including monitoring permitted projects issued in previous months. Coordination with contractors requires continued monitoring of access to the Mine Waste Repository. BSB personnel issued 14 Excavation and Dirt-Moving Permits during the month of December; 6 within the BPSOU:

- 121 E. Aluminum St. – demolition of house
- 117 E. Aluminum St. – demolition of house
- 75 E. Park – vaulted sidewalk and debris removal, sidewalk to be replaced
- 53 E. Park – vaulted sidewalk removal
- 616 S. Colorado St. – install water and sewer service

- 1124 W. Porphyry St. – replace sewer service

**Mine Waste Repository Maintenance.** The Mine Waste Repository continued operation with all active dumping directed to the lower, eastern bench which continues to be monitored and maintained on a regular basis.

- The materials on the lower deck of the repository were pushed off.

## **B. Storm Water Operations and Maintenance Activities**

During December 2021, standard routine work activities were completed. In addition to inspections and monitoring of facilities, BSB Crews completed the following:

- Continuous monitoring of Syndicate Pit, CB8, CB9 and HDDs.
- DD8 – Removal of fence from around a sinkhole on the site that was repaired.
- DD9 – Placed asphalt millings along the curb line to prevent erosion of road and berm for stormwater control.
- DD10 – Six-inch minus added to ditch for erosion control. Removal of sediment from the swale and disposed of at the MWR.
- CB8 – By-pass screen cleaned daily. Removal of sediment from the inlet outlet structure and disposed of at the MWR. Removal of large amount of plant litter that had built up along the perimeter fencing and disposed of at the landfill.
- CB9 – Repair of gate that was broken due to vandalism.
- Trash removed from various catch basins and inlet outlet structures and disposed of at the landfill.
- EPA approved fill added to various stormwater structures for erosion control.
- Snow removed from various inlet outlet structures.

**Superfund Storm Water Structures Inspections:** BSB Staff received comments back from the Agency in February 2021 on the 2020 Stormwater System Inspection Report and continue to draft a response.

**Superfund Storm Water Structures Operations and Maintenance Plan:** Butte-Silver Bow has received approval on this plan and will resubmit to reference the reclaimed areas QAPP.

**MPDES Storm Water Permit Assistance & Monitoring – MS4:** MPDES Storm Water Permit Assistance & Monitoring – MS4: Butte-Silver Bow and its consultants continue to implement requirements of its Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit requires that BSB develop a Storm Water Management Program (SWMP) that addresses six control measures: public education, public involvement, illicit discharge detection and elimination (IDDE), construction site storm water control, post-construction site storm water control, and pollution prevention/good housekeeping. Activities completed under each control measure are detailed below:

- Monitoring, Recording and Reporting Requirements for the General Permit.
- Butte-Silver Bow Public Works and its consultants provide engineering support and assistance in reviewing storm water design plans for proposed developments in Butte, as required by the City-County Storm Water Ordinance. Assistance regarding storm water requirements was provided to potential developers as requested.

## **C. Water Quality District Activities**

Water Quality District Completed the following tasks in December 2021:

- Received and reviewed BSB Closed Landfill-Clark Tailings Semi-Annual GW Monitoring September 2021.

- Received and reviewed Butte Priority Soils Operable Unit (BPSOU) Draft Final Quarterly Operations and Maintenance Report Butte Treatment Lagoon System.
- Received and reviewed BNSF Railway Company and Union Pacific Railroad's November 2021 monthly activity report for the Butte Priority Soils Operable Unit.
- Received and reviewed Montana Bureau of Mines and Geology's Butte Mine Flooding November 2021 Monthly Report.

## **D. GIS Activities**

Primary work in the reporting period included:

- Created webmap of filtered 2021 BRES O&M work on selected sites.
- Reviewed and edited reclamation storymap for Dr. Seth Cornell/Board of Health.
- Edited webmap of filtered 2021 BRES O&M following feedback.
- Strategic project to maintain access to online maps to eliminate static map products, reduce redundancy, and route to the GIS webpage.
- Met with Geophysics department at Montana Tech to get information on GPR and their remote sensing abilities.
- Participated in a work session to discuss RMAP database progress and GIS tools with AR, Woodard Curran, and BSB Reclamation Staff.
- Meeting to discuss training and next steps for server reinstall to reconnect Enterprise.
- Edited Survey 123 sampling request form, user permissions, group membership, and link for public access.
- Troubleshooting AGOL timeout/access errors to restore functionality of AGOL features and maps.
- Generated updated credentials and access for Woodard and Currant to develop relationships between AGOL and RMAP Database.
- Imported P25 kmz for Anthony Roth.
- Edited AR BSB parcel webmap, link base layers.
- Meeting series to discuss progress of ArcGIS Portal reinstall and recovery.
- Meeting to discuss recovery progress, next steps, and server integration post recovery.
- Edited AR-BSB parcel map and create a webapp.
- Import SBCCA presentation and Grove Gulch images on behalf of BSB Reclamation department.
- Inquiry to webmap beta viewer issues and revert to classic version for editing.
- Troubleshoot and error test repair of portal connections via AGOL.
- Validation and troubleshooting of portal repair with Enterprise layers, features, and web mapping services.
- Exported weekly activity from BRES O&M database to develop weekly reports.
- Performed weekly QA/QC of BSB reclamation data and draft BSB weekly O&M reports for monthly distribution and incorporation into the monthly report.

## **II. Community Involvement**

Butte-Silver Bow, Atlantic Richfield, and partners received approval of the Final Butte Priority Soils Operable Unit Community Engagement Plan (CEP) for Remedial Work in early December.



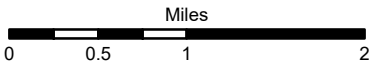
**Appendix E**  
**Outfall Maps**





**Legend**

Drainage Basin



**INDEX MAP**

City of Butte MS4 Boundary

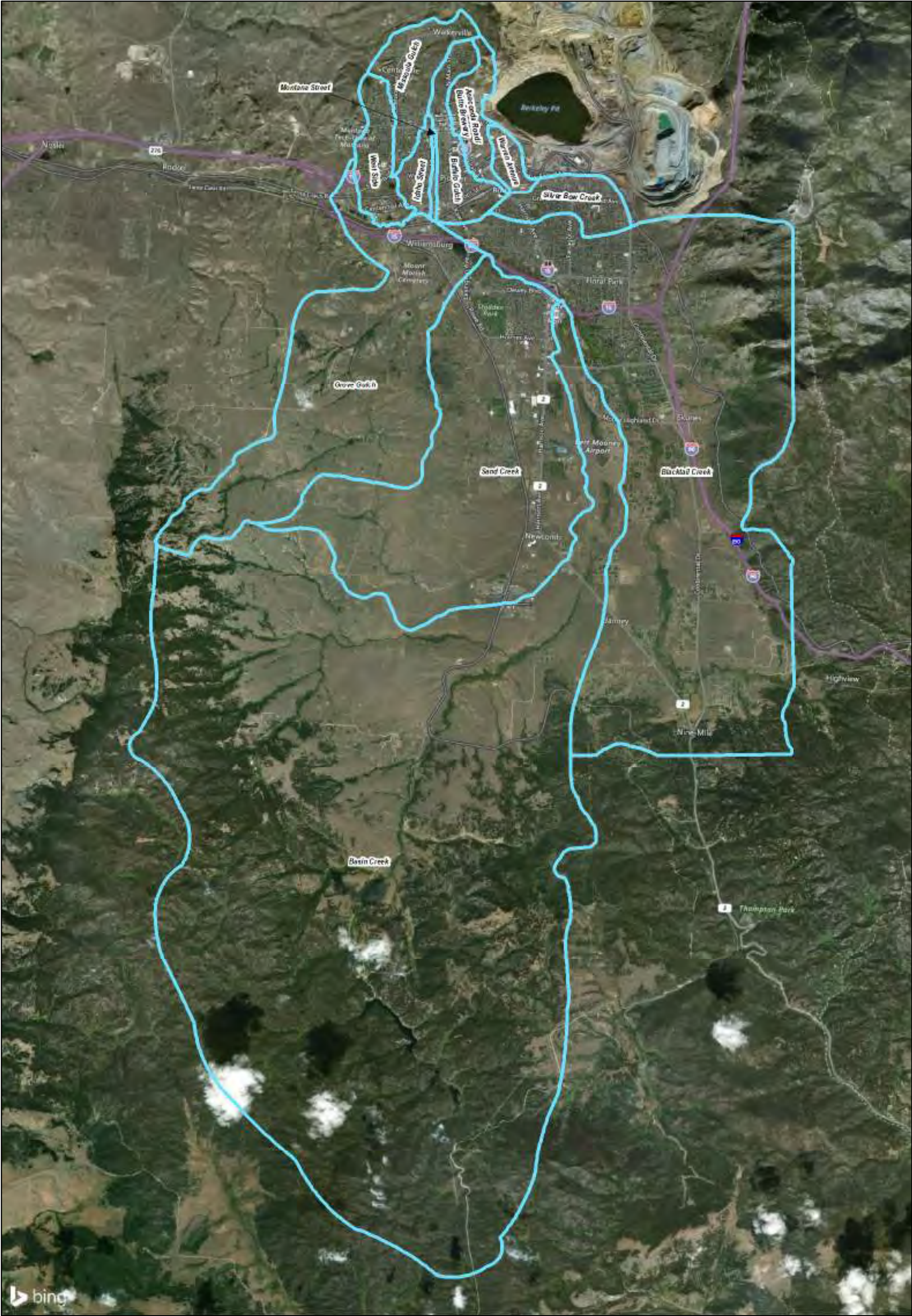
Job#: BSBPWM41 T5

Date: 1/24/2019

**FIGURE 1**

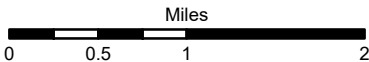
Path: M:\BSBPWM41\2019\_GIS\Figure1\_topo\_index.mxd, Author: japrowse





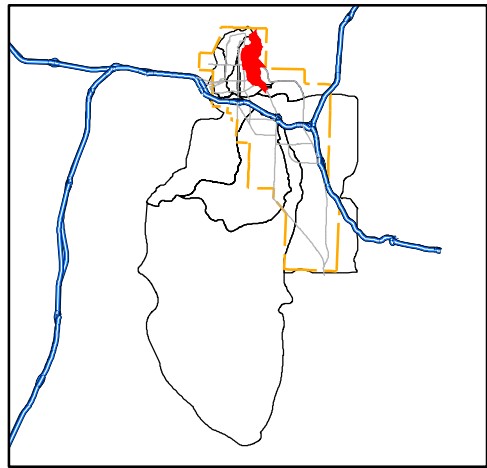
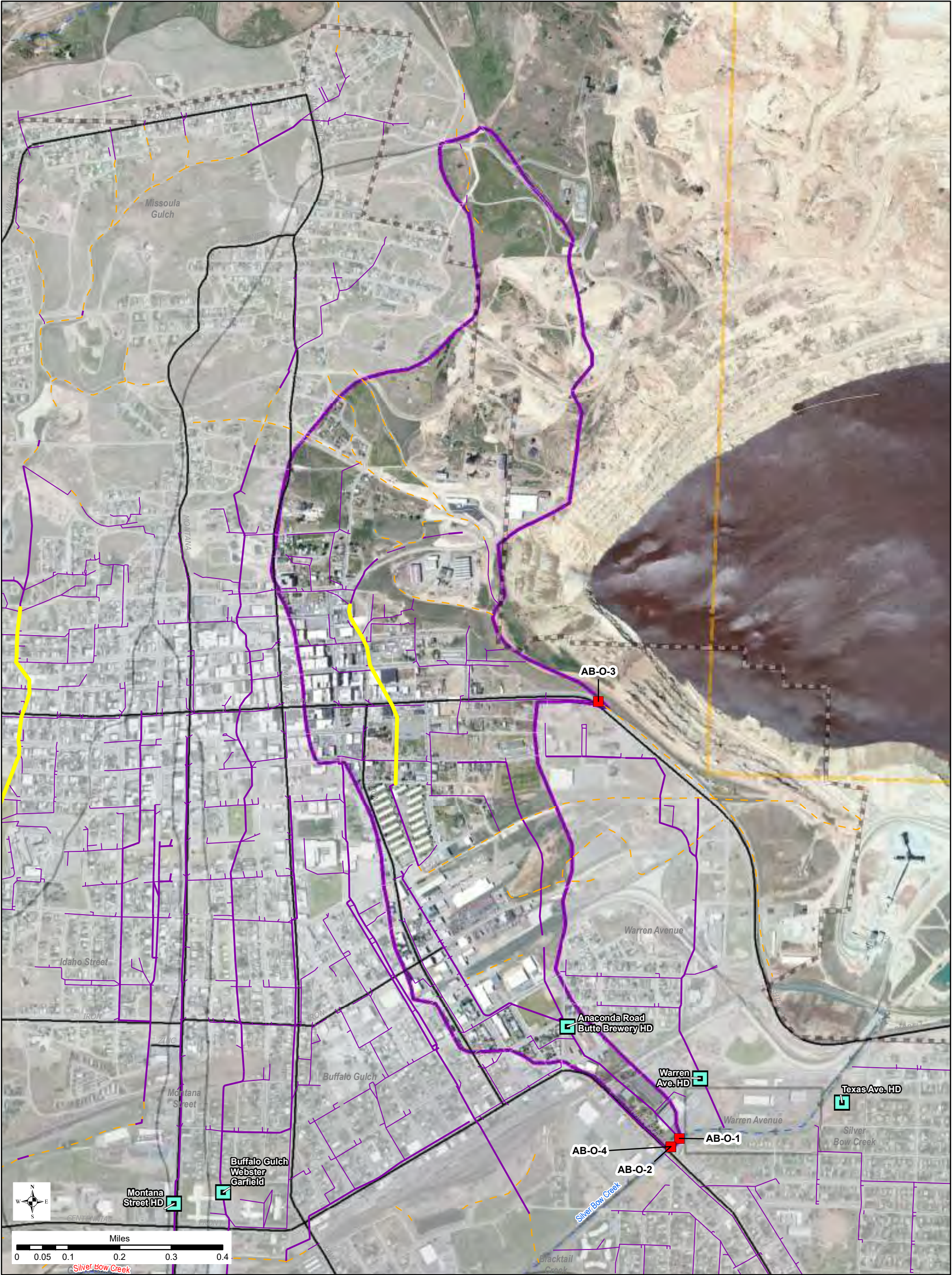
**Legend**

Drainage Basin



<b>INDEX MAP</b>	
<b>City of Butte MS4 Boundary</b>	
Job#: BSBPWM41 T5	<b>FIGURE 2</b>
Date: 1/24/2019	
Path: M:\BSBPWM41\2019_GIS\Figure2_aerial_index.mxd; Author: jeprowse	





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch
- Drainage Basin

**Anaconda Road/Butte Brewery**

City of Butte  
MS4 Boundary - USGS

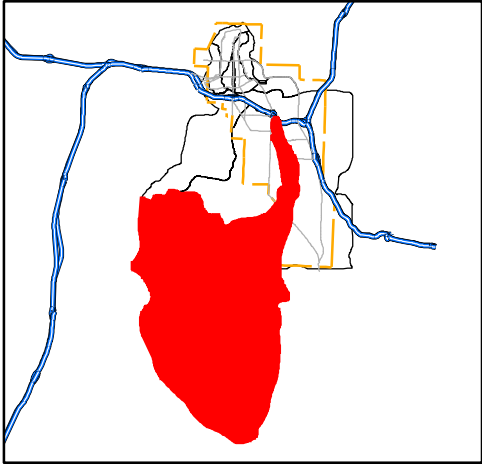
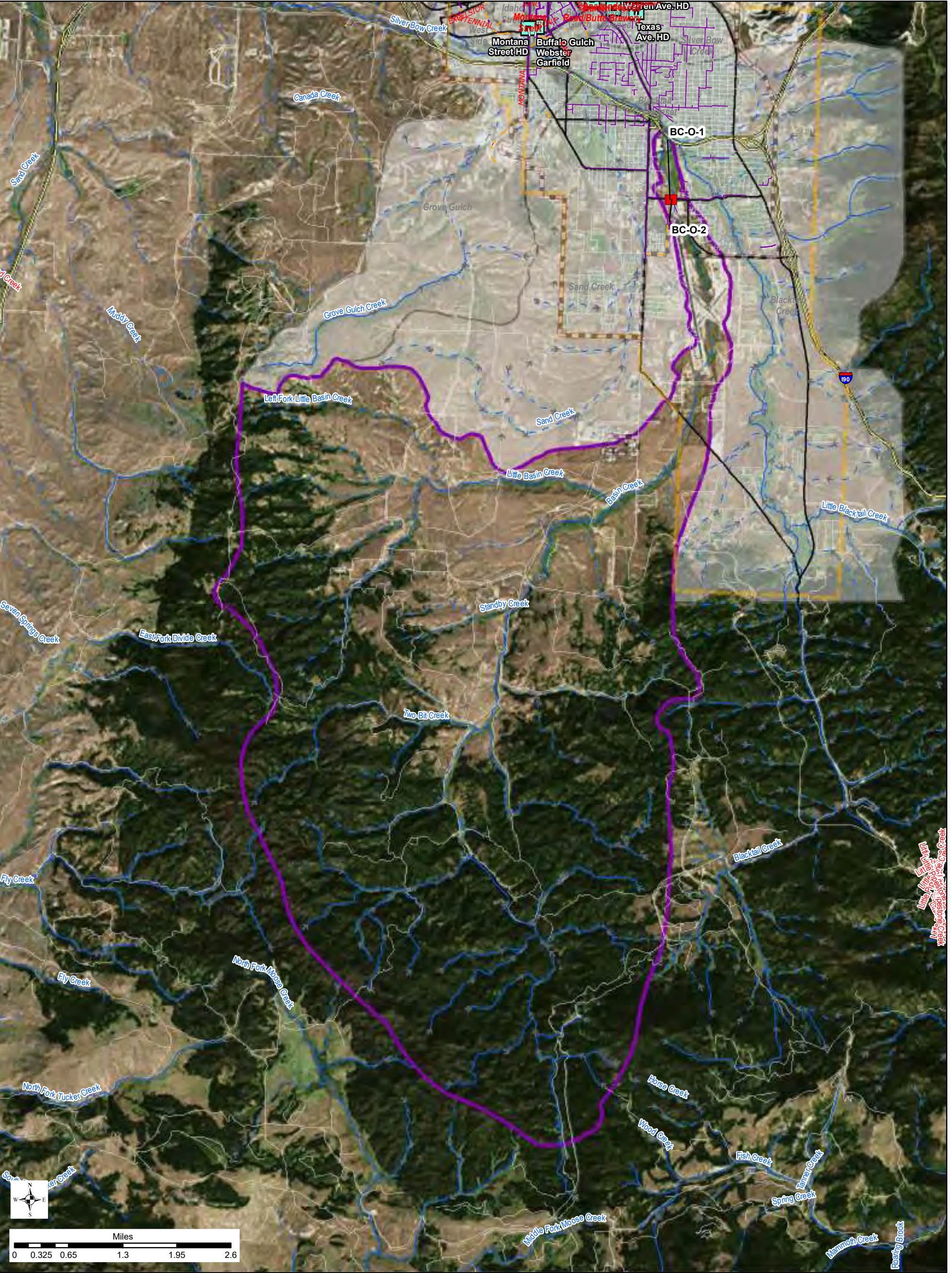
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 3a**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





Legend

HDD

Outfall

Spiral Wound PVC

Primary Pipe

Secondary Pipe

Ditch

Sewer District Boundary (MS4 Boundary)

Urban Limit Boundary

Perennial Stream

Intermittent Stream

Canal Ditch

Drainage Basin

WET

Water & Environmental

TECHNOLOGIES

Basin Creek

City of Butte

MS4 Boundary - USGS

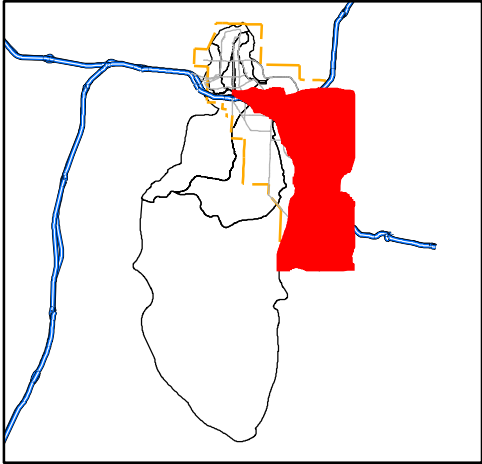
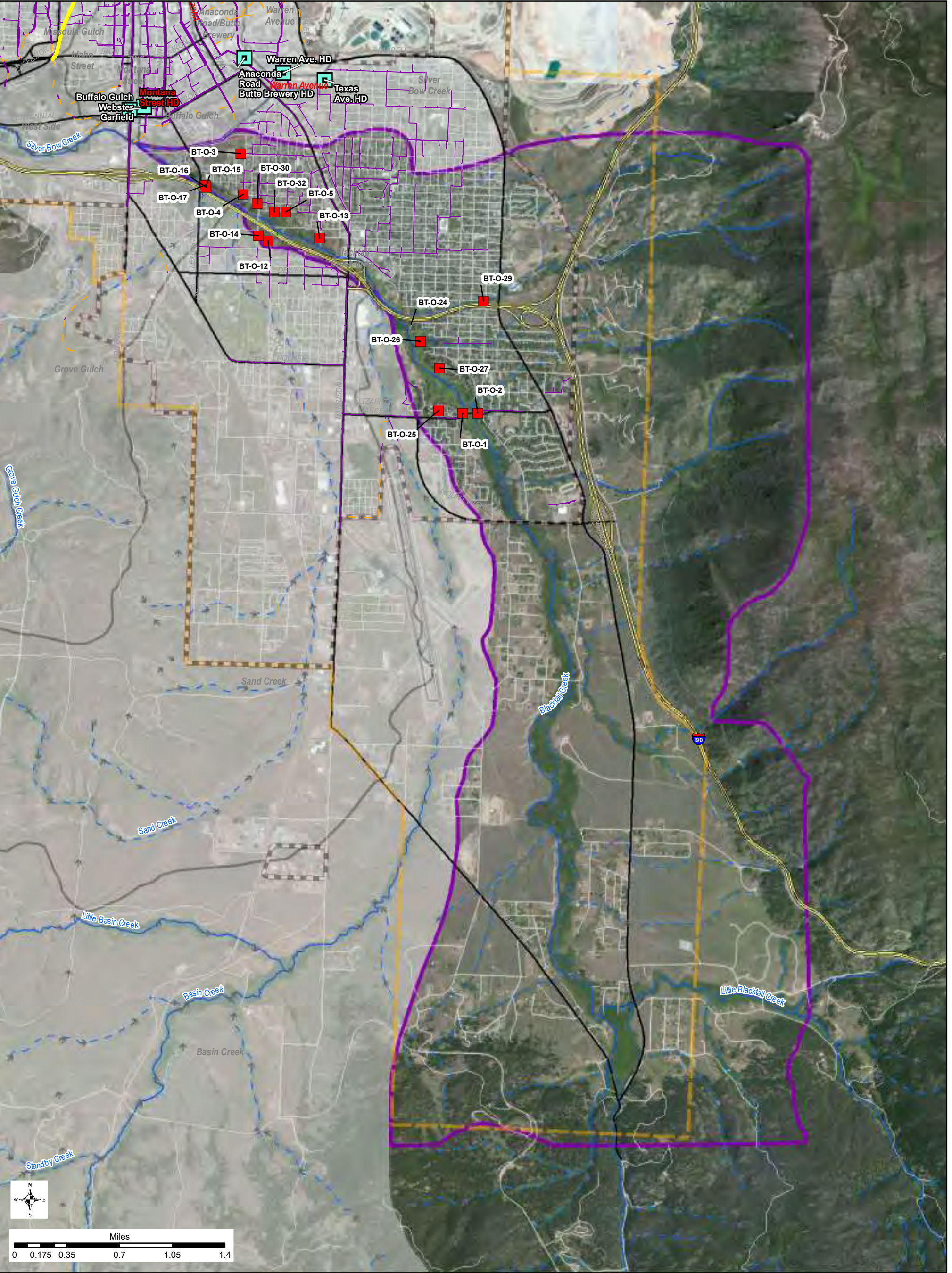
Job#: BSBPWM41 T5

Date: 1/28/2019

FIGURE 3b

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





Legend

HDD

Outfall

Spiral Wound PVC

Primary Pipe

Secondary Pipe

Ditch

Sewer District Boundary (MS4 Boundary)

Urban Limit Boundary

Perennial Stream

Intermittent Stream

Canal Ditch

Drainage Basin



Blacktail Creek

City of Butte  
MS4 Boundary - USGS

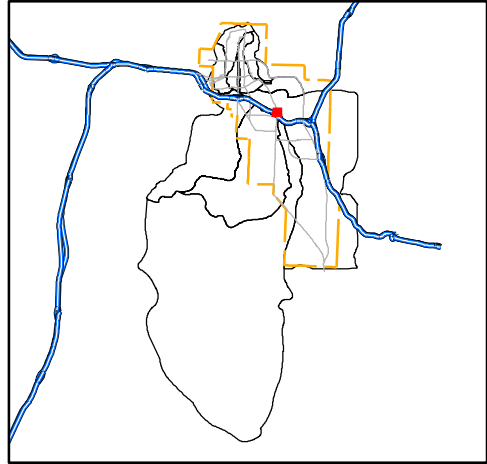
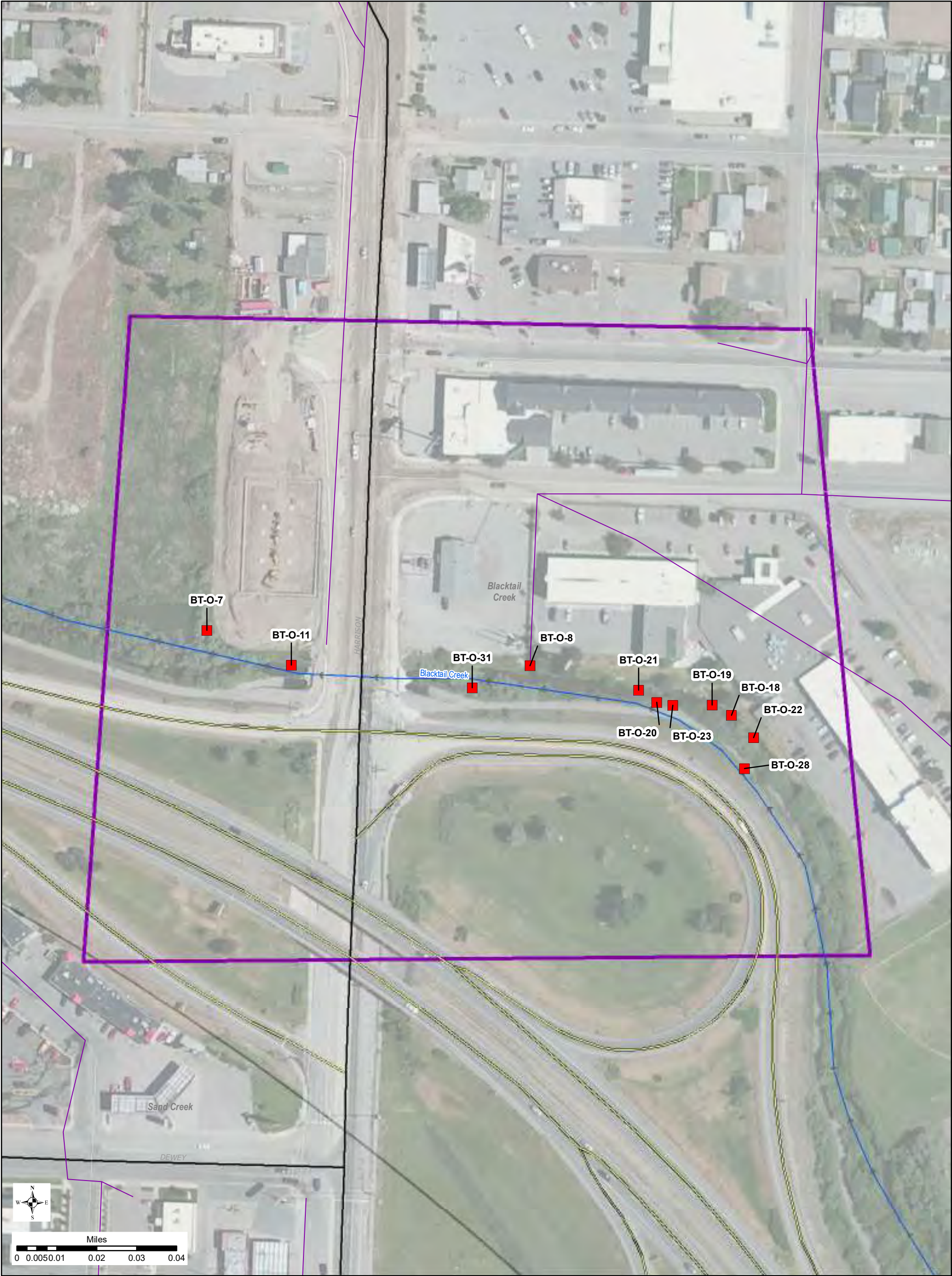
Job#: BSBPWM41 T5

Date: 1/28/2019

FIGURE 3c

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

HDD

Outfall

Spiral Wound PVC

Primary Pipe

Secondary Pipe

Ditch

Sewer District Boundary (MS4 Boundary)

Urban Limit Boundary

Perennial Stream

Intermittent Stream

Canal Ditch

Drainage Basin

**Blacktail Creek Inset**

*City of Butte*  
**MS4 Boundary - USGS**

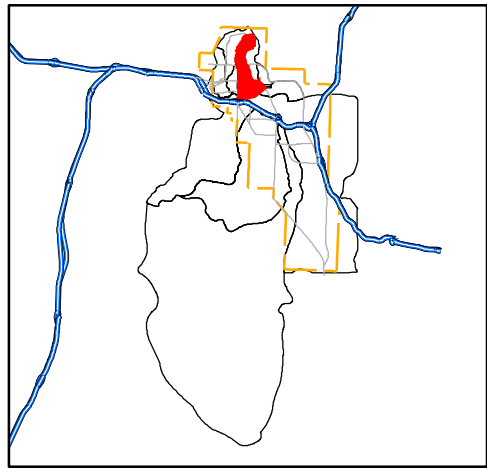
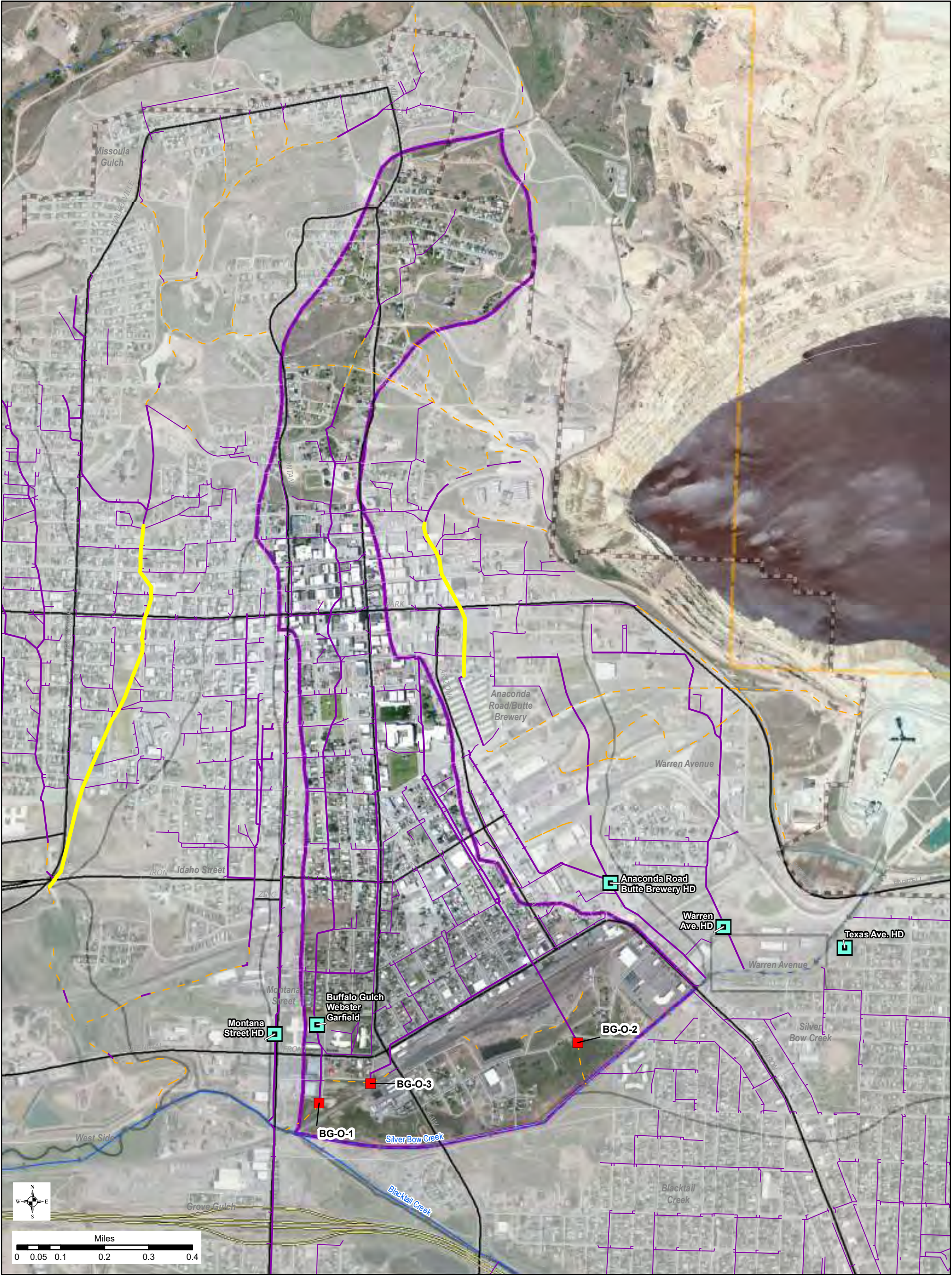
Job#: BSBPWM41 T5

Date: 1/28/2019


**FIGURE 3c1**


Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse








**Legend**


 HDD

 Outfall

 Spiral Wound PVC

 Primary Pipe

 Secondary Pipe

 Ditch


 Sewer District Boundary (MS4 Boundary)


 Urban Limit Boundary

 Perennial Stream

 Intermittent Stream

 Canal Ditch

 Drainage Basin



**Buffalo Gulch**

**City of Butte**  
**MS4 Boundary - USGS**

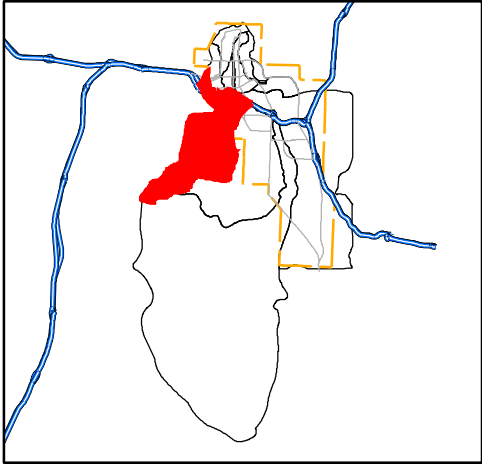
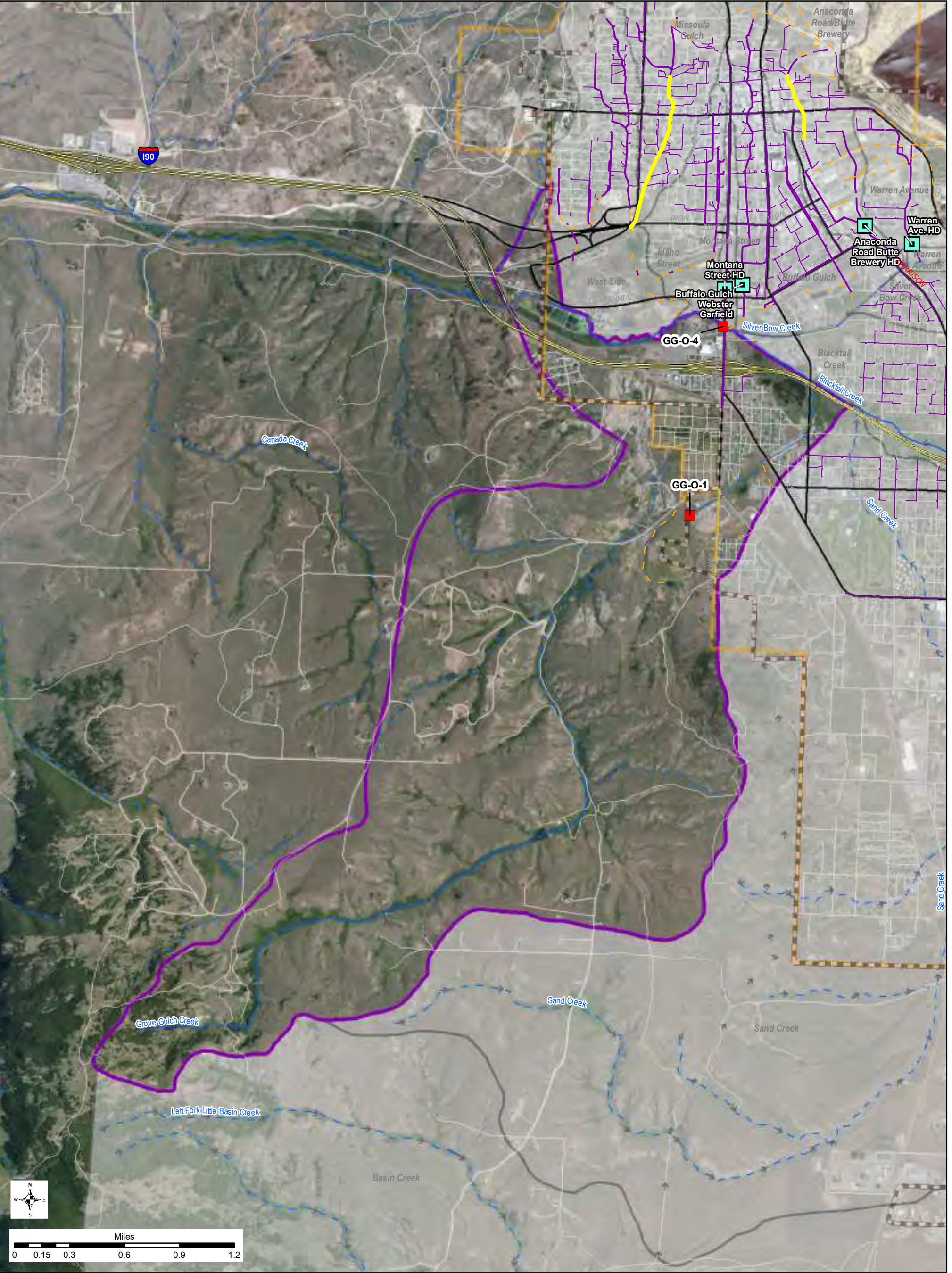
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 3d**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch

Drainage Basin

**Grove Gulch**

**City of Butte**  
**MS4 Boundary - USGS**

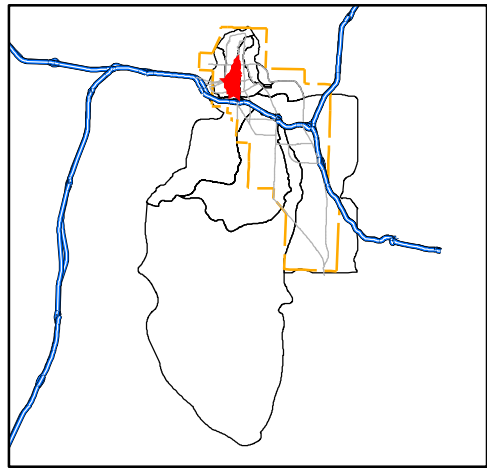
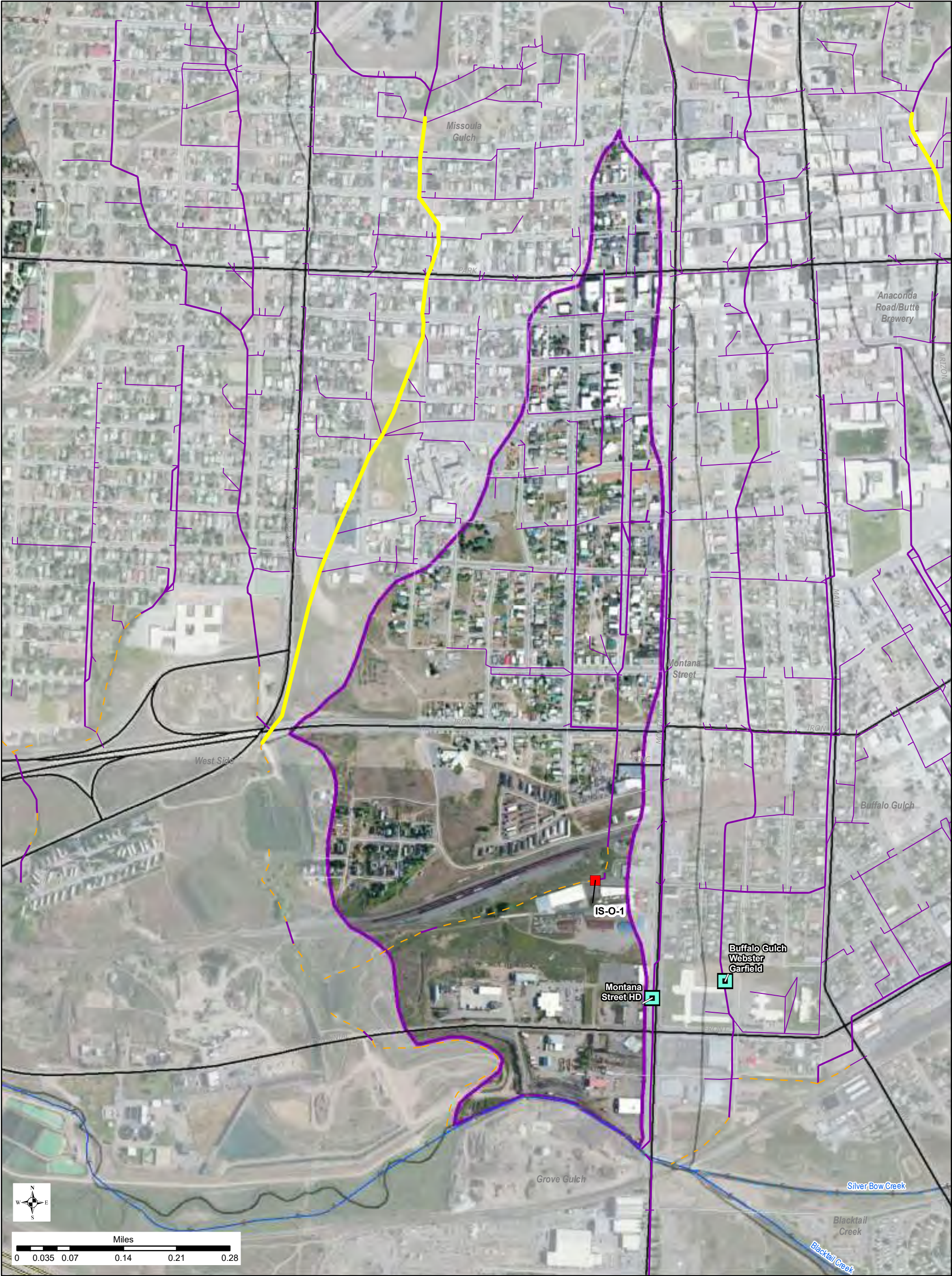
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 3e**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch

Drainage Basin

**Idaho Street**

**City of Butte**  
**MS4 Boundary - USGS**

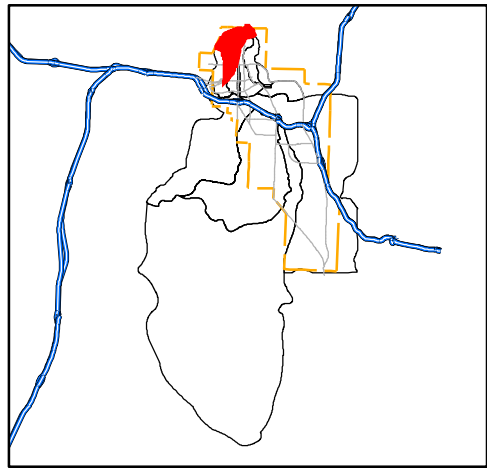
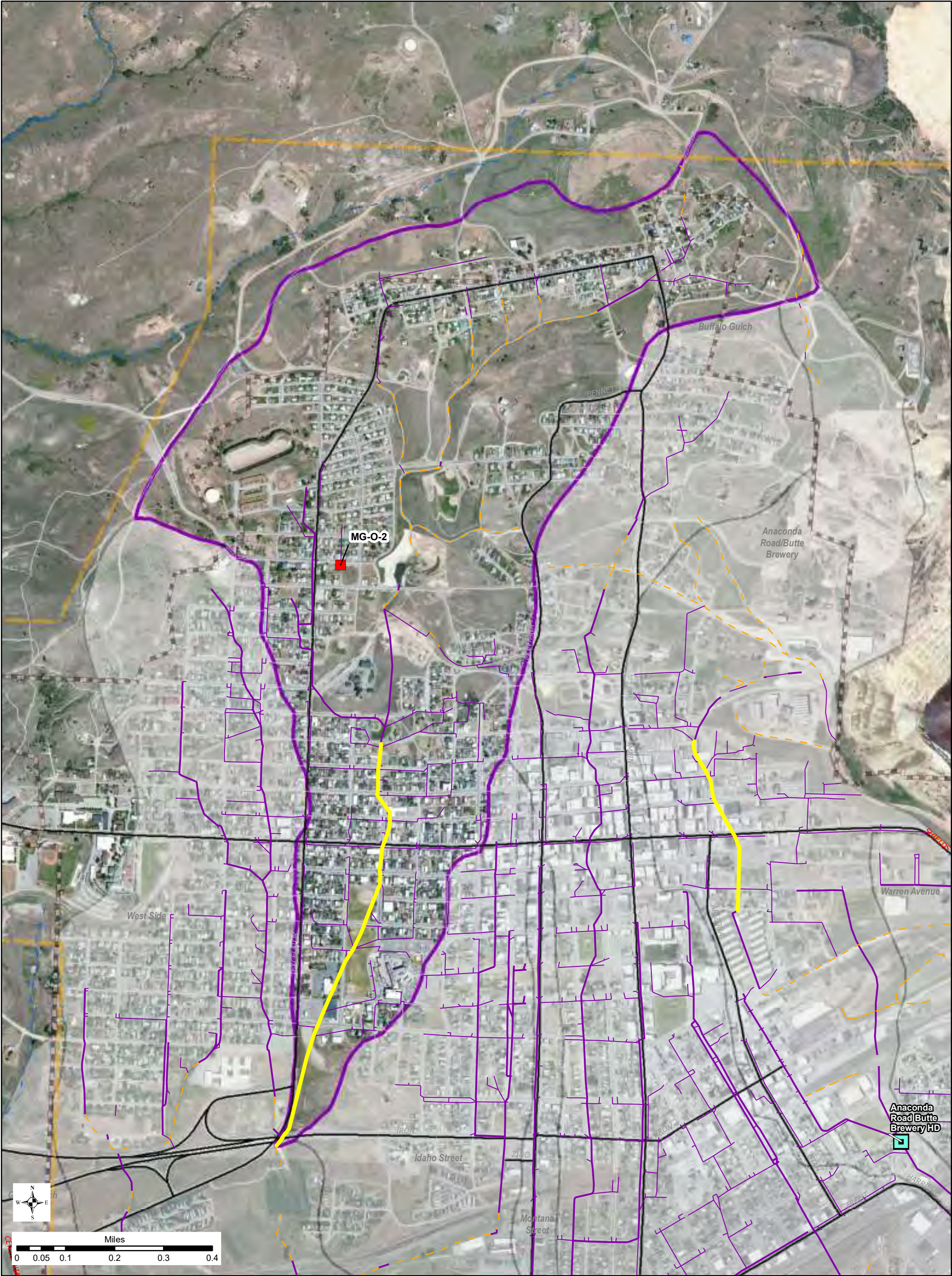
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 3f**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch

Drainage Basin

**Missoula Gulch**

**City of Butte**  
**MS4 Boundary - USGS**

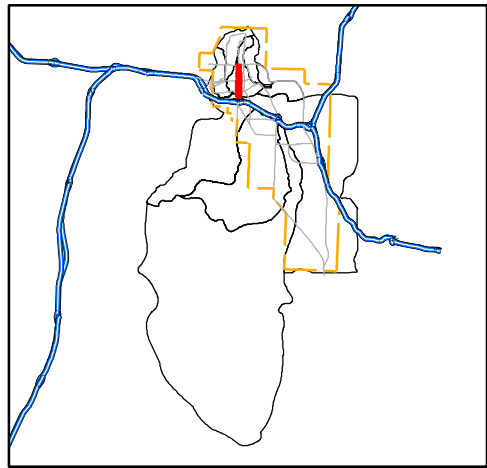
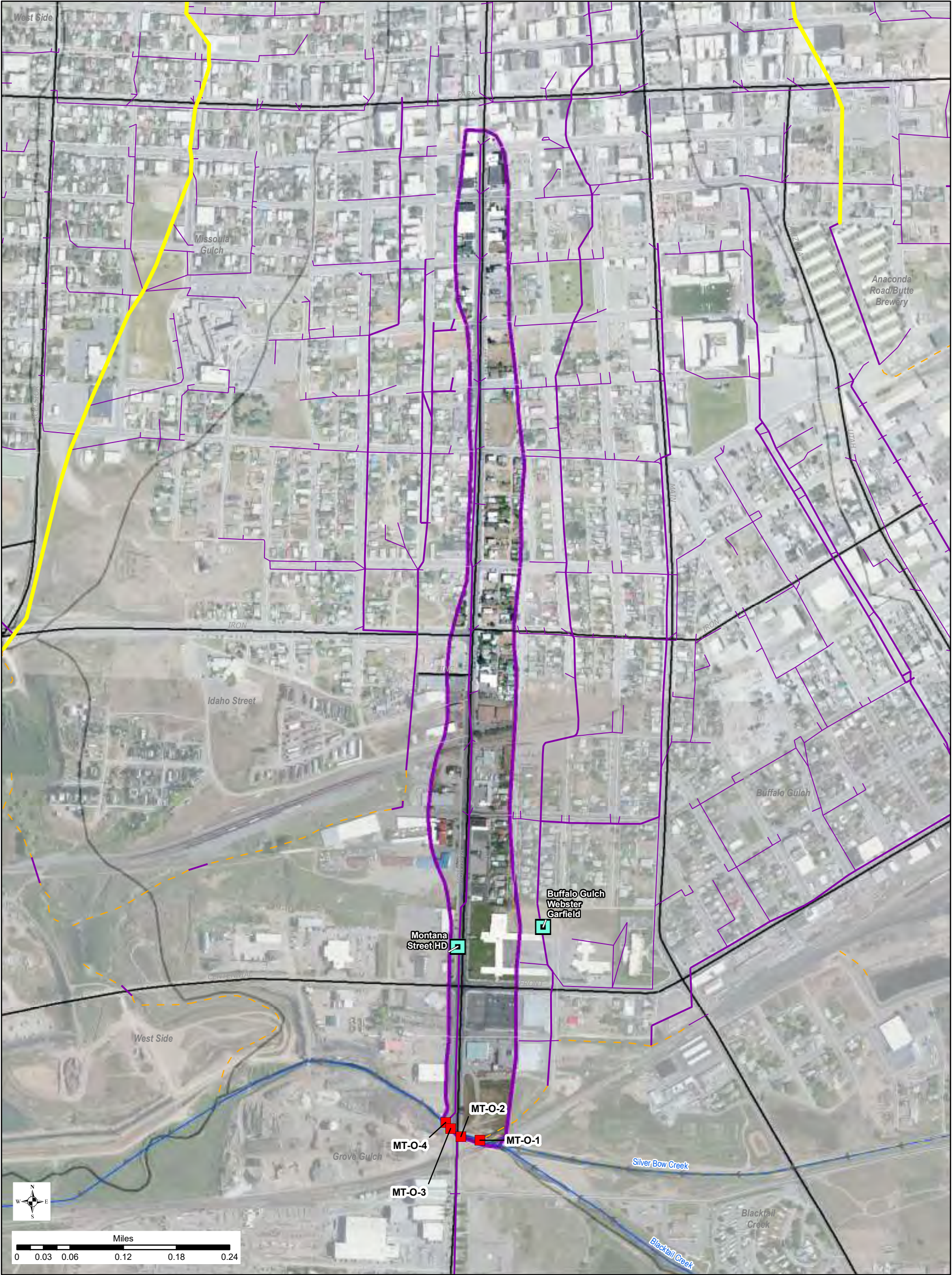
Job#: BSBPWM41 T5

Date: 1/28/2019


Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse


**FIGURE 3g**








**Legend**


 HDD


 Outfall


 Spiral Wound PVC


 Primary Pipe


 Secondary Pipe


 Ditch


 Sewer District Boundary (MS4 Boundary)


 Urban Limit Boundary

 Perennial Stream

 Intermittent Stream

 Canal Ditch

 Drainage Basin



**Montana Street**

**City of Butte**  
**MS4 Boundary - USGS**

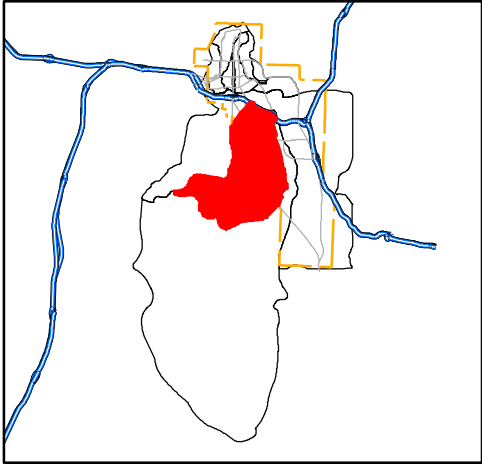
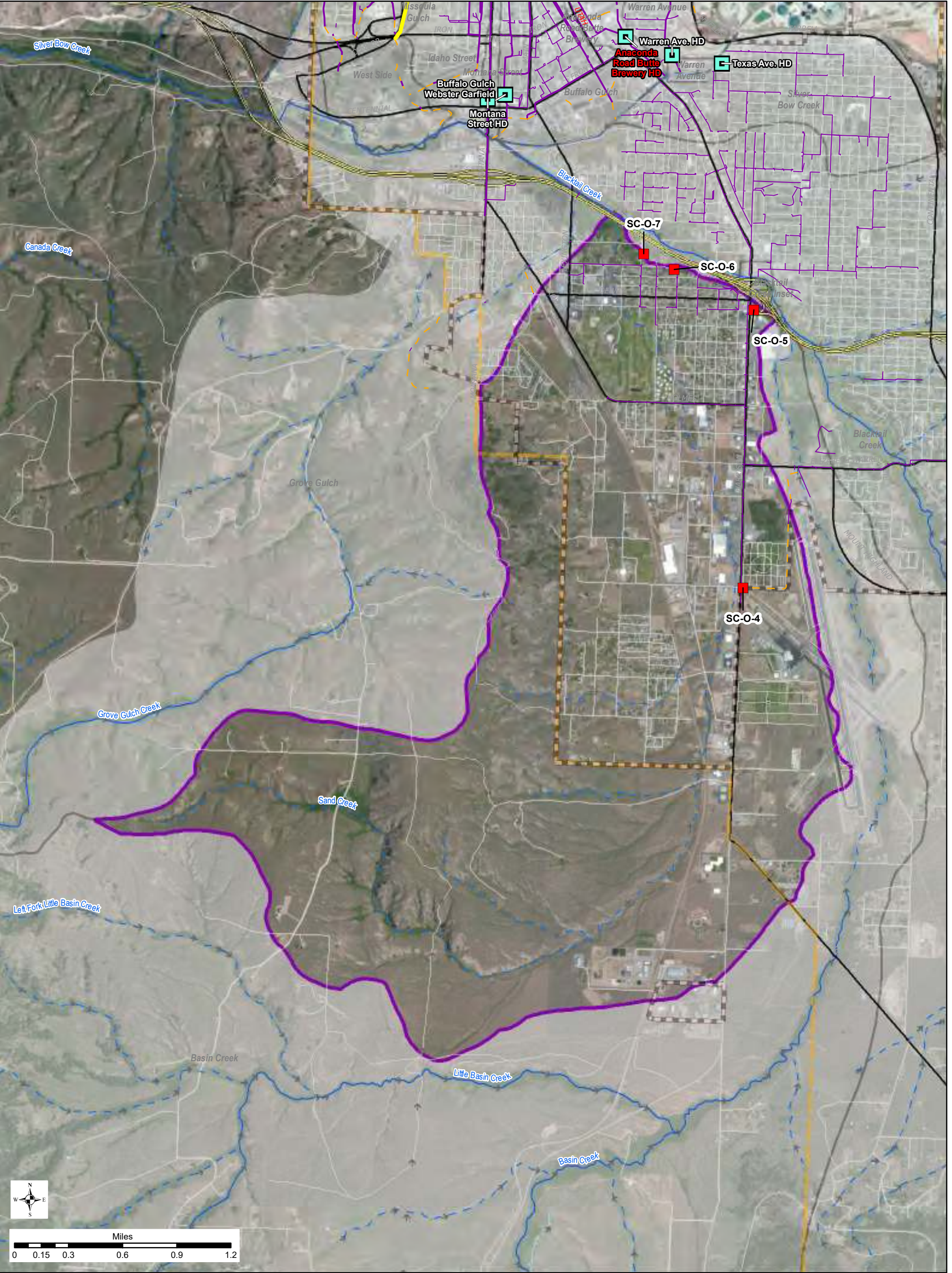
Job#: BSBPWM41 T5

Date: 1/28/2019


**FIGURE 3h**


Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse








**Legend**


 HDD


 Outfall


 Spiral Wound PVC


 Primary Pipe


 Secondary Pipe


 Ditch


 Sewer District Boundary (MS4 Boundary)


 Urban Limit Boundary

 Perennial Stream

 Intermittent Stream

 Canal Ditch

 Drainage Basin



**Sand Creek**

**City of Butte**  
**MS4 Boundary - USGS**

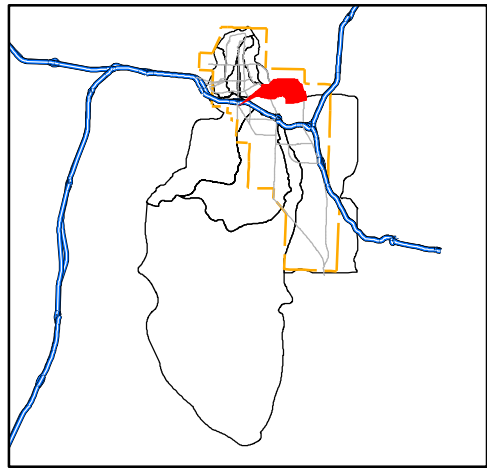
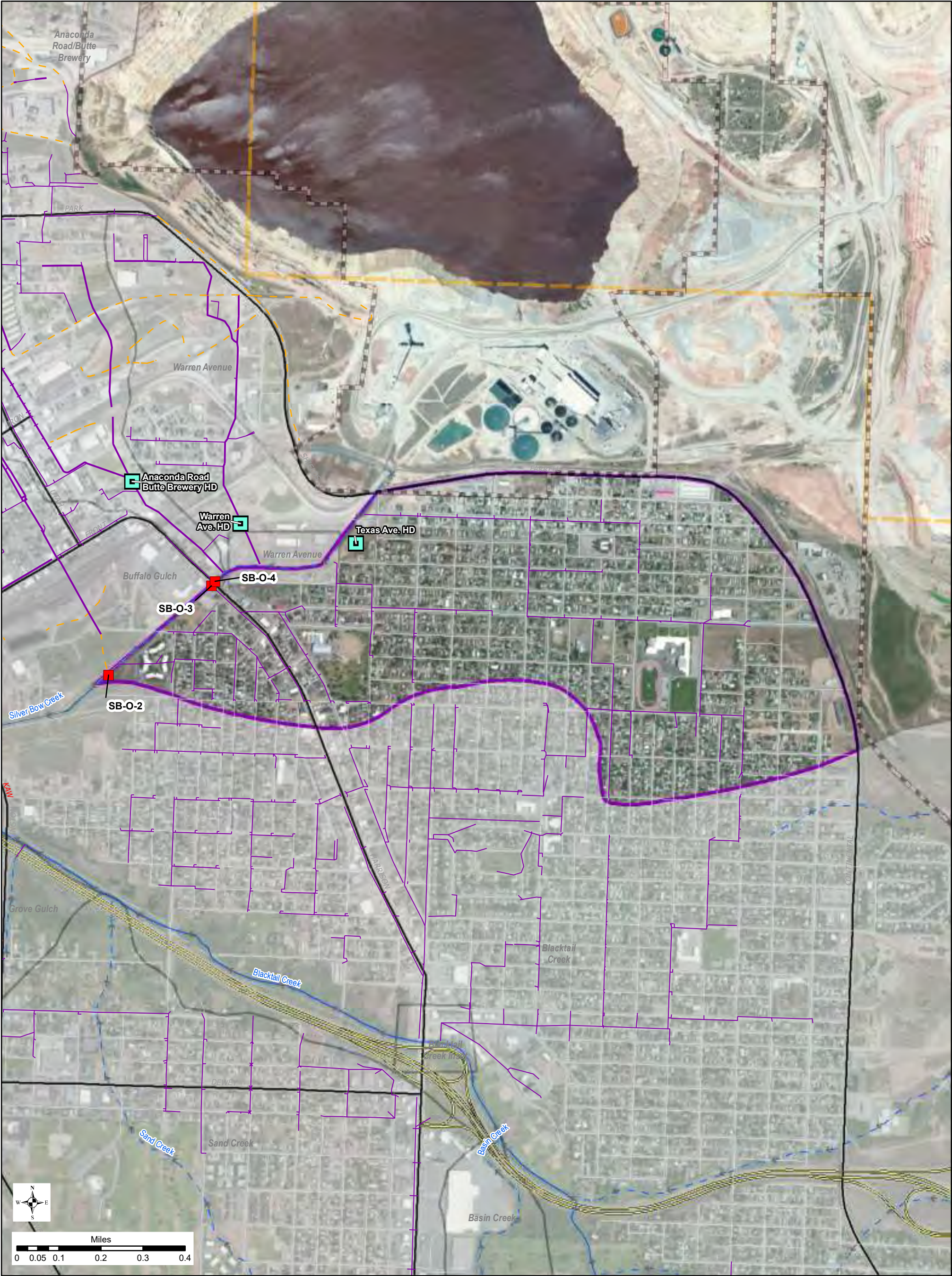
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 3i**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3i.mxd, Author: jeprowse





HDD

Outfall

Spiral Wound PVC

Primary Pipe

Secondary Pipe

Ditch

Sewer District Boundary (MS4 Boundary)

Urban Limit Boundary

Perennial Stream

Intermittent Stream

Canal Ditch

Drainage Basin

WET

Water & Environmental

TECHNOLOGIES

Silver Bow Creek

City of Butte

MS4 Boundary - USGS

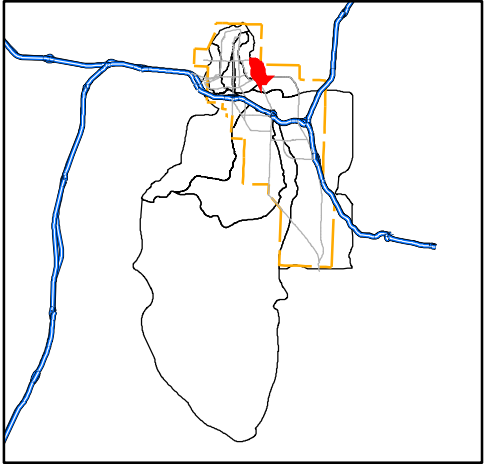
Job#: BSBPWM41 T5

Date: 1/28/2019

FIGURE 3j

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch

Drainage Basin

**Warren Avenue**

*City of Butte*  
**MS4 Boundary - USGS**

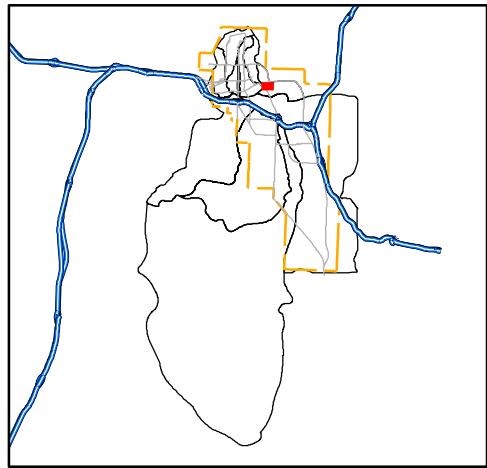
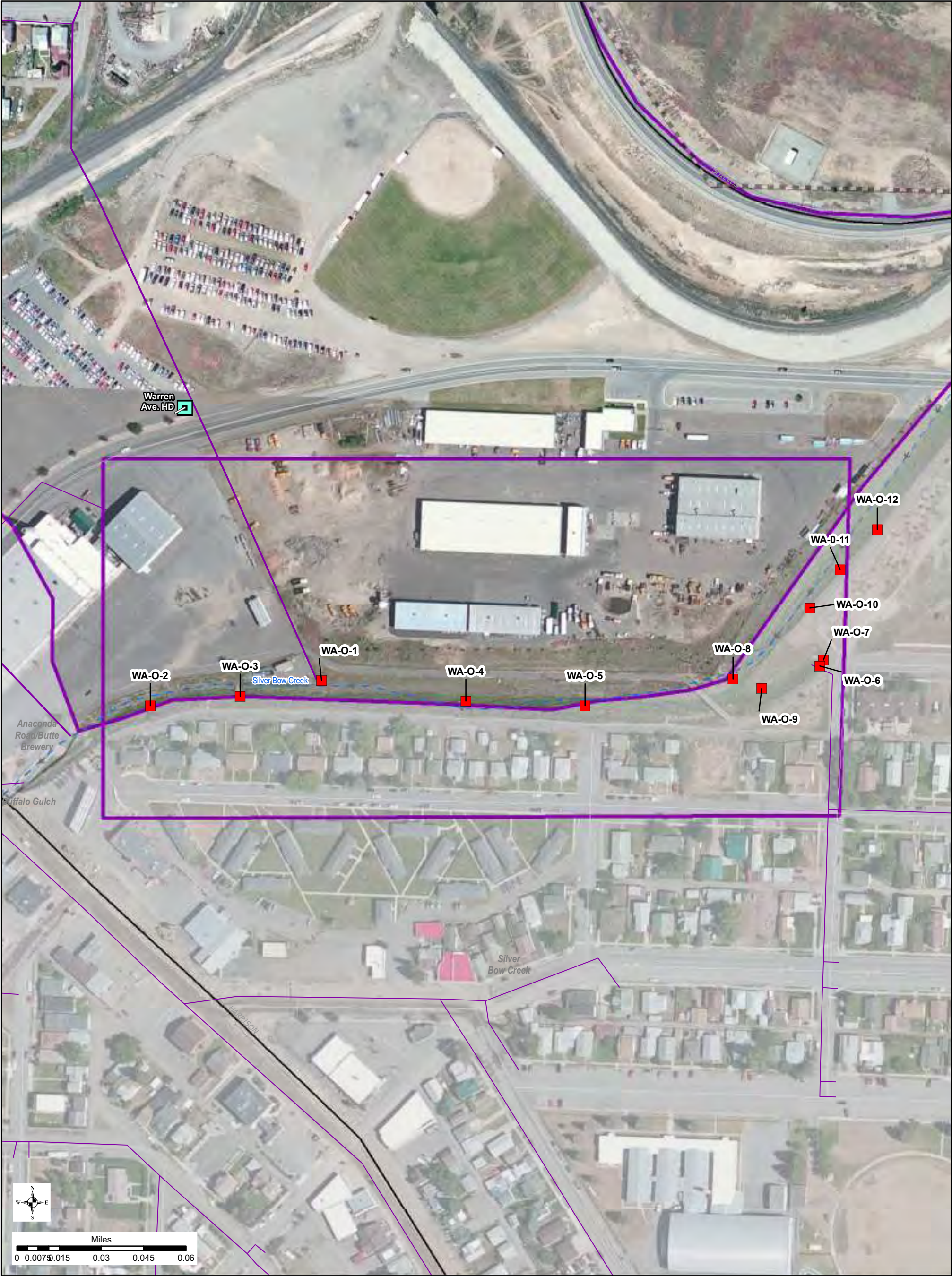
Job#: BSBPWM41 T5

Date: 1/28/2019


**FIGURE 3k**


Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse








Legend


 HDD


 Outfall


 Spiral Wound PVC


 Primary Pipe


 Secondary Pipe


 Ditch


 Sewer District Boundary (MS4 Boundary)


 Urban Limit Boundary

 Perennial Stream

 Intermittent Stream

 Canal Ditch

 Drainage Basin



Warren Avenue

City of Butte  
MS4 Boundary - USGS

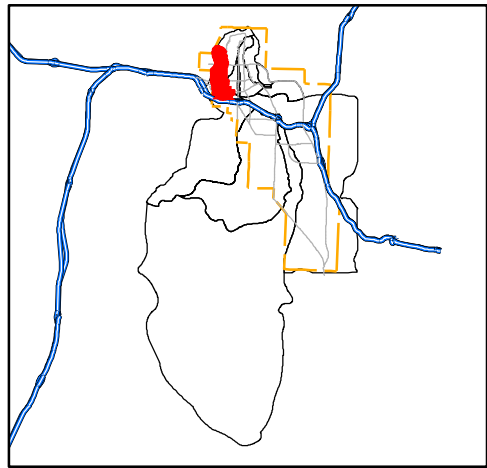
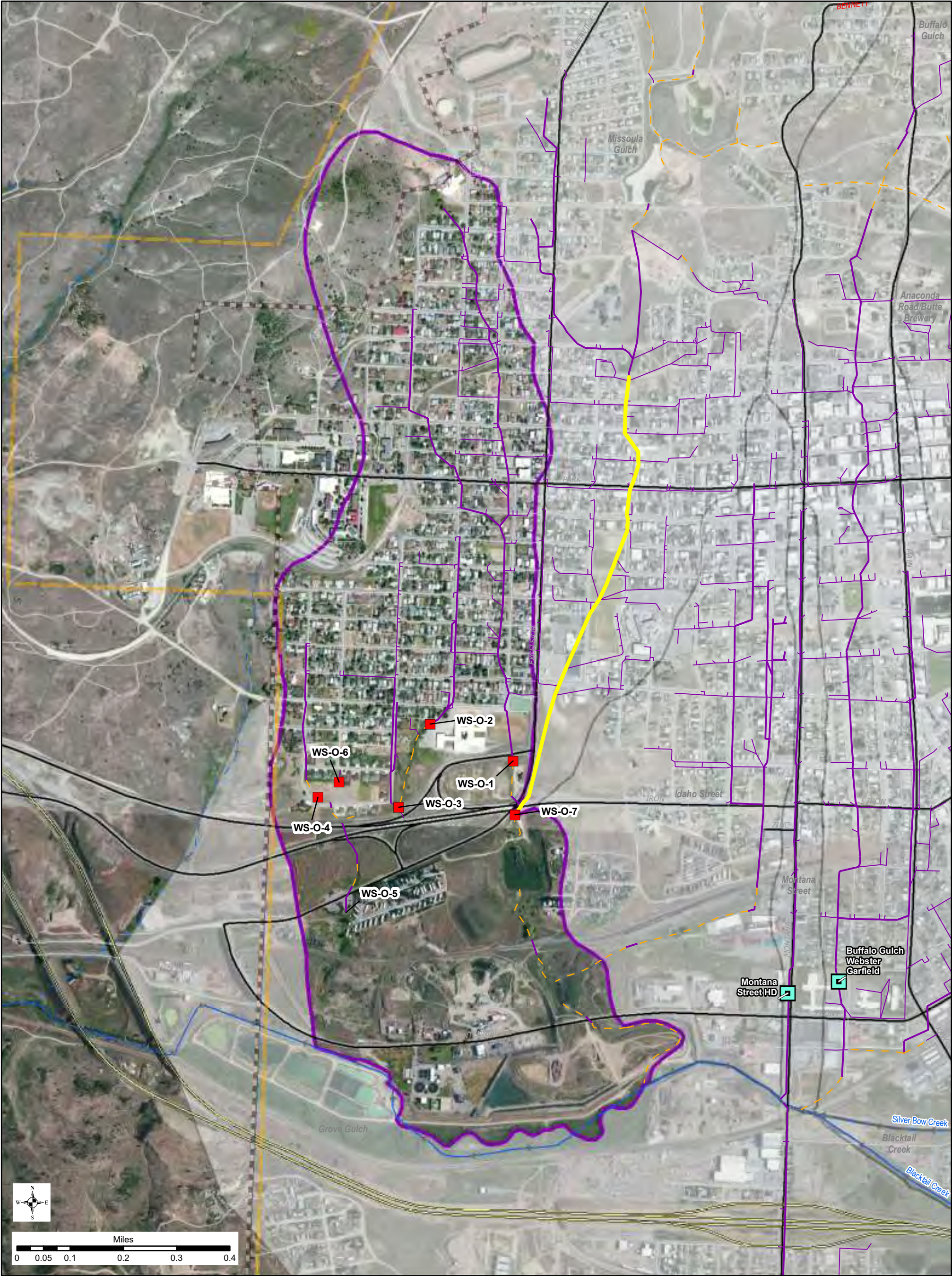
Job#: BSBPWM41 T5

Date: 1/28/2019

FIGURE 3k1

Path: M:\BSBPWM41\2019\_GIS\Fig3a-3f.mxd, Author: jeprowse





**Legend**

- HDD
- Outfall
- Spiral Wound PVC
- Primary Pipe
- Secondary Pipe
- Ditch
- Sewer District Boundary (MS4 Boundary)
- Urban Limit Boundary
- Perennial Stream
- Intermittent Stream
- Canal Ditch

Drainage Basin

**West Side**

**City of Butte**  
**MS4 Boundary - USGS**

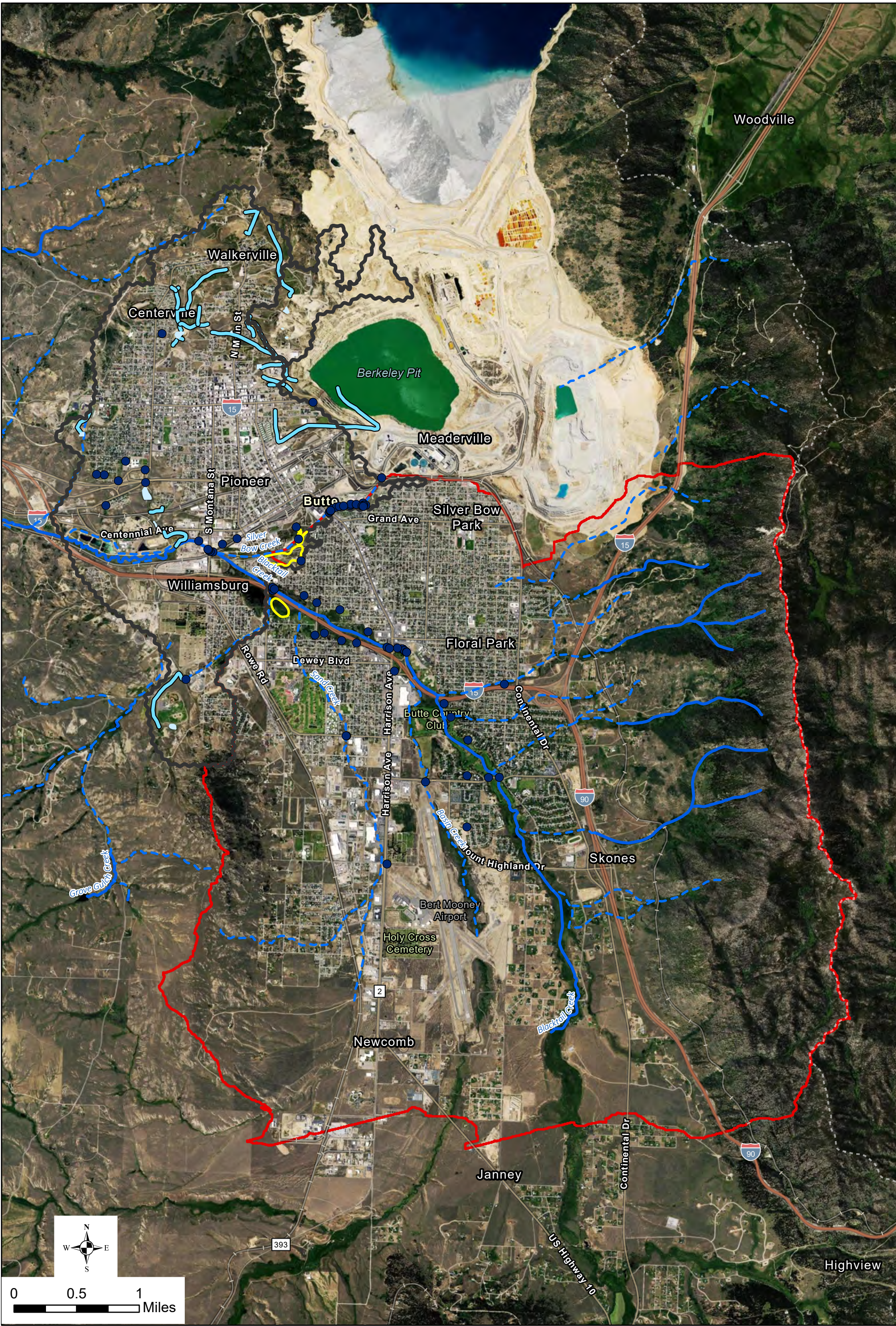
Job#: BSBPWM41 T5

Date: 1/28/2019

**FIGURE 31**

Path: M:\BSBPWM41\2019\_GIS\Fig3a-31.mxd, Author: jeprowse

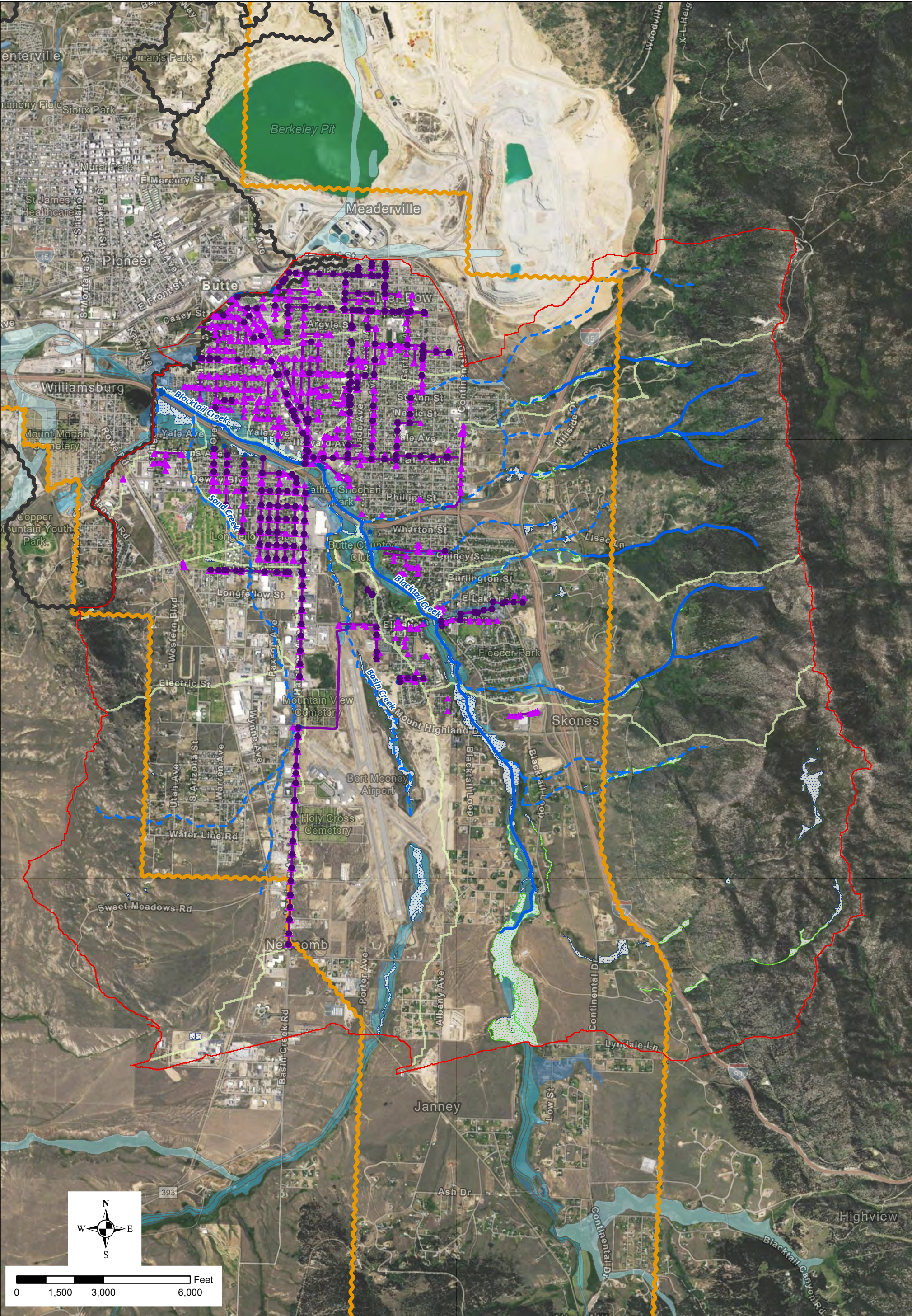




BPSOU Boundary	Proposed Superfund Stormwater Structures
Perennial Stream	Superfund Storm Water Catch Basins
Intermittent Stream	Superfund Storm Water Channels
Flats Master Plan Study Area	
Outfall	

<b>BUTTE SILVER BOW MS4-AREA</b>	
<b>BPSOU Ponds and Features</b>	
Job#: BSBPWM41	<b>Figure3m</b>
Date: 2/17/2022	
<small>\\192.168.1.11\maps\Butte Silver Bow\BSBPWM41\2022\GIS\BSBM41_Maps\BSBM41_Maps.aprx_jhula</small>	

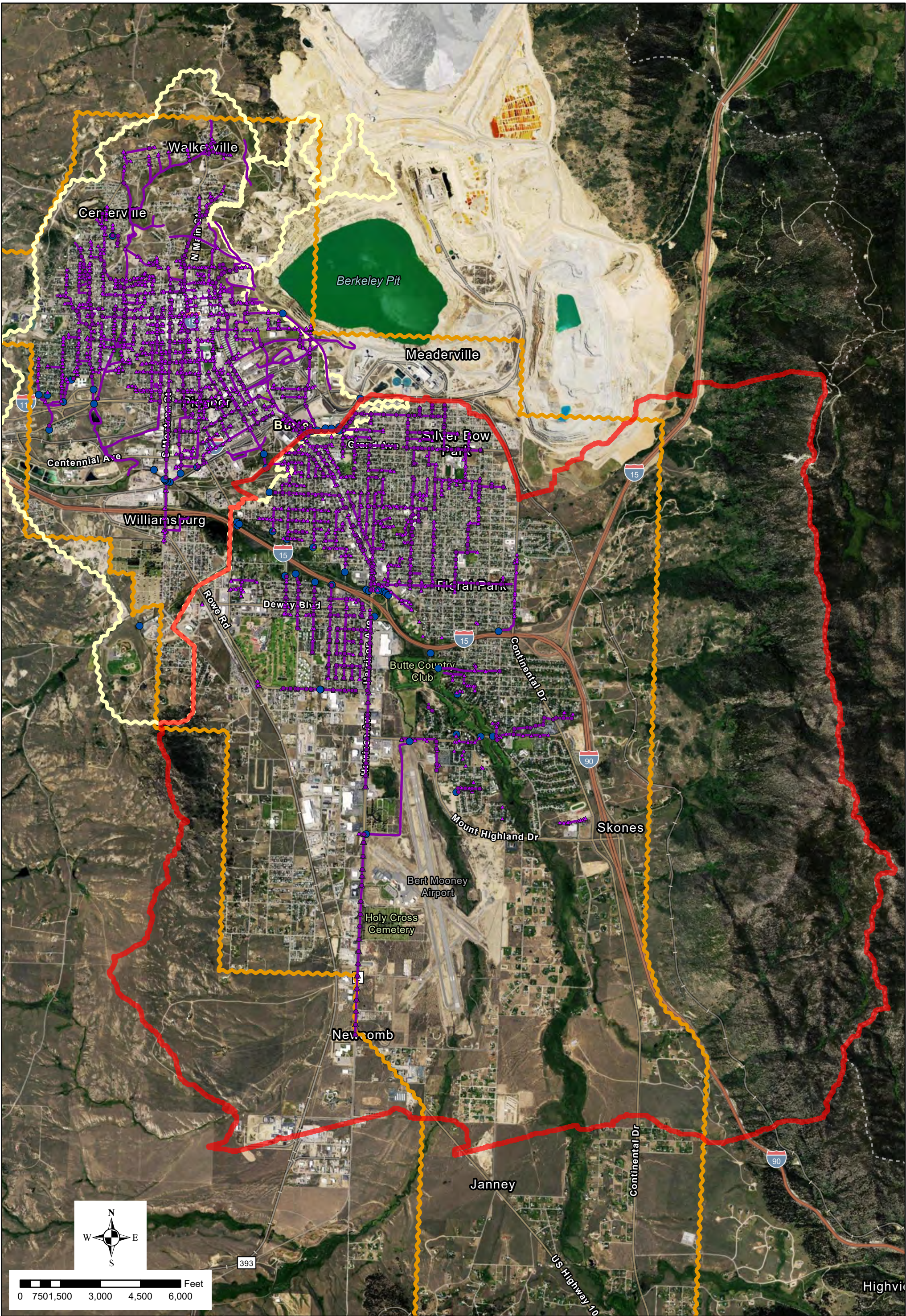





<ul style="list-style-type: none"><li>Inlet</li><li>Manhole</li><li>Outlet</li><li>Stormwater Line</li><li>Perennial Steam</li><li>Intermittent Stream</li></ul>	<ul style="list-style-type: none"><li>Flats Master Plan Study Area</li><li>FLOOD ZONE<ul style="list-style-type: none"><li>0.2 PCT ANNUAL CHANCE FLOOD HAZARD</li><li>A</li><li>AE</li><li>AO</li></ul></li></ul>	<ul style="list-style-type: none"><li>WETLANDS<ul style="list-style-type: none"><li>Freshwater Wetland</li><li>Riparian Wetland</li></ul></li></ul>
--	---	---

	<b>BUTTE SILVER BOW MS4-AREA</b>	
	<i>Hydrology, Wetlands and Floodplain</i>	
	Job#: BSBPWM41	<b>Figure 3n</b>
	Date: 2/17/2022	
<small>\\192.168.1.11\maps\Butte Silver Bow\BSBPWM41\2022\GIS\BSBM41_Maps\BSBM41_Maps.aprx_jhulia</small>		





● Stormwater Manhole	--- BPSOU Boundary
▲ Stormwater Inlet	--- Urban Limit Boundary
● Stormwater Outlet	▭ Flats Master Plan Study Area
— Stormwater Line	

	<b>BUTTE SILVER BOW MS4-AREA</b>	
	<i>Butte-Silver Bow Stormwater System</i>	
	Job#: BSBPWM41	<b>Figure 30</b>
	Date: 2/17/2022	
<small>\\192.168.1.11\maps\Butte Silver Bow\BSBPWM41\2022\GIS\BSBM41_Maps\BSBM41_Maps.aprx_jhulla</small>		



**Appendix F**  
**Sampling Results**

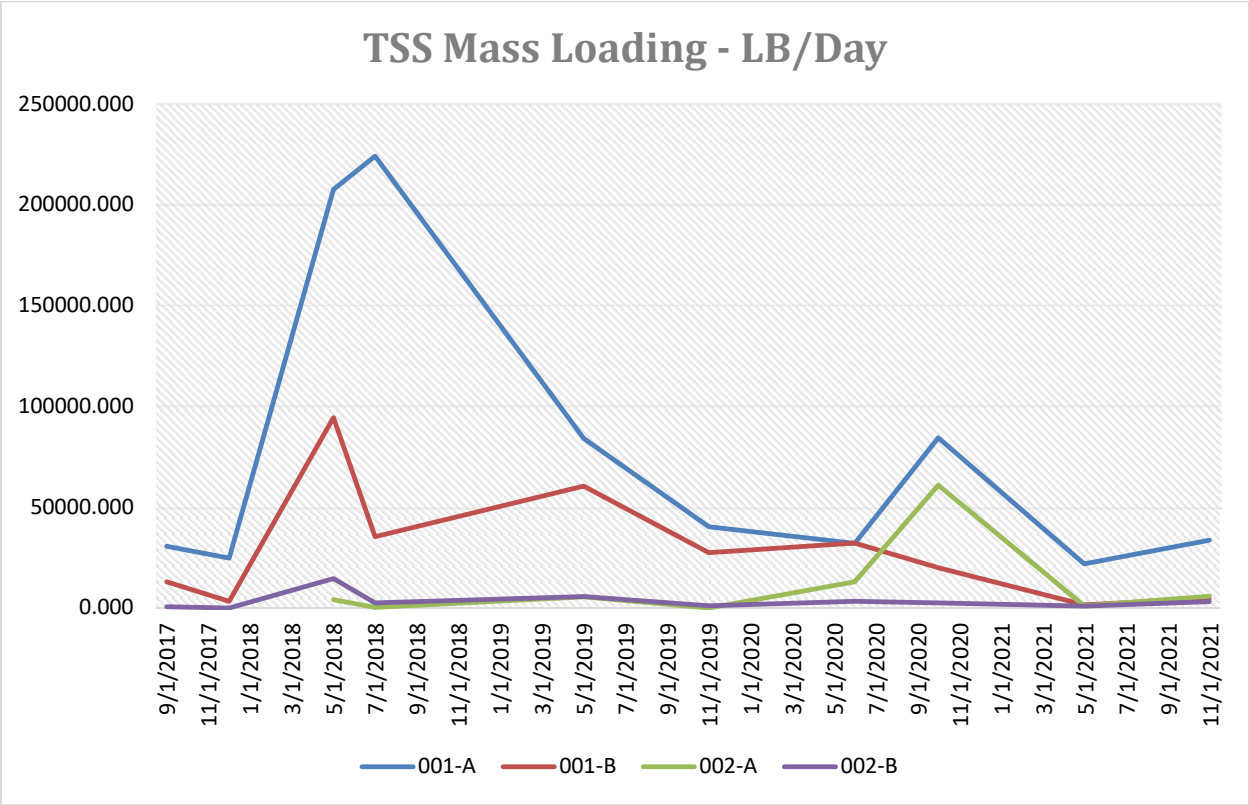
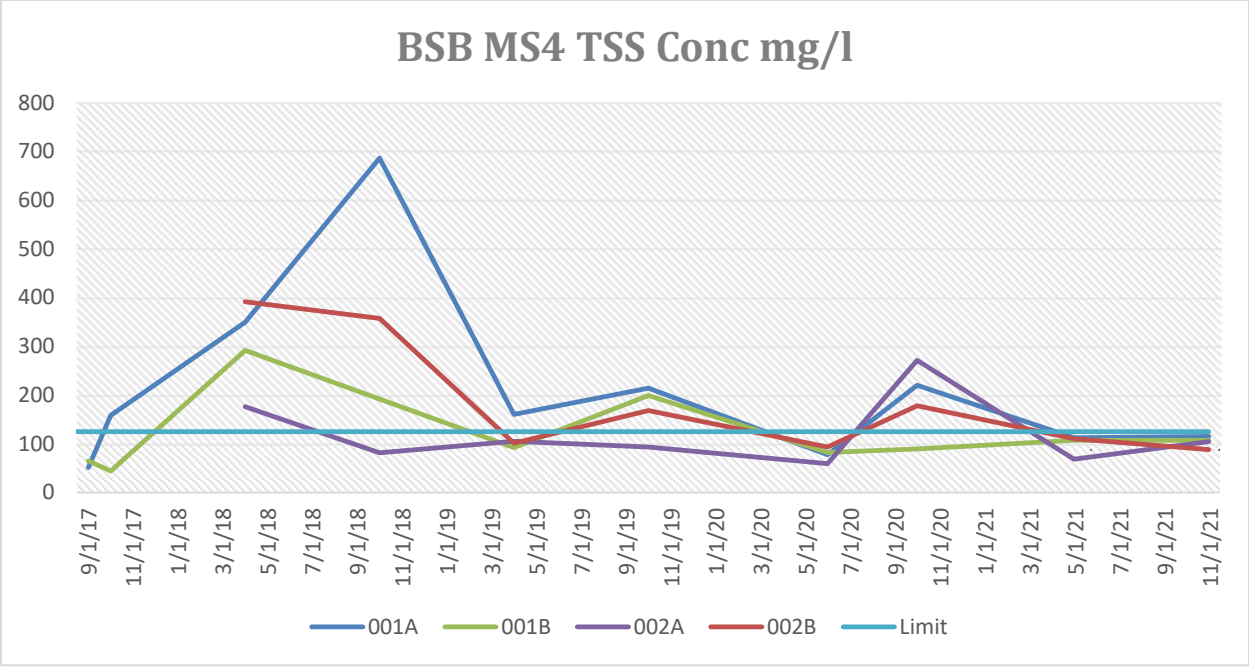


MS4 sampling Site 001-A INDUSTRIAL/COMMERCIAL - WALGREENS																							
Mass Loading calculations																							
Gall to liter 3.78541178      g to lb 0.00220462																							
Sampler	Testing Period	Date	Flow (GPM)	pH (soil Lab)	pH (soil Field)	TSS (mg/L)	TSS Mass Loading (lb/day)	Oil & grease (mg/L)	Oil & grease Mass Loading (lb/day)	Nitrogen (total) (mg/L)	Nitrogen (total) Mass Loading (lb/day)	Phosphorus (total) (mg/L)	Phosphorus (total) Mass Loading (lb/day)	Zinc (mg/L)	Zinc Mass Loading (lb/day)	Lead (mg/L)	Lead Mass Loading (lb/day)	Copper (mg/L)	Copper Mass Loading (lb/day)	Chemical O <sub>2</sub> Demand (mg/L)	Chemical O <sub>2</sub> Demand Mass Loading (lb/day)	Data Source	
	Maximum					125	16.0	16.0	0.410	2.0	2.0	0.410	0.410	0.11	0.11	0.165	0.165	0.04	0.04	80	80		
BSM Metrics	January to July 2012			No Sample		No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample		
WET	July to December 2017	9/15/2017	49,821.6	7.2	7.1	51	10514.943	1	198.724	658.9569	0.237	103.872	0.09	53.885	0.0124	7.424	0.089	29.337	0.02	12120.911	0.1		
WET	July to December 2017 (2)	11/29/2017	12,918.1	7.4	7.4	118	24604.078	3	440.166	485.1769	0.449	69.919	0.17	26.471	0.013	2.024	0.017	5.762	0.117	18219.476	117		
WET	January to July 2018	5/22/2018	49,395.9	7.6	7.6	100	207783.245	2	1187.219	1363.9013	0.617	378.129	0.18	146.211	0.045	26.712	0.117	69.452	0.14	10024.108	184		
WET	July to December 2018	7/17/2018	27,139.4	7.1		688	224386.985	2	652.288	1587.5826	0.136	50.878	0.05	198.948	0.052	16.959	0.278	74.361	0.15	245802.237	815		
WET	January to July 2019	11/15/2019	20,956.7	7.4		160	40214.444	3	231.964	802.3569	0.336	68.660	0.17	42.824	0.03	2.928	0.021	22.929	0.05	18892.304	75		
WET	July to December 2019	5/21/2019	32,720.7	7.6	7.49	214	84122.637	2	786.193	943.4314	0.504	149.377	0.18	20.598	0.0524	26.598	0.185	72.723	0.03	110460.099	201		
WET	January to July 2020	6/8/2020	34,642.8	8.0	7.86	77	32056.293	<1	<289	249.7893	0.22	10.589	0.076	31.440	0.0162	6.744	0.04	18.318	0.11	12955.780	31		
WET	July to January 2020	10/15/2020	31,947.8	7.6	7.47	120	84448.126	2	797.857	767.8566	0.61	234.456	0.16	61.429	0.051	13.437	0.138	60.661	0.05	28784.623	75	Energy Labs	
WET	January to July 2021	5/26/2021	18,316.8	7.3	7.25	112	196181.484	1	196.085	2.6	411.7778	0.29	36.865	0.15	29.413	0.019	3.726	0.048	11.765	0.04	16078.944	80	
WET	July to December 2021	11/29/2021	24,321.6	7.5	7.7	115.0	33612.227	2	584.562	1462.9493	0.37	168.144	0.21	61.379	0.018	5.261	0.059	27.182	0.06	51441.475	116		

Sampling Site 001-B INDUSTRIAL/COMMERCIAL - BUFFALO GULCH																							
Sampler	Testing Period	Date	Flow (GPM)	pH (soil Lab)	pH (soil Field)	TSS (mg/L)	TSS Mass Loading (lb/day)	Oil & grease (mg/L)	Oil & grease Mass Loading (lb/day)	Nitrogen (total) (mg/L)	Nitrogen (total) Mass Loading (lb/day)	Phosphorus (total) (mg/L)	Phosphorus (total) Mass Loading (lb/day)	Zinc (mg/L)	Zinc Mass Loading (lb/day)	Lead (mg/L)	Lead Mass Loading (lb/day)	Copper (mg/L)	Copper Mass Loading (lb/day)	Chemical O <sub>2</sub> Demand (mg/L)	Chemical O <sub>2</sub> Demand Mass Loading (lb/day)	Data Source	
	Maximum		9.0			125		10.0		2.0		0.410		0.21		0.165		0.04		80			
BSM Metrics	January to July 2012			No Sample		No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample		
WET	July to December 2017	9/15/2017	16,550.8	7.3		81	12708.302	2	397.784	133.072	0.1	38.272	0.034	41.133	0.014	6.145	0.009	11.335	0.01	14506.141	29		
WET	July to December 2017 (2)	11/29/2017	6,000.5	7		44	3090.127	1	477.631	231.406	0.497	36.211	0.02	50.810	0.004	7.585	0.012	15.461	0.03	29912.414	779		
WET	January to July 2018	5/22/2018	26,835.6	7.8		292	94519.120	3	971.087	151.913	0.587	100.009	0.469	194.217	0.122	58.913	0.138	44.670	0.111	48878.038	111		
WET	July to December 2018	7/17/2018	13,140.8	7.1		102	31396.444	1	184.164	1437.981	0.098	16.067	0.17	113.519	0.136	7.129	0.106	80748.137	0.16	30403	438		
WET	January to July 2019	11/15/2019	24,761.3	7.5		3	27376.067	3	892.698	102.383	0.344	351.079	0.08	104.148	0.086	25.593	0.077	22.913	0.01	27673.633	31		
WET	July to December 2019	5/21/2019	21,243.6	7.6	7.94	109	60166.272	1	910.031	144.085	0.25	144.085	0.05	107.078	0.0812	24.831	0.124	7.614	0.05	17150.871	105		
WET	January to July 2020	6/8/2020	39,629.2	7.8	7.71	82	37153.632	<1	784.203	0.7	274.482	98.029	0.30	103.026	0.146	57.265	0.033	20.782	0.03	12330.875	33		
WET	July to January 2020	10/15/2020	18,641.8	7.6	7.42	89	19938.209	<1	9VALU81	1.8	403.245	0.38	85.129	0.70	156.817	0.085	19.042	0.085	19.042	59	13212.464	59	
WET	January to July 2021	5/26/2021	1,155.5	7.3	7.36	107	1445.806	2	27.772	30.149	0.34	7.723	0.78	30.831	0.077	1.009	0.095	1.319	0.05	1041.653	75		
WET	July to December 2021	11/29/2021	7,877.1	7.4	7.8	48.0	4601.445	1	95.863	2.2	210.900	0.32	30.676	0.21	20.131	0.02	1.917	0.041	3.930	0.01	8148.392	85	

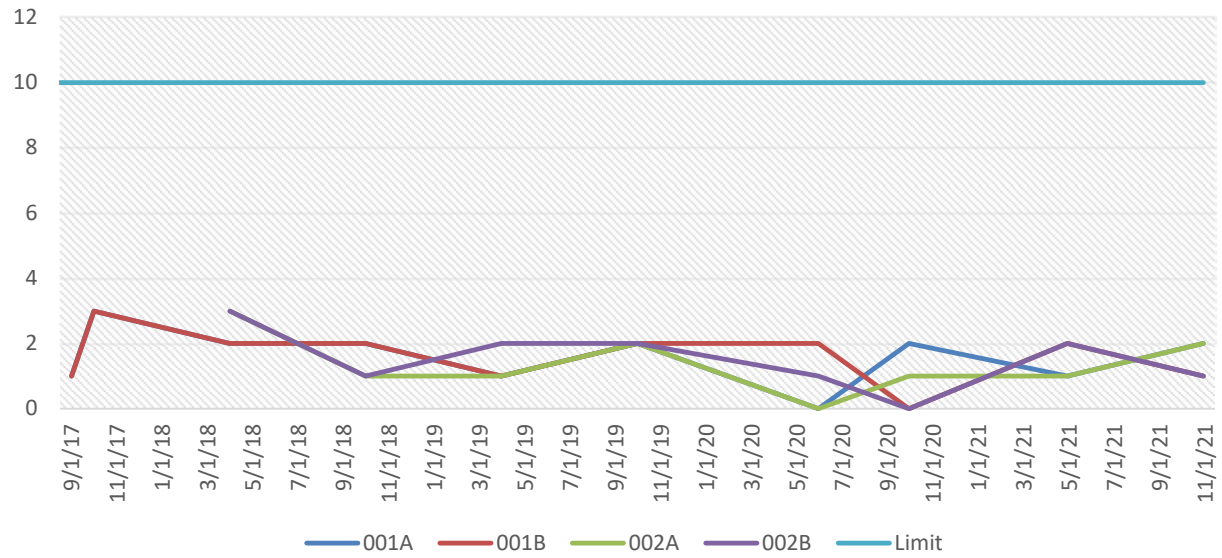
MS4 sampling Site 002-A RESIDENTIAL - INTERSECTION OF THOMAS AND CORNELL AVENUES																							
Sampler	Testing Period	Date	Flow (GPM)	pH (soil Lab)	pH (soil Field)	TSS (mg/L)	TSS Mass Loading (lb/day)	Oil & grease (mg/L)	Oil & grease Mass Loading (lb/day)	Nitrogen (total) (mg/L)	Nitrogen (total) Mass Loading (lb/day)	Phosphorus (total) (mg/L)	Phosphorus (total) Mass Loading (lb/day)	Zinc (mg/L)	Zinc Mass Loading (lb/day)	Lead (mg/L)	Lead Mass Loading (lb/day)	Copper (mg/L)	Copper Mass Loading (lb/day)	Chemical O <sub>2</sub> Demand (mg/L)	Chemical O <sub>2</sub> Demand Mass Loading (lb/day)	Data Source	
	Maximum		9.0	165	165	10.0	10.0	10.0	10.0	2.0	2.0	0.410	0.410	0.21	0.21	0.165	0.165	0.04	0.04	80	80		
WET	July to December 2017	9/15/2017				2	0.000	1.7	0.000	1.7	0.000	0.293	0.000	0.242	0.000	0.014	0.000	0.000	0.000	0.000	0.000		
WET	July to December 2017 (2)	11/29/2017				6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.000	0.004	0.000	0.000	0.000	0.000	0.000		
WET	January to July 2018	5/22/2018	1,877.9	7.1		176	3971.788	3	67.701	42.877	0.396	8.937	0.131	0.956	0.0219	0.494	0.075	1.699	0.05	3023.975	85		
WET	July to December 2018	7/17/2018	146.3	7.2		81	142.440	1	1.79	9.350	0.058	0.102	0.016	0.193	0.009	0.016	0.009	0.149	0.009	543.361	39		
WET	January to July 2019	11/15/2019	20.4	7.3		105	57.716	0.245	0.318	0.366	0.090	0.090	0.14	0.034	0.026	0.005	0.130	0.036	0.031	24.032	30		
WET	July to December 2019	5/21/2019	4,813.7	7.3	7.17	93	5179.884	2	117.696	2.2	127.266	0.139	19.611	0.122	7.057	0.046	0.845	0.093	5.180	0.117	9582.170	117	
WET	January to July 2020	6/8/2020	18,116.8	7.7	7.86	59	12987.043	<1	<0.153	0.6	133.072	0.1	44.024	0.05	13.096	0.003	1.981	0.003	7.264	0.01	1831.462	29	
WET	July to January 2020	10/15/2020	18,641.8	8.0	7.37	272	60934.751	3	224.023	2.8	448.095	0.71	158.008	0.18	40.324	0.11	73.928	0.106	23.742	0.03	28074.556	109	
WET	January to July 2021	5/26/2021	1,155.5	7.3	7.43	88	945.260	1	11.881	1.8	245.995	0.27	1.128	0.11	1.927	0.015	0.108	0.012	0.122	67	330.864	67	
WET	July to December 2021	11/29/2021	4,606.6	7.6	7.7	104.0	5757.373	2	110.119	2.1	110.119	0.33	18.269	0.21	11.623	0.014	0.079	0.019	4.373	0.01	1155.371	109	

MS4 sampling Site 002-B RESIDENTIAL - C STREET AT LOWELL ST INTERSECTION																							
Sampler	Testing Period	Date	Flow (GPM)	pH (soil Lab)	pH (soil Field)	TSS (mg/L)	TSS Mass Loading (lb/day)	Oil & grease (mg/L)	Oil & grease Mass Loading (lb/day)	Nitrogen (total) (mg/L)	Nitrogen (total) Mass Loading (lb/day)	Phosphorus (total) (mg/L)	Phosphorus (total) Mass Loading (lb/day)	Zinc (mg/L)	Zinc Mass Loading (lb/day)	Lead (mg/L)	Lead Mass Loading (lb/day)	Copper (mg/L)	Copper Mass Loading (lb/day)	Chemical O <sub>2</sub> Demand (mg/L)	Chemical O <sub>2</sub> Demand Mass Loading (lb/day)	Data Source	
	Maximum		9.0			125	10.0	10.0	10.0	2.0	2.0	0.410	0.410	0.21	0.21	0.165	0.165	0.04	0.04	80	80		
WET	January to July 2012	6/8/2020	18,316.8	7.2	7.86	59	0.2	1,287,043	0.5	<1	132,072	0.2	44,024	0.05	0.009	1.981	0.009	0.033	7,264	29	6385,462		
WET	July to January 2020	10/15/2020	2,011.1	8.0	7.37	272	0.2	657,613	1	24,568	48,335	0.71	17,159	0.18	4,350	0.33	7,975	0.156	2,562	103	2489,273		
WET	5/20/2021 to January 2021	5/20/2021	22.1	7.2	7.43	68	0.265	18,027	0.11	0.477	0.27	0.072	0.11	0.029	0.004	0.015	0.004	0.052	0.014	67	17,762		
WET	July to December 2021	11/29/2021	4,656.6	7.6	7.7	104.9	0.2	575,373	2.0	110,719	2.2	121,791	0.3	18,209	0.2	11,625	0.0	0.775	0.1	4,373	169.0	9355,731	

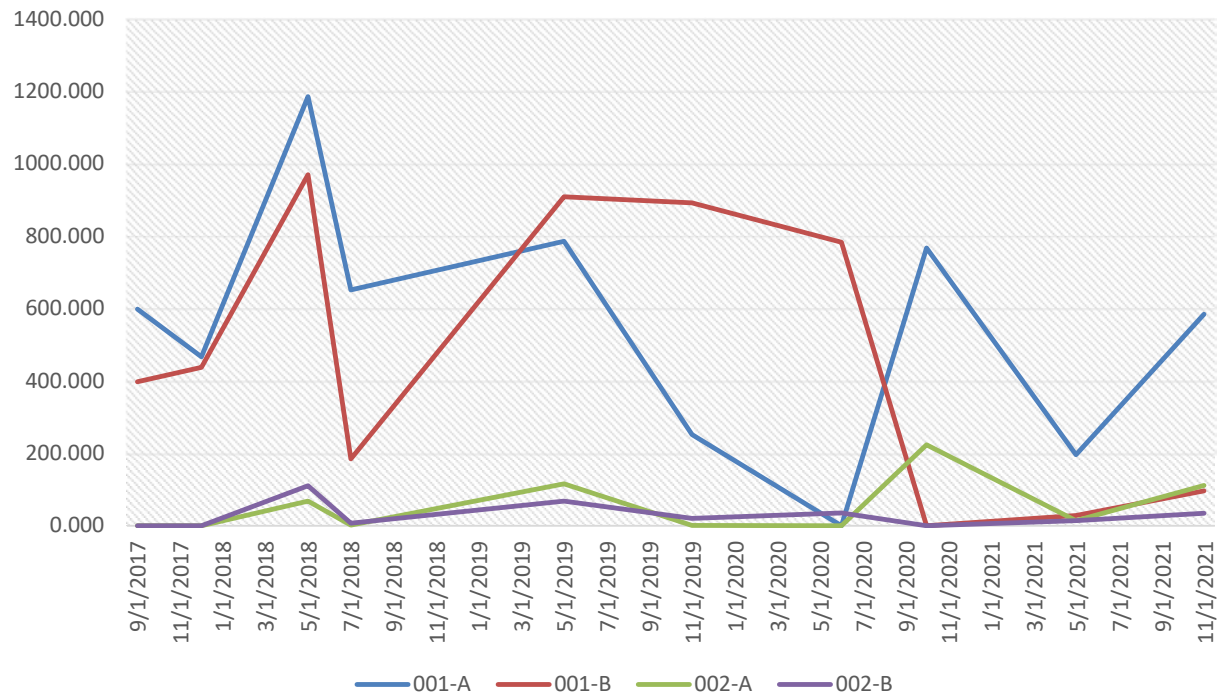




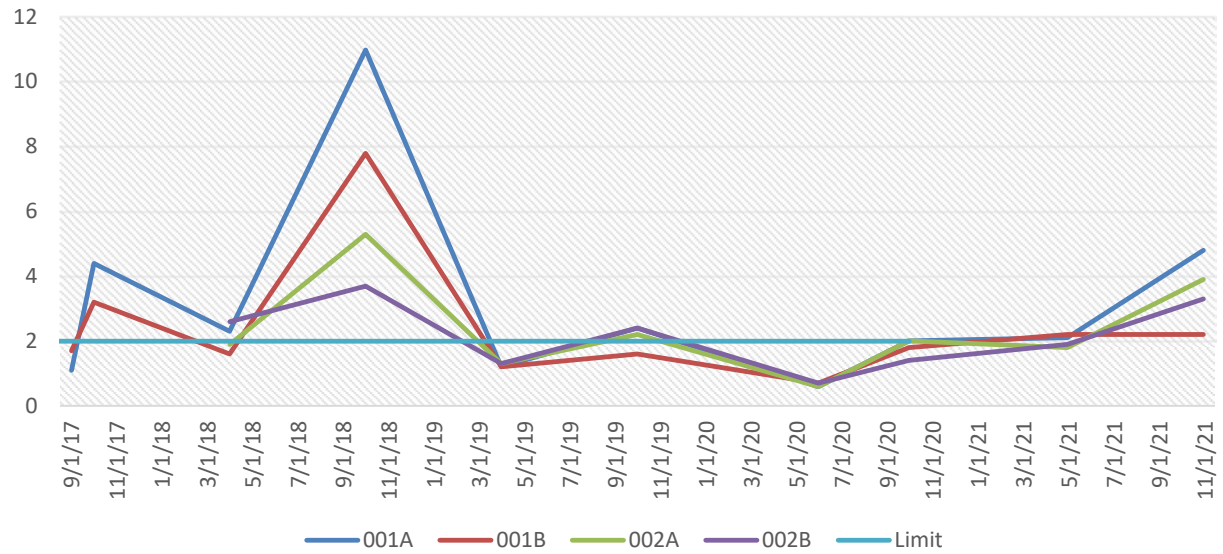
## BSB MS4 Oil & Grease Conc mg/l



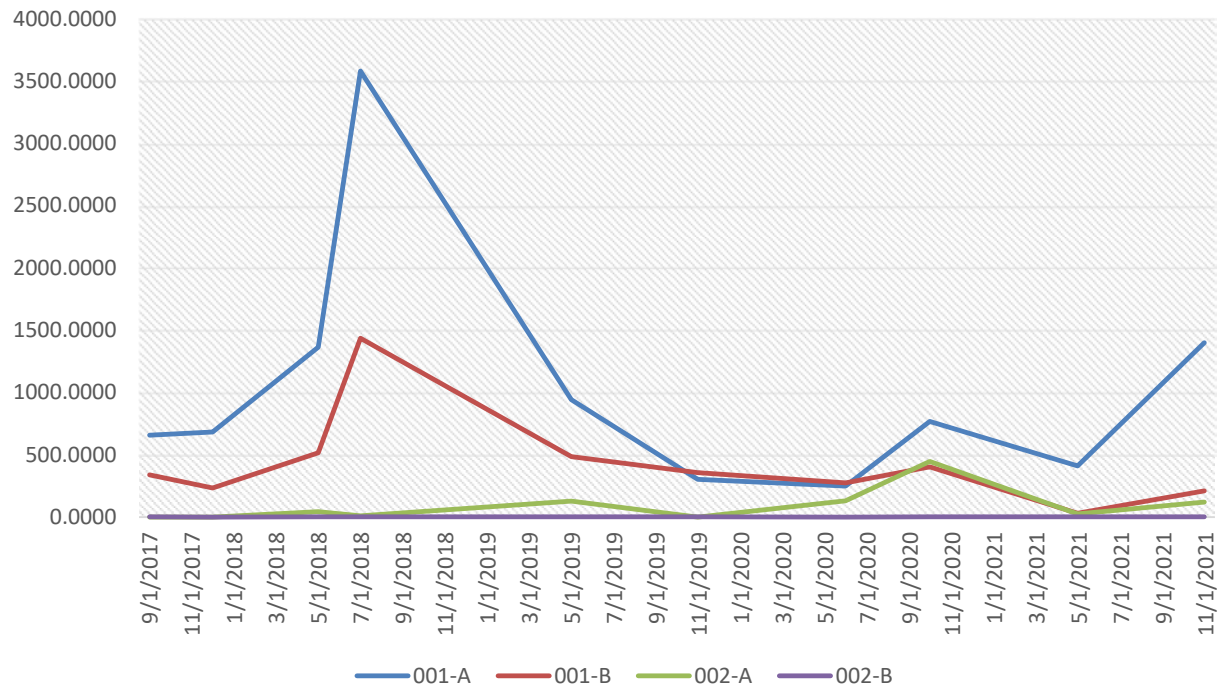
## Oil & Grease Mass Loading - LB/Day



BSB MS4 Nitrogen (Total) Conc mg/l

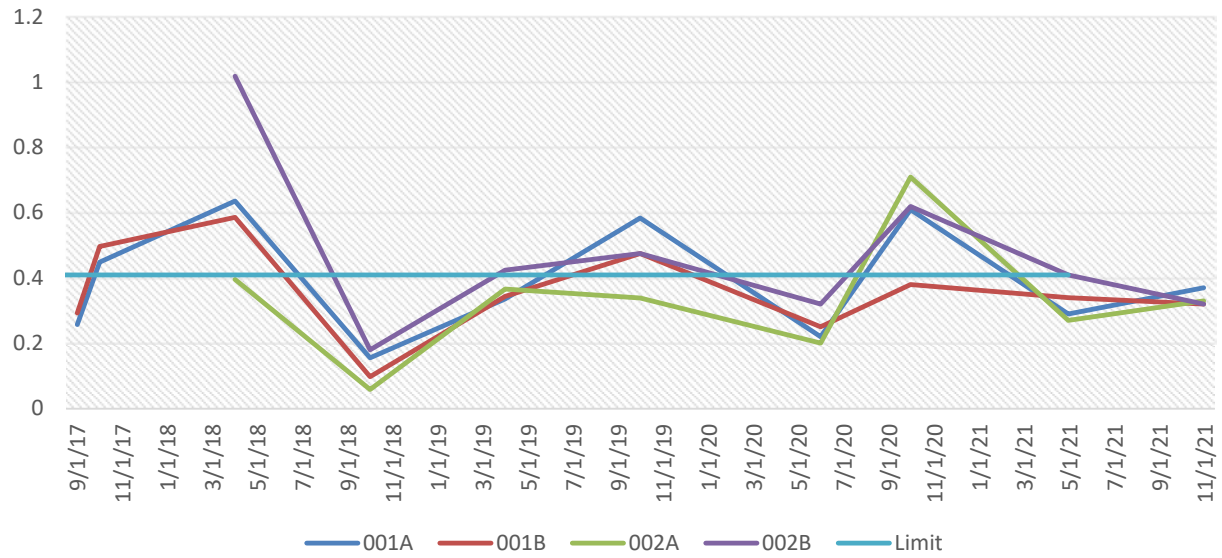


Nitrogen Mass Loading - LB/Day

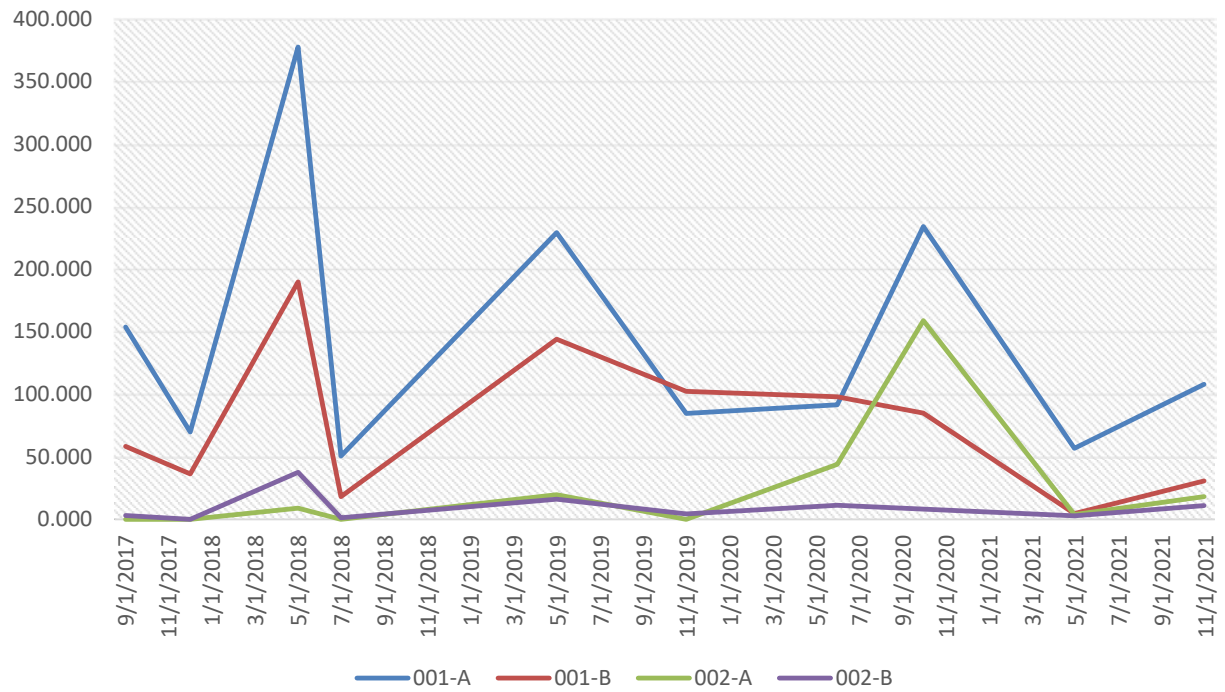




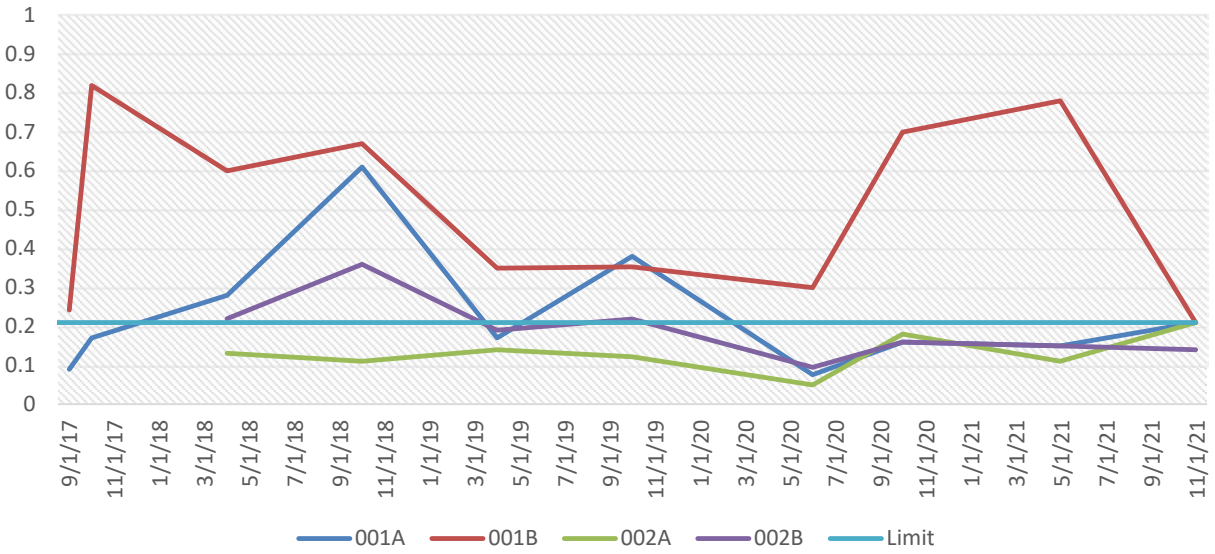
### BSB MS4 Phosphorus (Total) Conc mg/l



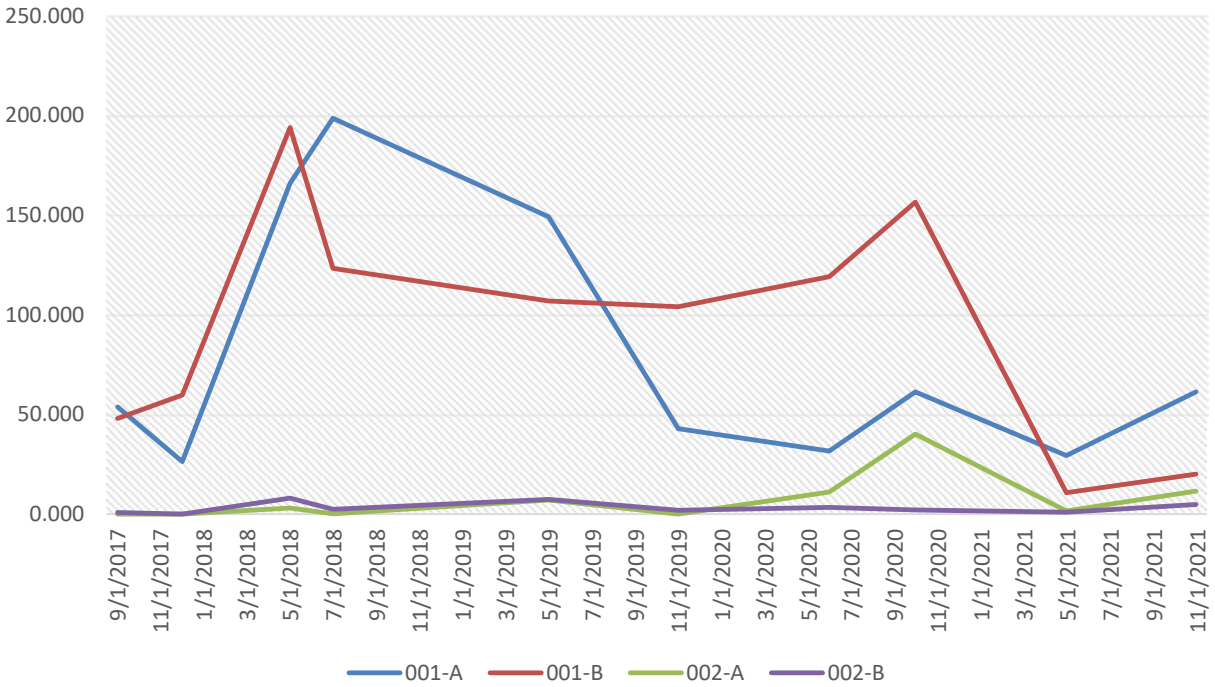
### Phosphorus Mass Loading - LB/Day



BSB MS4 Zinc Conc mg/l

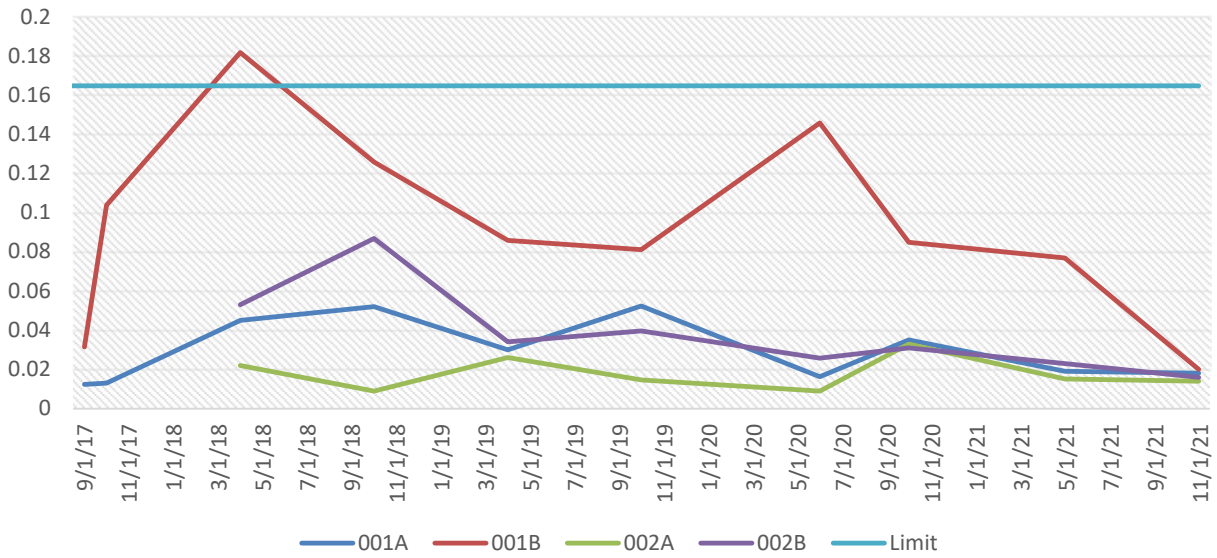


Zinc Mass Loading - LB/Day

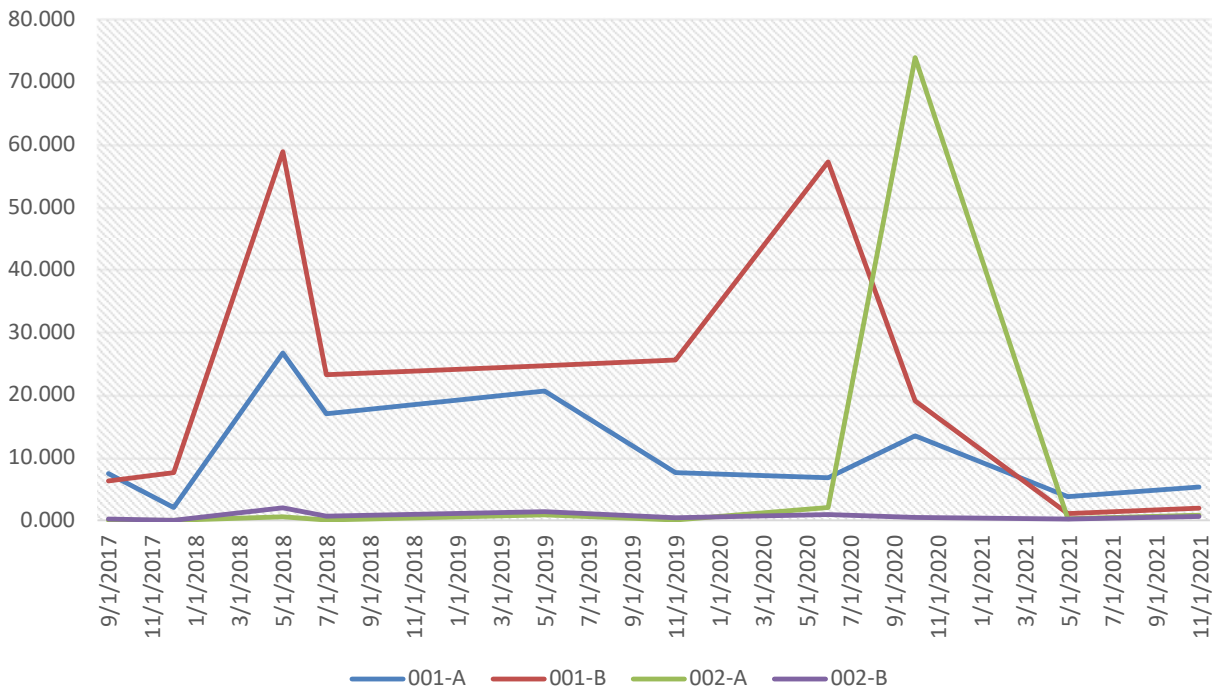




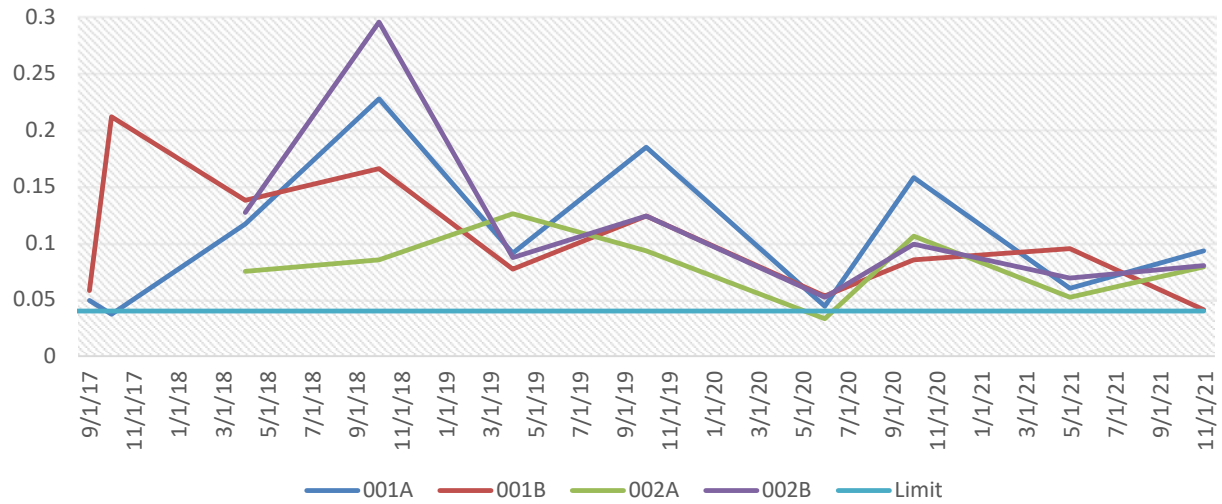
### BSB MS4 Lead Conc mg/l



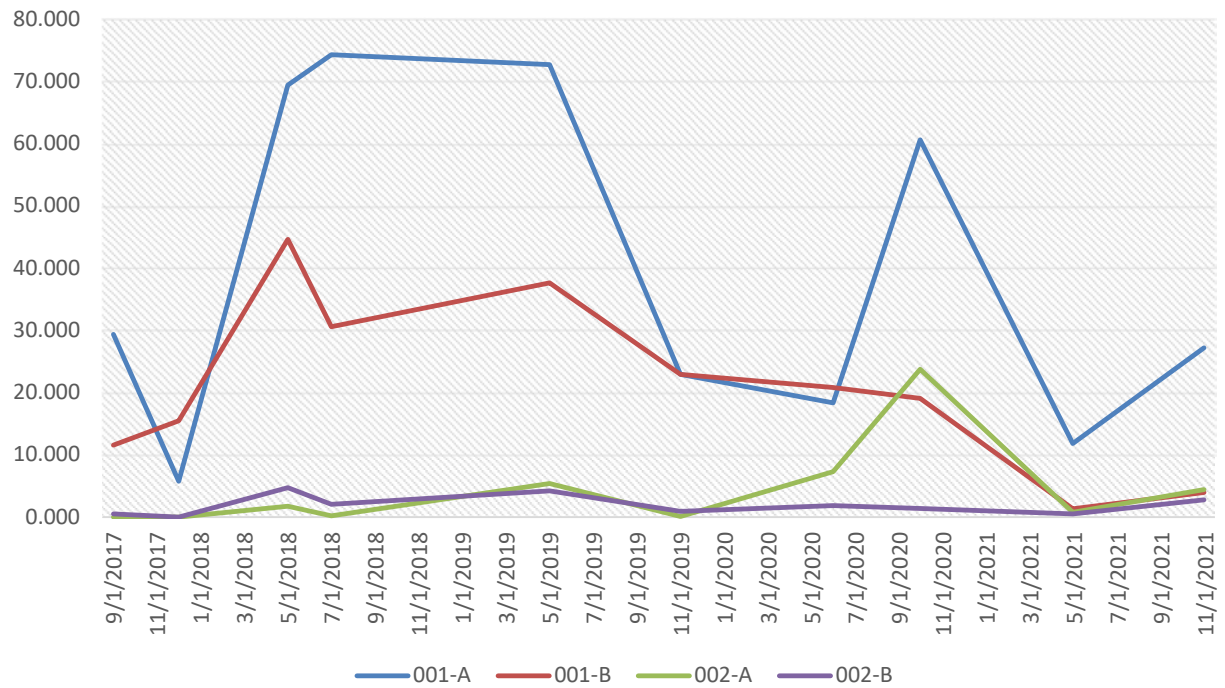
### Lead Mass Loading - LB/Day



### BSB MS4 Copper Conc mg/l

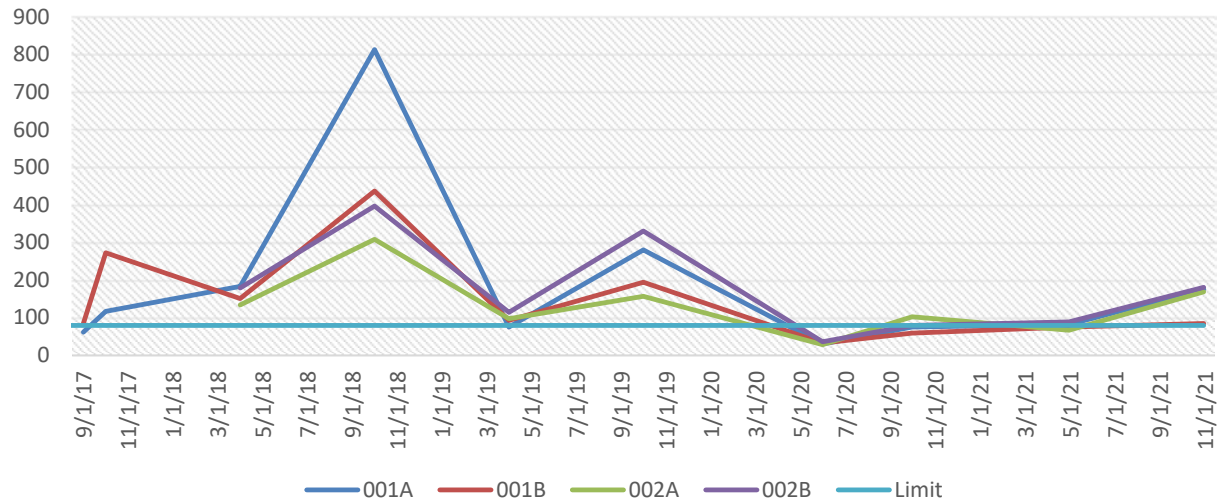


### Copper Mass Loading - LB/Day

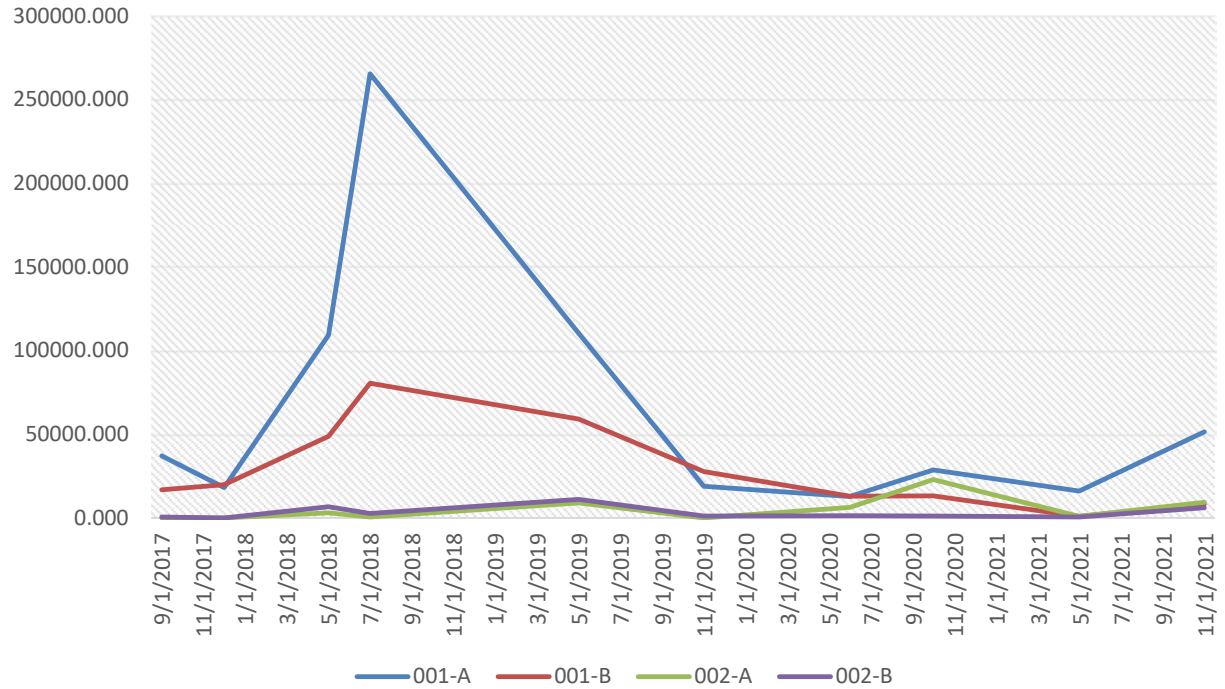




BSB MS4 COD Conc mg/l



COD Mass Loading - LB/Day



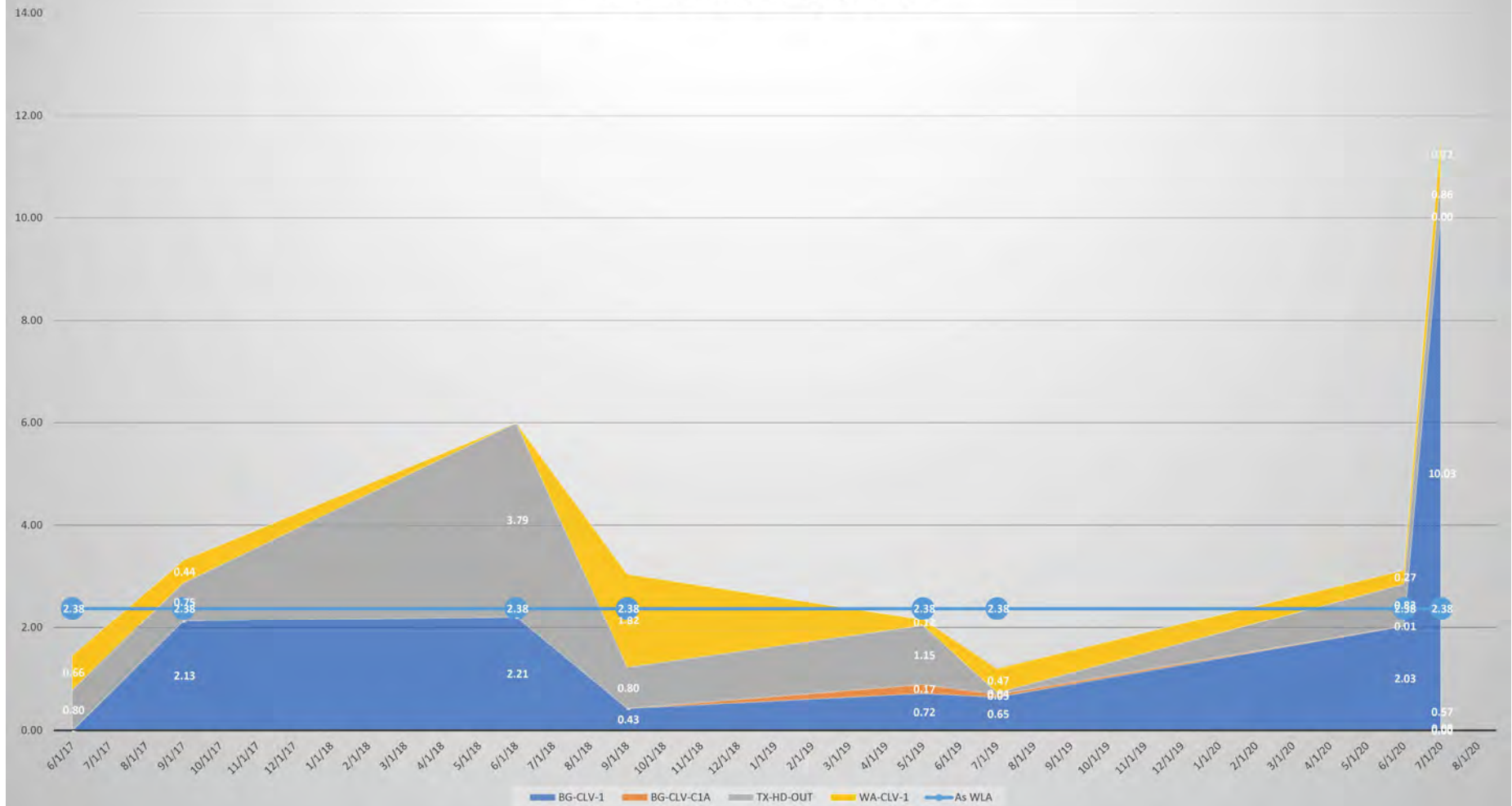
### TMDL-Related Monitoring - Silver Bow Creek (Arco Sampling Results)

Testing Period	Sample Date	Arsenic (mg/l)	Cadmium (mg/l)	Copper (mg/L)	Mercury (mg/L)	Lead (mg/L)	Zinc (mg/L)	TSS (mg/L)
BG-CLV-1 West Buffalo Gulch								
January to July 2017	6/4/17	0.017	0.0020	0.18	0.00012	0.11	0.73	0.10
July to December 2017	9/30/17	0.041	0.0043	0.31	0.00025	0.30	1.36	2.46
January to July 2018	6/28/18	0.041	0.0037	0.29	0.00039	0.27	1.10	0.49
July to December 2018	9/20/18	0.006	0.0003	0.03	0.00005	0.02	0.12	0.02
January to July 2019	5/17/19	0.046	0.0039	0.42	0.00031	0.36	1.81	1.29
July to December 2019	7/8/19	0.046	0.0046	0.37	0.00053	0.30	1.70	0.62
January to July 2020	6/27/20	0.132	0.0104	1.16	0.00087	1.45	4.83	2.38
July to December 2020	7/10/20	0.166	0.0143	1.45	0.00139	2.09	5.80	2.91
BG-CLV-C1A East Buffalo Gulch								
January to July 2019	5/17/19	0.057	0.0049	0.64	0.00048	0.34	1.94	0.88
July to December 2019	7/8/19	0.037	0.0032	0.40	0.00038	0.17	1.26	0.30
January to July 2020	6/27/20	0.150	0.0078	2.54	0.00046	0.67	3.10	2.76
July to December 2020	7/10/20	0.065	0.0027	0.81	0.00040	0.21	1.01	0.98
TX-HD-OUT Texas Ave. (Greely area)								
January to July 2017	5/12/17	0.090	0.0038	1.52	0.00022	0.25	1.45	0.72
July to December 2017	9/14/17	0.045	0.0019	0.83	0.00019	0.12	0.67	0.58
January to July 2018	6/10/18	0.053	0.0018	0.68	0.00034	0.11	0.66	0.48
July to December 2018	8/27/18	0.022	0.0008	0.20	0.00022	0.02	0.20	0.09
January to July 2019	6/16/19	0.083	0.0054	2.30	0.00019	0.34	1.90	1.80
July to December 2019	8/10/19	0.018	0.0004	0.20	0.00015	0.02	0.19	0.13
January to July 2020	6/27/20	0.087	0.0032	1.54	0.00046	0.23	1.23	1.29
July to December 2020	7/10/20	0.052	0.0026	1.14	0.00020	0.18	0.93	0.88
WA-CLV-1 Warren Ave. & Anaconda Rd								
January to July 2017	4/24/17	0.116	0.0095	0.95	0.00024	0.37	1.64	0.56
July to December 2017	8/13/17	0.094	0.0060	0.99	0.00054	0.36	1.46	0.39
January to July 2018	5/4/18	0.042	0.0035	0.16	0.00012	0.03	0.34	0.00
July to December 2018	9/17/18	0.101	0.0055	0.84	0.00072	0.35	1.34	0.39
January to July 2019	5/25/19	0.109	0.0087	0.77	0.00100	0.36	1.57	0.52
July to December 2019	7/8/19	0.077	0.0062	0.78	0.00072	0.30	1.42	0.51
January to July 2020	6/27/20	0.070	0.0032	0.67	0.00083	0.22	0.98	0.34
July to December 2020	7/10/20	0.083	0.0034	0.74	0.00056	0.15	0.95	0.30

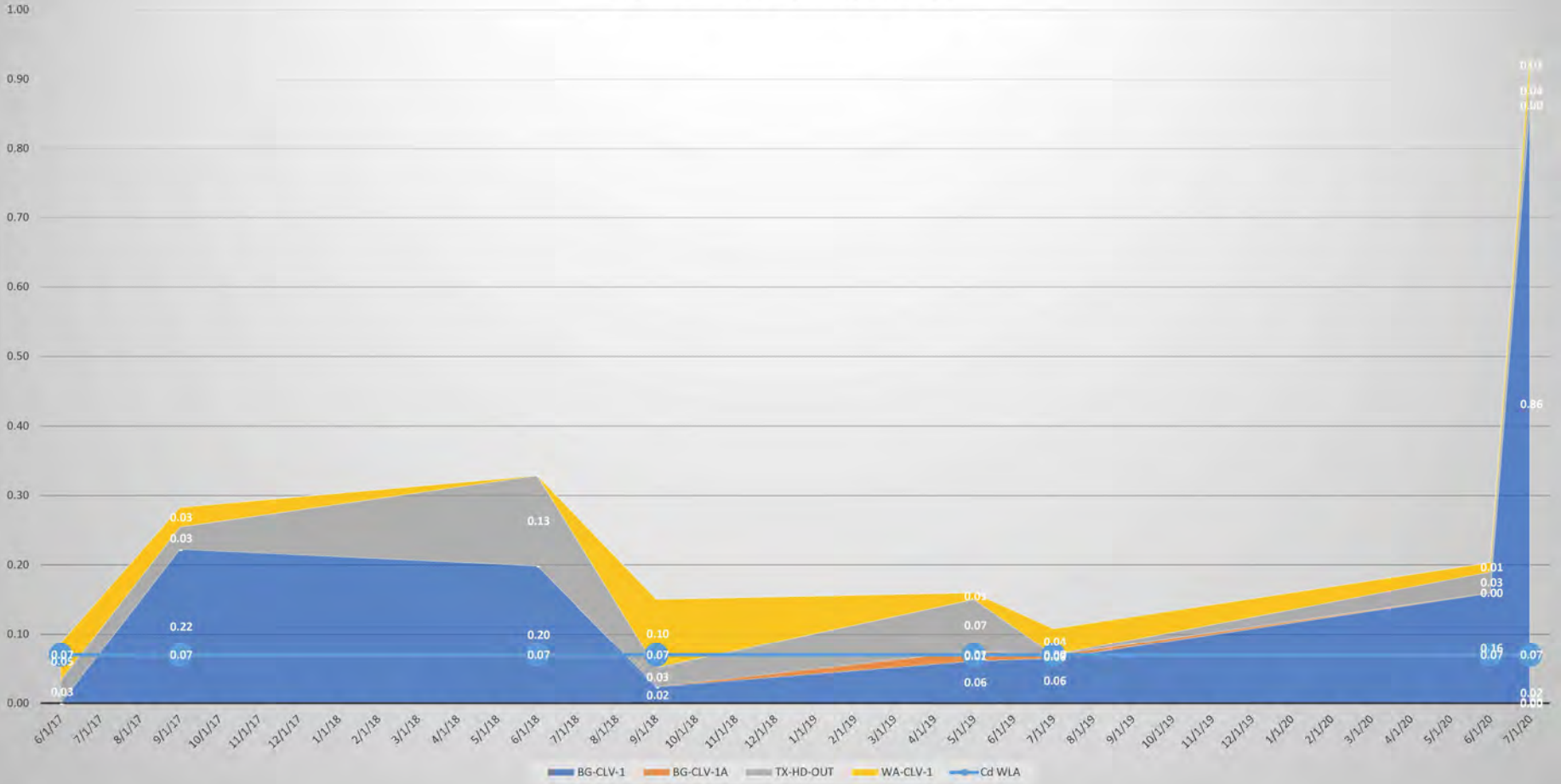
\* ARCO has not released 2021 sampling data to the public. BG-CLV-C1A and WA-CLV-1 are no longer being monitored. Replaced with LC-CLV-1 and MSD-CLV-3A, respectively, for 2020.



# Arsenic Mass loading (lbs/day)

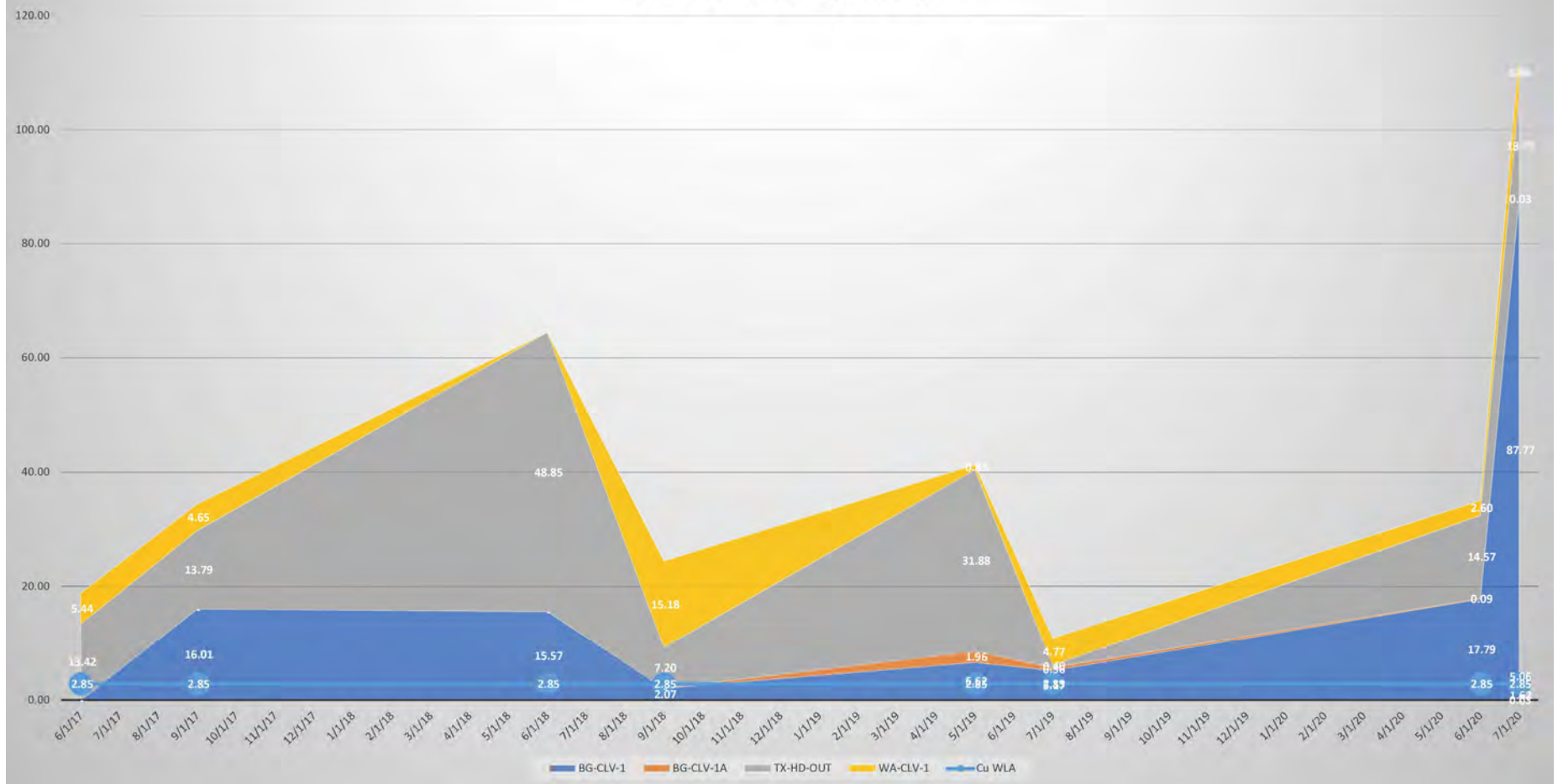


Cadmium Mass loading (lbs/day)

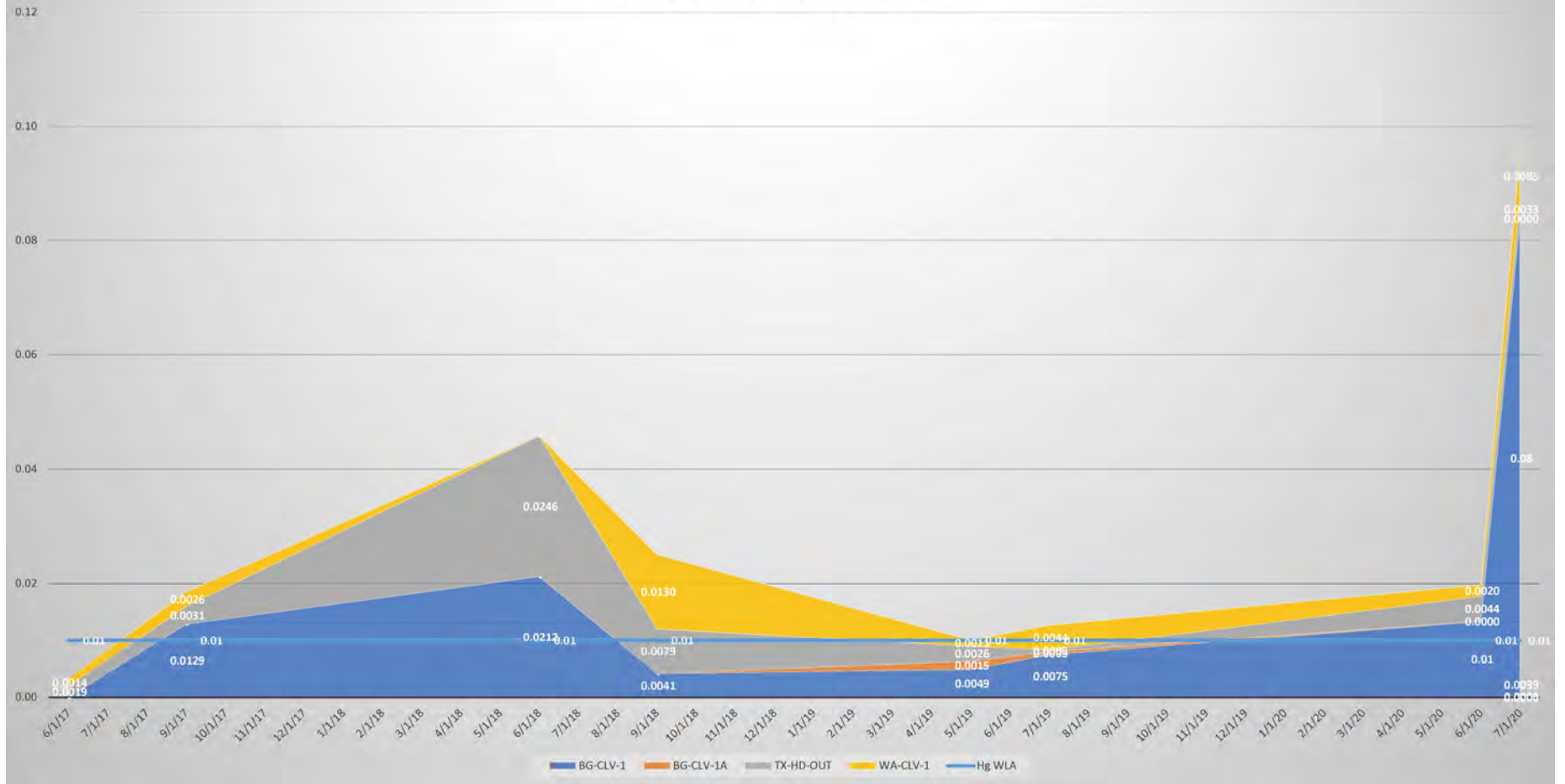




Copper Mass loading (lbs/day)

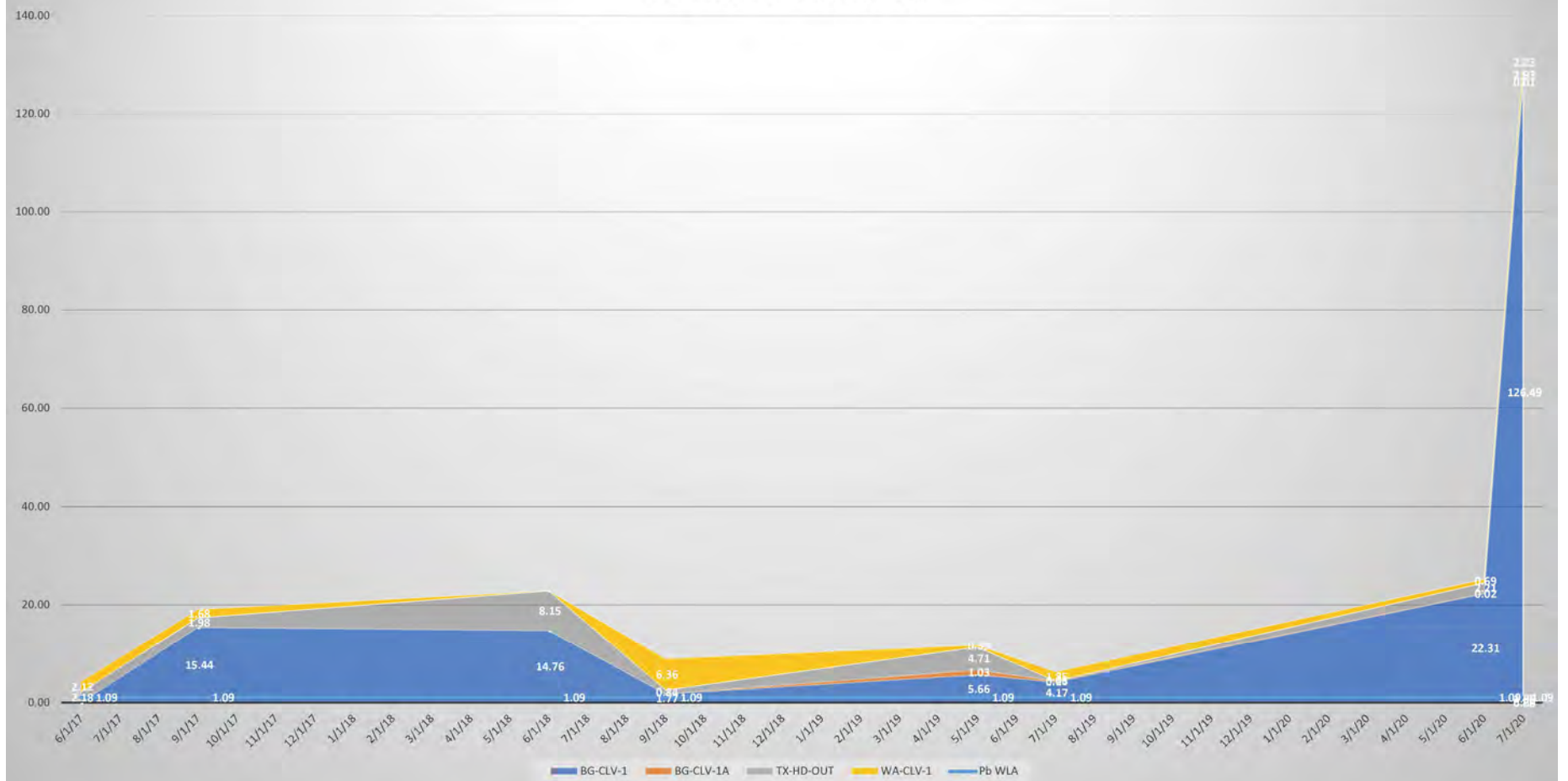


Mercury Mass loading (lbs/day)

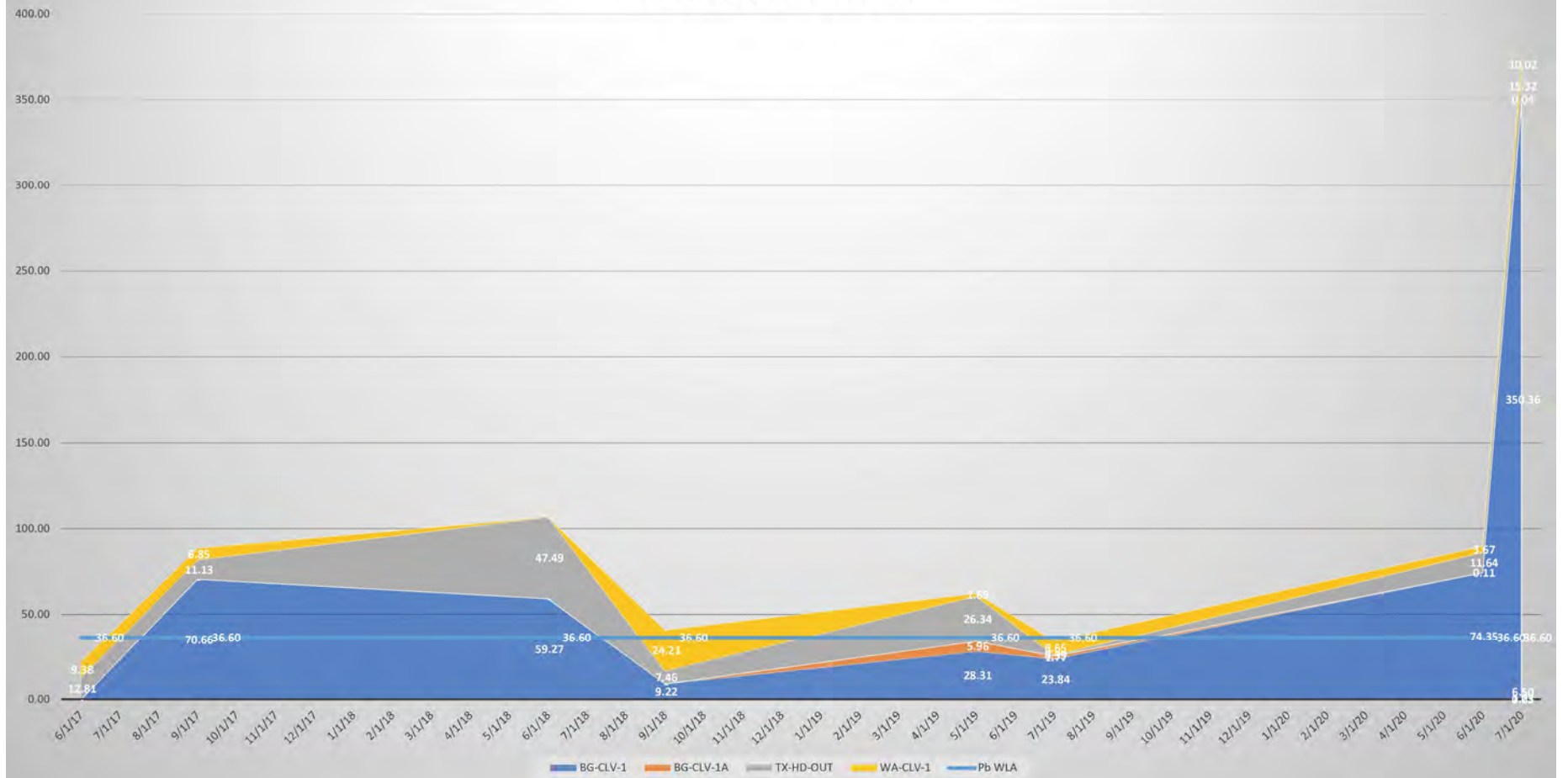




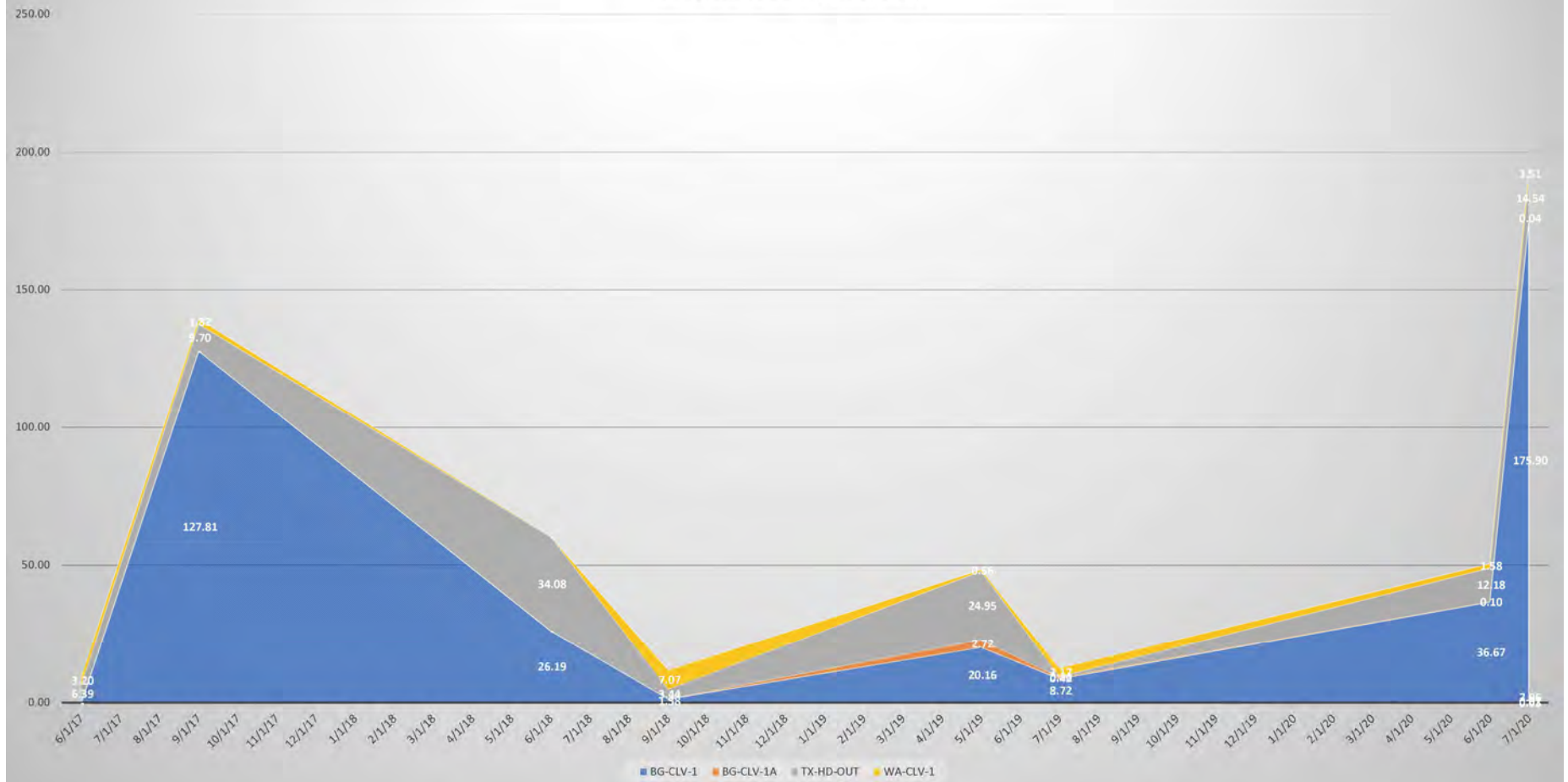
Lead Mass loading (lbs/day)



Zinc Mass loading (lbs/day)



TSS Mass loading (lbs/day)





**Appendix G**  
**CFWEP Public Outreach Summary**



### **CFWEP Report MS4 Contract with Butte Silver-Bow 2019**

**Provided by: Rayelynn Brandl**

**Reporting Period: January 1, 2021-December 31, 2021**

#### **Overall Goal of the Project**

The Clark Fork Watershed Education Program continues to serve for Butte Silver Bow as their primary partner for delivery of the education and outreach aspects of the MS4 permit. The following SWO tasks for Public Education and Outreach are assigned to CFWEP:

- 1) Implement a storm water education program to develop or adapt, distribute, and evaluate educational materials and outreach activities to key target audiences in the MS4 that raise awareness about the impacts of storm water discharges on waterbodies, educate audiences about the behaviors and activities that have the potential to pollute storm water discharges, and motivate action to change behaviors to reduce pollutants in storm water runoff.**

In 2021, we continued the radio and television commercials, running them in the Spring and again in the Fall. Our students at Butte Central High School produced an additional two radio commercials that aired throughout the year.

**Determine key target audiences most appropriate for storm water outreach including but not limited to the following: Analyze and tally business types and/or residential behaviors (locations) where illicit discharges, spills and dumping are prevalent; list key target audiences involved in illicit discharges and improper disposal of waste along with a description and rationale for each selection; determine pollutants associated with each target audience**

Progress on-going. During the 2021 plan year, we organized a longer Earth Month outreach campaign. We elicited support from local businesses who helped to both clean up trash around their business and sponsor local schools for the Clean Up Blacktail Stream/Earth Month events. Targeted outreach with signage at outfalls was completed by WET.

- 2) Develop and advertise a stormwater website for access by key target audiences, other interested stakeholders, and the general public. The website must include: copy of the general permit; or link to the permittee's webpage containing the permit, access to outreach materials, outreach event information, stormwater management program documents and updates, annual reports, and a mechanism for providing continued public input for the SWMP; information regarding how to identify illicit discharges; procedures on how to report an illicit discharge; summary of the permittee's requirements for covered construction activities; and how to submit construction project complaints.**

This task is completed and the website continues to be maintained by CFWEP, with updated materials loaded as needed.

**3) Develop and utilize the permittee's website for public outreach and involvement.**  
**CONSULTANT shall develop outreach messages to identified key audience.**

This task is completed. CFWEP has utilized the website to engage the public with our various stormwater outreach campaigns and have included the PSA's on the website as well. Our outreach campaign for 2021 involved targeting specific neighborhoods. Citizens added their information to the website for drain cleaning, trash pick up and general stormwater awareness.

**4) Develop a tailored outreach strategy for each key target audience and specific stormwater polluting behavior including but not limited to: 1) identify and as needed, develop outreach formats and distribution channels for messages developed for each key target audience associated with stormwater polluting behavior; 2) formats and distribution channels should be tailored to key target audiences and can utilize other existing formats such as community newsletters; 3) Submit a description of formats, distribution channels and schedule for each target audience in the 2nd annual report; 4) Provide classroom education for Butte students and public education at festivals, etc.**

The tailored outreach strategies for specific neighborhoods and problems was piloted in 2021. There was participation from targeted neighborhoods, which can be found on the CFWEP website at <https://cfwep.org/earthmonth/>.

The targeted outreach for students in Butte schools expanded to cover all of the elementary schools in Butte.. As part of that outreach, stormwater issues are presented within the curriculum. Our program staff developed both videos and ARC GIS story maps that illustrate the importance of healthy waterways and include stormwater awareness. The story maps can be found at [www.cfwep.org/storymaps](http://www.cfwep.org/storymaps)

Each school participated during the month of May, with students completing the curriculum and participating in a clean-up day nearby their school. The total number of students served for this outreach month was 1,244, including students in Anaconda who participated as part of a district-wide event. For only Butte students, the total was 444 students, who cleaned up approximately 90 miles of area in Butte, including streams, curb and gutter around the schools, parking lots, and parks/open lot areas.

CFWEP is assigned the following for SWO Task 2: Public Involvement and Participation

- 1) develop a strategy to involve key target audiences in the development and implementation of the SWMP that complies with state and local public notice requirements.**  
No progress this period. .
- 2) Identify approaches for involving key target audiences in SWMP development and implementation including but not limited to the following: 1) Identify approaches for involving key target audiences in SWMP development and implementation; 2) Identify existing organizations with membership that represent some or all of the key target audiences and describe opportunities for partnering to involve membership in SWMP development and implementation; 3) document collaboration with existing organizations if this is an approach; 4) submit a description of public involvement approach and schedule**



for each target audience in 1st annual report; 5) Implement identified involvement approaches for each key target audience; 6) document participation and key target audience feedback on the approach in the SWMP; 7) Provide classroom education for Butte students and public education at festivals, etc.



*Figure 1 East Middle School Students on Silver Bow Creek*

The expansion of our CUBS day to an entire month involved working with the Butte Chamber of Commerce, Butte YMCA, Butte School District #1, Montana Tech, Friends of Thompson Park, Montana Resources, Butte Trap Club, Butte- Silver Bow Parks and Rec, Butte-Silver Bow Superfund Division, and many local neighborhood councils. We were featured on local radio stations throughout the month to increase awareness of stormwater issues, and increase participation in the clean-up month.

As stated prior, we had exceptional turn out from local students and teachers. For the public/adult participation within the project, we had 210 people volunteer, who collected over 66 trash bags, providing approximately 13 hours of service. Our tracking methodology relied upon participants uploading their information to our website, which likely did not capture all who participated. We had feedback from the Chamber of Commerce that they had given a record number of trash bags

out to community members. To see a map of the areas cleaned up by Butte citizen volunteers, please visit our website at: <https://cfwep.org/earthmonth/>

**Goals for 2022:**

- 1) Revise our current deliverables given the new MS4 permit.
- 2) Revision of PSA's for radio and TV.
- 3) Grow the Earth Month initiative to include more neighborhoods.



*Figure 2 West Elementary Students at lot adjacent to school on Excelsior Street*

## **Appendix H**

### **Non – Stormwater Discharge/Flow Assessment**



**MS4 General Permit Part II.A.3.a.i**  
**2021 annual assessment of non-storm water discharge or flows**

**Significant contributors of pollutants are as follows:**

**1. Water line flushing/fire hydrant flushing**

**Why:**

Water line flushing and fire hydrant flushing are municipal operations which discharge chlorinated water onto streets and have the potential to mix with oil & grease, sediment, debris, and other pollutants. These non-storm water discharges have the potential to reach area surface waters via municipal storm water system and are allowable if all conditions are met.

**Associated pollutants may include:**

- Total Suspended Solids (TSS)
- Oil & Grease
- Metals
- Chlorine
- Debris

**Education:**

- Train BSB field personnel on SOPs, BMP selection, installation, and maintenance

**Local controls:**

- SOP#18 – Hydrant Flushing
- SOP#20 – Water Main Breaks and Repairs
- Coordination with BSB Road Dept to ensure street sweeping is conducted prior to water line/fire hydrant flushing
- Installation of BMP (i.e., street sweeping, inlet protection) prior to performs routine street sweeping prior to water line/fire hydrant flushing
- Use of chlorine diffusing device and tablets while water line/fire hydrant flushing is conducted
- Re-evaluate annually

**2. Street cleaning/flushing**

**Why:**

Street cleaning/flushing are municipal operations which discharge chlorinated water onto streets and have the potential to mix with oil & grease, sediment, debris, and other pollutants. These non-storm water discharges have the potential to reach area surface waters via municipal storm water system and are allowable if all conditions are met.

**Associated pollutants may include:**

- Total Suspended Solids (TSS)
- Oil & Grease
- Metals
- Chlorine
- Debris

**Education:**

- Train BSB field personnel on SOPs, BMP selection, installation, and maintenance

**Local controls or conditions:**

- Coordination with BSB Road Dept to ensure street sweeping is conducted prior to street flushing
- Installation of BMP (i.e., street sweeping, inlet protection) prior to performs routine street sweeping prior to street flushing
- Re-evaluate annually

**3. Discharges or flows from firefighting activities****Why:**

Fighting fires is a municipal operation which discharges chlorinated water onto streets and have the potential to mix with oil & grease, sediment, debris, and other pollutants. These non-storm water discharges have the potential to reach area surface waters via municipal storm water system and are allowable if all conditions are met.

**Associated pollutants may include:**

- Total Suspended Solids (TSS)
- Oil & Grease
- Metals
- Chlorine
- Debris

**Education:**

- Train fire personnel on SOPs

**Local controls or conditions:**

- SOP#18 – Hydrant Flushing
- BSB Road Dept conducts routine street sweeping
- Re-evaluate annually

**4. Landscape irrigation/lawn watering****Why:**

Excessive landscape irrigation/lawn water if it reaches a street has the potential to mix with oil & grease, sediment, debris, and other pollutants. Landscape irrigation/lawn

water that doesn't infiltrate into the soil may discharge along curb/gutter and reach area surface waters via municipal storm water system and are allowable if all conditions are met.

**Associated pollutants may include:**

- TSS
- Oil & Grease
- Metals
- Chlorine
- Debris

**Education:**

- Train public on resource benefits of limiting landscape irrigation/lawn watering
- CFWEP educate students on water conservation

**Local controls or conditions:**

- BSBPW provides water meters to the public to promote water conservation
- BSBPW limits watering days to every-other (June-October)
- Re-evaluate annually

### 5. **Uncontaminated ground water infiltration/inflow**

**Why:**

Uncontaminated ground water infiltration/inflow may be considered an allowable non-storm water discharge if all conditions are met.

**Associated pollutants may include:**

- Nutrients: Phosphorus, Nitrogen
- Metals

**Education:**

- Train BSB field personnel on smoke testing

**Local controls or conditions:**

- Smoke testing and infiltration/inflow (I/I) identification projects are ongoing and will guide capital improvements to the collection system over the next 30 years
- CCTV inspection if I/I suspected
- Re-evaluate annually

### 6. **Springs**

**Why:**

Spring water may be considered an allowable non-storm water discharge.



**Associated pollutants may include:**

- Metals

**Education:**

- Train BSB field personnel recognizing signs of flow from spring
- Train BSB field personnel on BMP selection, installation, and maintenance

**Local controls or conditions:**

- Re-evaluate annually

7. **Flows from riparian habitats and wetlands**

**Why:**

Flows from riparian habitats and wetlands may be considered an allowable non-storm water discharge.

**Associated pollutants include:**

- Nutrients: Phosphorus, Nitrogen
- Metals

**Education:**

- Train BSB field personnel recognizing signs of flow from riparian habitats and wetlands

**Local controls or conditions:**

- Culvert placement to direct wetland waters
- Monitoring by agencies (Superfund, etc.)
- Re-evaluate annually

## **MS4 General Permit Part II. A.3.b.i.**

### **2021 annual assessment of occasional incidental non-storm water discharges or flows**

**Occasional incidental non-storm water discharges that will not be addressed as illicit discharges are as follows:**

#### **Charity Car Washes**

##### **Why:**

Charity car washes produce soapy-water that have the potential to mix with oil & grease associated with the vehicle. These non-storm water discharges have the potential to reach area surface waters via municipal storm water system.

##### **Associated pollutants include:**

- Total Suspended Solids (TSS)
- Oil & Grease
- Metals
- Chlorine

##### **Education:**

- Notify public on conditions associated with charity car washes

##### **Conditions:**

- Contact Butte-Silver Bow Parks and Recreation department (Bob Lazzari, 406-533-8227) prior to organizing a charity car wash
- Locate on infiltrative surface, rather than on asphalt
- Locate a minimum of 300-ft from area surface waters (Silver Bow Creek, Blacktail Creek, Sand Creek, Basin Creek, & Grove Gulch Creek)
- BSBPW department will provide BMPs (i.e., inlet protection devices) at no charge

**Appendix I**  
**Dry Weather Outfall Inspections**



# All Outfalls

Major = 36" or Larger  
Minor = Less than 36"



Outfall Name	Receiving H2O	Diameter	Major/Minor	Inspected 2017	Inspected 2018	Inspected 2019	Inspected 2020	Inspected 2021	Misc.
Anaconda Road/Butte Brewery									
AB-0-1	Metro Storm/ Historic Silver Bow Creek	open channel	Minor				x		
AB-0-2	Metro Storm/ Historic Silver Bow Creek	48"	Major				x		
AB-0-3	Metro Storm/ Historic Silver Bow Creek	10"	Minor	x					find culvert inlet
AB-0-4	Metro Storm/ Historic Silver Bow Creek	12"	Minor				x		
Basin Creek									
BC-0-1	Basin Creek	5'	Major				x	x	
BC-0-2	Basin Creek	4'	Major				x	x	
Blacktail Creek									
BT-0-1	Blacktail Creek	2'	Minor	x		x			on golf course
BT-0-2	Blacktail Creek	36"	Major			x		x	on golf course
BT-0-3	Metro Storm	24"	Minor	x		x			
BT-0-4	Blacktail Creek	12"	Minor	x		x			
BT-0-5	Blacktail Creek	12"	Minor	x		x			sample site
BT-0-7	Blacktail Creek	36"	Major			x		x	
BT-0-8	Blacktail Creek	42"	Major			x		x	#1 by motel
BT-0-11	Blacktail Creek	24"	Minor			x			
BT-0-12	Blacktail Creek	16"	Minor			x			
BT-0-13	Blacktail Creek	8"	Minor			x			
BT-0-14 - EAST	Blacktail Creek	10"	Minor	x					
BT-0-14 - WEST	Blacktail Creek	10"	Minor			x			
BT-0-15	Blacktail Creek	15	Major			x		x	walking trail drains ponded area
BT-0-16	Blacktail Creek	144"	Major			x		x	Huge Culvert under I- 15
BT-0-17	Blacktail Creek	18"	Minor		x	x			walking trail drains ponded area
BT-0-18	Blacktail Creek	6" (iron)	Minor	x		x			#2 by motel
BT-0-19	Blacktail Creek	6" (PVC)	Minor	x		x			#3 by motel
BT-0-20	Blacktail Creek	6" (PVC)	Minor	x		x			#4 by motel
BT-0-21	Blacktail Creek	6" (PVC)	Minor	x		x			#5 by motel
BT-0-22	Blacktail Creek	6" (PVC)	Minor	x		x			#6 by motel
BT-0-23	Blacktail Creek	6" (PVC)	Minor	x		x			#7 by motel
BT-0-24	Blacktail Creek	18"	Major	x		x		x	
BT-0-25	Blacktail Creek	14"	Minor			x			
BT-0-26	Blacktail Creek	2'	Minor		x	x			on golf course
BT-0-27	Blacktail Creek	12"	Minor			x			on golf course
BT-0-28	Blacktail Creek	6"	Minor			x			#8 by motel
BT-0-29	Blacktail Creek	36"	Major			x		x	MDT?
BT-0-30	Blacktail Creek	12"	Minor	x		x			new 2013
BT-0-31	Blacktail Creek	24"	Minor	x		x			
BT-0-32	Blacktail Creek	12"	Minor		x	x			new 2018
Buffalo Gulch									
BG-0-1	Metro Storm/ Historic Silver Bow	48"	Major	x				x	HDD upgradient
BG-0-2	Metro Storm/ Historic Silver Bow Creek	24"	Minor	x					
BG-0-3	Metro Storm/ Historic Silver Bow Creek	36		x					
Grove Gulch									
GG-0-1	Blacktail Creek?	3', 4'	Major				x	x	
GG-0-2	Blacktail Creek	4'	Major				x		
GG-0-3	Blacktail Creek	12"	Minor				x		
GG-0-4	Silver Bow Creek	18-24"	Minor				x		
Idaho Street									
IS-0-1	Silver Bow Creek		Major				x	x	HDD
Missoula Gulch									
MG-0-2	re-routed	re-routed	re-routed	re-routed	re-routed				re-routed
MG-0-3	Silver Bow Creek	18"					x		

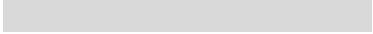
# All Outfalls

Major = 36" or Larger  
Minor = Less than 36"



Outfall Name	Receiving H2O	Diameter	Major/Minor	Inspected 2017	Inspected 2018	Inspected 2019	Inspected 2020	Inspected 2021	Misc.
Montana Street									
MT-0-1	Silver Bow Creek	NA	Major				x	x	Historic SBC meets Blacktail
MT-0-2	Silver Bow Creek	18"	Minor				x		
MT-0-3	Silver Bow Creek	18"	Minor				x		
MT-0-4	Silver Bow Creek	30"	Minor				x		
Sand Creek									
SC-0-4	Basin Creek	3', 4'	Major				x	x	MDT?
SC-0-5	Blacktail Creek	2'?	Minor	x			x		MDT?
SC-0-6	Blacktail Creek	NA	?	x					MDT? Find inlet
SC-0-7	on	private	property	on	private				property
Silver Bow Creek									
SB-0-2	Metro Storm/ Historic Silver Bow	20"	Minor				x		
SB-0-3	Metro Storm/ Historic Silver Bow Creek	30"	Minor				x		
SB-0-4	Metro Storm/ Historic Silver Bow	12"	Minor				x		
Montana Resources									
MR-0-1	Metro Storm/ Historic Silver Bow	3 @ 4'10"	Major					x	on mine (MRI) property
Warren Avenue									
WA-0-1	Metro Storm/ Historic Silver Bow	20"	Minor		x				
WA-0-2	Metro Storm/ Historic Silver Bow	12"	Major		x			x	
WA-0-3	Metro Storm/ Historic Silver Bow	12"	Minor		x				
WA-0-4	Metro Storm/ Historic Silver Bow	12"	Minor		x				
WA-0-5	Metro Storm/ Historic Silver Bow	12"	Minor		x				
WA-0-6 nested with 07	Metro Storm/ Historic Silver Bow	12"	Minor		x				
WA-0-7 nested with 06	Metro Storm/ Historic Silver Bow	24"	Minor		x				
WA-0-8	Metro Storm/ Historic Silver Bow	4'	Major		x			x	
WA-0-9	Metro Storm/ Historic Silver Bow	open channel	major		x			x	
WA-0-10	Metro Storm/ Historic Silver Bow	12"	Minor		x				
WA-0-11	Metro Storm/ Historic Silver Bow Creek	12"	Minor		x				
WA-0-12	Metro Storm/ Historic Silver Bow Creek	12"	Minor		x				
West Side									
WS-0-1	Silver Bow Creek	48"	Major				x	x	
WS-0-2	Silver Bow Creek	24"	Minor		x				
WS-0-3	Silver Bow Creek	10"	Minor		x				
WS-0-4	Silver Bow Creek	NA	Minor	x					
WS-0-6	Silver Bow Creek	12"	Minor		x				MDT?
WS-0-7	Silver Bow Creek	70"	Major				x	x	

SUBTOTAL MAJOR	22								
SUBTOTAL MINOR	49								
SUBTOTAL Unknown	1								
TOTAL	72								
		23	20	29	22	20			
		32%	28%	40%	31%	28%			



Total Inspected 114

Site	Amount Removed	Material Removed	Units	Date of Report	Repository of Removed Material	Drainage Basin
DD17	0	Sediment	yd3	Not specified	Not specified	West Side
DD8	0	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
BRES Site 2000	0	Sediment	yd3	Not specified	Not specified	
BRES Site 2330	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
BRES Site 174	0	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
BRES Site 71N	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
BRES Site 79	0	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
CB08	96	Sediment	yd3	Not specified	Not specified	West Side
DD1	55	Sediment	yd3	Not specified	Not specified	Missoula Gulch
DD10	3	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
DD3	48		yd3	Not specified	Not specified	Missoula Gulch
DD7	0		yd3	Not specified	Not specified	Buffalo Gulch
HDD1	24	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
HDD3	66	Sediment	yd3	Not specified	Not specified	Silver Bow Creek
HDD4	84	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
HDD5	40	Sediment	yd3	Not specified	Not specified	Montana Street
BRES Site 2330A	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
BRES Site 29N	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
BRES Site 32	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
BRES Site 37	0	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
BRES Site 41	0	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
BRES Site 42	0	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
BRES Site 70	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
CB07	0	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
Corner of Emmett and Woolman	0	Sediment	yd3	Not specified	Not specified	West Side
Granite Mountain Memorial	0	Sediment	yd3	Not specified	Not specified	
BRES Site 120	0	Sediment	yd3	Not specified	Not specified	West Side
BRES Site 155	0	Sediment	yd3	Not specified	Not specified	Grove Gulch
HDD2	20	Sediment	yd3	Not specified	Not specified	Warren Avenue
BRES Site 132	0		yd3	Not specified	Not specified	West Side
BRES Site 136	0		yd3	Not specified	Not specified	Buffalo Gulch
CB03	0	Sediment	yd3	Not specified	Not specified	Anaconda Road/Butte Brewery
BRES Site 150	0		yd3	Not specified	Not specified	Grove Gulch
BRES Site 60	0		yd3	Not specified	Not specified	Buffalo Gulch
BRES Site 121	0	Mine waste	yd3	Not specified	Not specified	Idaho Street
Various Areas in BPSOU	0	Sediment	yd3	Not specified	Not specified	
BRES Site 174/67	0	Sediment	yd3	Not specified	Not specified	Buffalo Gulch
BRES Site 29	0		yd3	Not specified	Not specified	Missoula Gulch
BRES Site 71	0	Sediment	yd3	Not specified	Not specified	Missoula Gulch
DD7	0		yd3	Not specified	Not specified	Buffalo Gulch
DD9	8	Sediment	yd3	Not specified	Not specified	
DD16	8	Sediment	yd3	Not specified	Not specified	
DD7	0		yd3	Not specified	Not specified	Buffalo Gulch

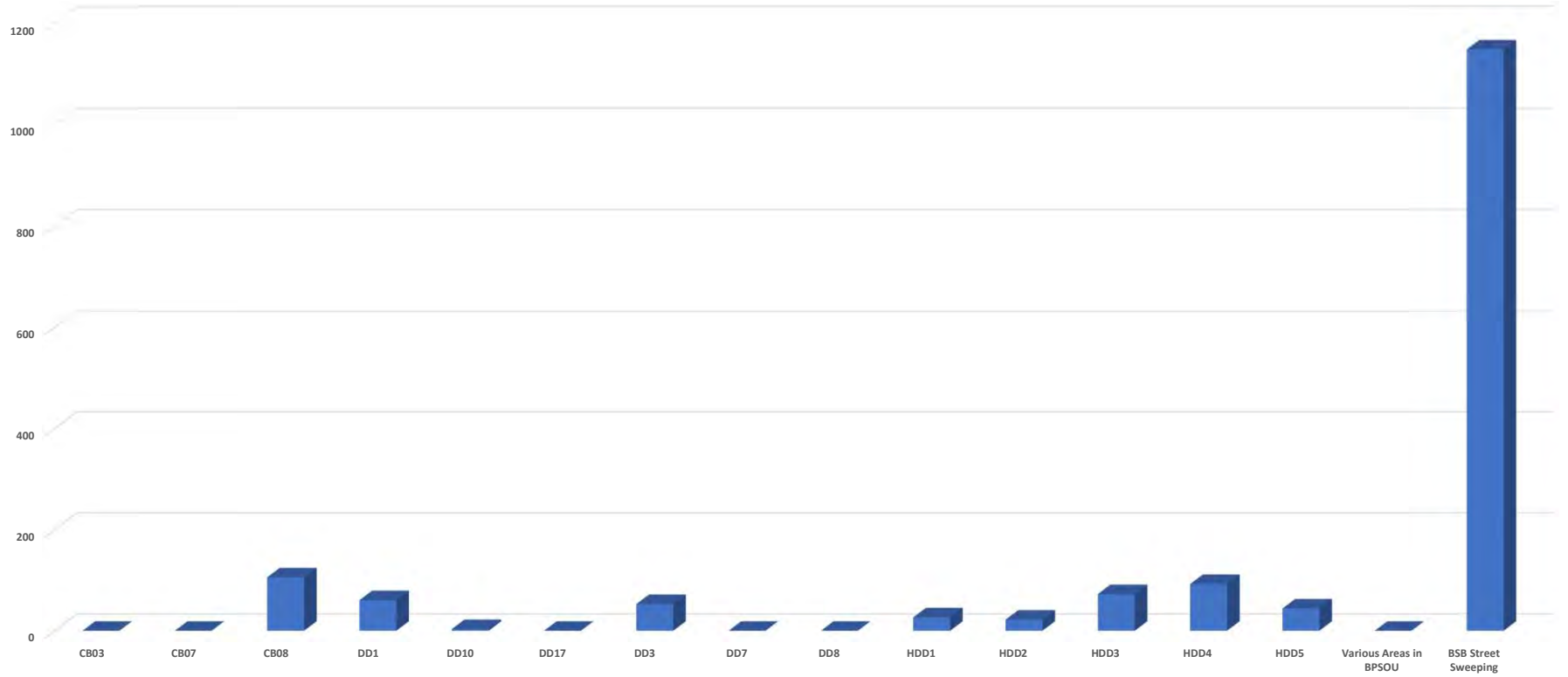
<b>2021 Sediment Removed</b>	<b>452</b>	<b>Cu yds</b>
	<b>497</b>	<b>Tons</b>
<b>BSB Street Sweeping</b>	<b>1044</b>	<b>Cu yds</b>
	<b>1,148</b>	<b>Tons</b>
<b>Total Sediment Removed</b>	<b>1,496</b>	<b>Cu yds</b>
	<b>1,646</b>	<b>Tons</b>

Assumes 1 Cu Yd of Sediment = 2,200 pounds

	<b>Baseline Sediment load to Silver Bow Creek -</b>	<b>746</b>	<b>Tons Per year TSS</b>
	<b>Removal Requirement -</b>	<b>76%</b>	
	<b>Removal Requirement -</b>	<b>567</b>	<b>Tons Per year TSS</b>
	<b>TSS - WLA -</b>	<b>179</b>	<b>Tons per year from the MS4 to SBC</b>



BSB MS4 Sediment Removed 2021  
(tons)



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	WS-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:43	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Open Space	<b>Known Industries:</b>	
<b>Lat</b>	46.0046766	<b>Long</b>	-112.55019804
<b>Notes (e.g. origin of outfall, if</b>	Less than 0.5" of snow in last 48 hours.		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	CMP
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	36	<b>Submerged in Water:</b>	Partially
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	Yes
<b>Flow Description:</b>	Moderate		

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>	Color	
<b>Odor</b>	,	
<b>Color</b>	Other, Light blue gray tint	1 - Faint colors in sample bottle
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Nothing to note, cleared some tumbleweeds away from outfall. Some ponding but not prohibiting outfall flow

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	WS-O-7	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:36	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Open Space	<b>Known Industries:</b>	
<b>Lat</b>	46.00318529	<b>Long</b>	-112.55033821
<b>Notes (e.g. origin of outfall, if</b>	Less than 0.5" of snow in last 48 hours.		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	60	<b>Submerged in Water:</b>	Partially
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	Yes
<b>Flow Description:</b>	Trickle		

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>	Color	
<b>Odor</b>	,	
<b>Color</b>	Other, Light blue gray tint	1 - Faint colors in sample bottle
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>	Deposits/Stains		
<b>Outfall</b>		<b>Deposits/Stains</b>	Other, Some debris in drain directly
<b>Abnormal</b>		<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

Minor flow, has a little bit of blue gray tint to it but could be reflection of concrete pipe through water.

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	GG-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:25	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Commercial	<b>Known Industries:</b>	
<b>Lat</b>	45.98070151	<b>Long</b>	-112.5422965
<b>Notes (e.g. origin of outfall, if</b>	Less than .5" of snow in last 48 hoirs		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	48	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	



**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> ,
<b>Abnormal</b>		<b>Poor pool quality</b> ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Nothing to note, looks functional and no damage



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	---	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	IS-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:17	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Commercial	<b>Known Industries:</b>	Auto repair, asphalt plant
<b>Lat</b>	45.99679525	<b>Long</b>	-112.540878
<b>Notes (e.g. origin of outfall, if</b>	Less than 0.5" of snow in last 48 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	18	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	Partially	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

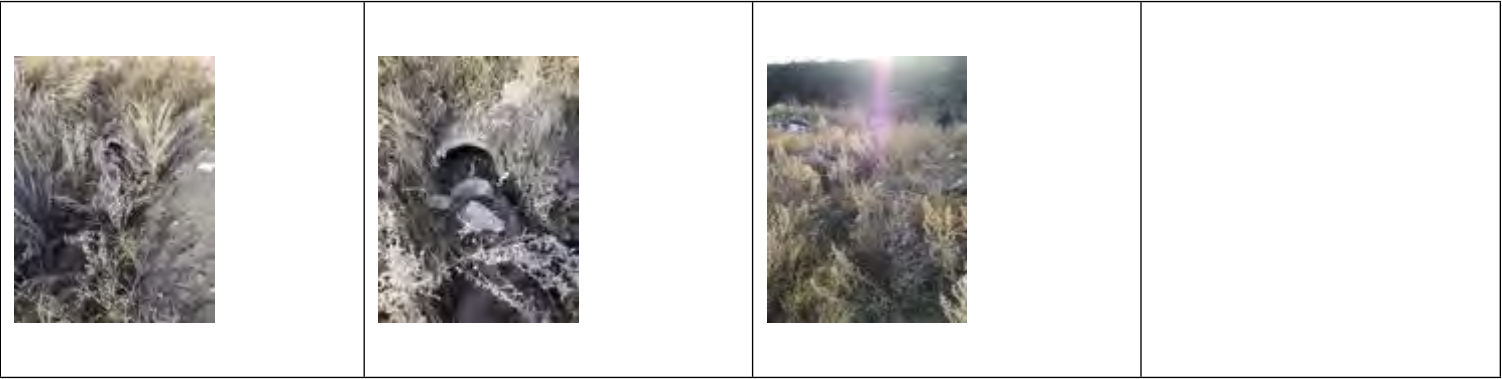
INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>	Deposits/Stains		
<b>Outfall</b>		<b>Deposits/Stains</b>	Other, Sediment, some concrete chunks to
<b>Abnormal</b>		<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

About 1/3 of pipe submerged in sediment

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	MT-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:08	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Commercial	<b>Known Industries:</b>	Railroad
<b>Lat</b>	45.99566202	<b>Long</b>	-112.53840374
<b>Notes (e.g. origin of outfall, if</b>	Less than 0.5" of snow in last 48 hours, outfall is channel that meets black tail creek		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	In-Stream	<b>Material:</b>	
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

No flow, some sediment and pooling above outfall that may impact flow but no major issues to note

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLICIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BG-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	14:02	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Commercial	<b>Known Industries:</b>	Storage area, close to grocery store
<b>Lat</b>	45.99645192	<b>Long</b>	-112.53696306
<b>Notes (e.g. orgin of outfall, if</b>	Less than 0.5" of snow in last 48 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	RCP
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	36	<b>Submerged in Water:</b>	Partially
<b>Submerged in Sediment:</b>	Partially	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>	Deposits/Stains, Poor Pool quality		
<b>Outfall</b>		<b>Deposits/Stains</b>	Other, Sediment and water in pipe
<b>Abnormal</b>		<b>Poor pool quality</b>	Other, Pool unable to drain flow
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Potential (presence of two or more indicators)			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	---	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	WA-O-2	<b>Date:</b>	2021-11-22
<b>Time:</b>	13:47	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	50
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential, Commercial	<b>Known Industries:</b>	
<b>Lat</b>	46.00138403	<b>Long</b>	-112.5182112
<b>Notes (e.g. origin of outfall, if</b>	Outfall is in middle of creek channel. Less than 0.5" of snow in last 48 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	HDPE
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	12	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>	Abnormal Vegetation		
<b>Outfall</b>		<b>Deposits/Stains</b>	,
<b>Abnormal</b>	Excessive	<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

Outfall is almost all surrounded by vegetation but appears that flow can still seep into the channel

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	WA-O-9	<b>Date:</b>	2021-11-22
<b>Time:</b>	13:16	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential, Open Space	<b>Known Industries:</b>	
<b>Lat</b>	46.001497	<b>Long</b>	-112.51385496
<b>Notes (e.g. origin of outfall, if</b>	This outfall does not exist. Appears to be open channel if anything where flow can come into creek channel from peninsula shaped area directly to the N of creek channel and SE of sBC1-01. Less than 0.5" of snow in last 48 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	In-Stream	<b>Material:</b>	
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Nothing to note

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	WA-O-8	<b>Date:</b>	2021-11-22
<b>Time:</b>	13:12	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential, Open Space	<b>Known Industries:</b>	
<b>Lat</b>	46.00154804	<b>Long</b>	-112.5139394
<b>Notes (e.g. orgin of outfall, if</b>	less than 0.5" of snow in last 48 hours. Thus outfall is just rip rap off the slope and into the creek channel. Second photo shows SBC1-0-1to the NE of this outfall		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Open drainage	<b>Material:</b>	rip-rap
<b>Shape:</b>	Other	<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	12
<b>Open Drainage Width:</b>	36	<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Nothing to note



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	MRI-0-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	13:00	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Open Space	<b>Known Industries:</b>	Montana Resources
<b>Lat</b>	46.00433503	<b>Long</b>	-112.51062037
<b>Notes (e.g. origin of outfall, if</b>	3 concrete pipes from the north. One HPD line running out of center pipe and runs into S culverts. Two rectangular concrete culverts to the S. Rip rap channel and corrugated pipe to the NE of 3 concrete pipes.		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Triple
<b>Dimensions (in):</b>	48	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Nothing to note.

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-2	<b>Date:</b>	2021-11-22
<b>Time:</b>	12:44	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Golf Course	<b>Known Industries:</b>	
<b>Lat</b>	45.97089199	<b>Long</b>	-112.48950832
<b>Notes (e.g. origin of outfall, if</b>	Less than .5" of snow in last 24 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	36	<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>	Outfall Damage		
<b>Outfall</b>	Spalling, Cracking or Chipping	<b>Deposits/Stains</b>	,
<b>Abnormal</b>		<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

Some degradation of concrete, not excessive or impeding potential flow

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BC-O-1	<b>Date:</b>	2021-11-22
<b>Time:</b>	12:32	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential, Open Space	<b>Known Industries:</b>	
<b>Lat</b>	45.96479072	<b>Long</b>	-112.4942548
<b>Notes (e.g. origin of outfall, if</b>	Snowed less than .5" in last 48 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Open drainage	<b>Material:</b>	rip-rap
<b>Shape:</b>	Other	<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	24
<b>Open Drainage Width:</b>	60	<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> ,
<b>Abnormal</b>		<b>Poor pool quality</b> ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	SC-O-4	<b>Date:</b>	2021-11-22
<b>Time:</b>	12:15	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	49
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Open Space	<b>Known Industries:</b>	Airport
<b>Lat</b>	45.96046686	<b>Long</b>	-112.50769244
<b>Notes (e.g. origin of outfall, if</b>	Some ponding and ice present in pool beneath outfall. Did snow less than .5" in last 24 hours		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Open drainage	<b>Material:</b>	Concrete
<b>Shape:</b>	Trapezoid	<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	48
<b>Open Drainage Width:</b>	36	<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> ,
<b>Abnormal</b>		<b>Poor pool quality</b> ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	---	--	--



**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-16	<b>Date:</b>	2021-11-19
<b>Time:</b>	14:32	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	46
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Open Space	<b>Known Industries:</b>	
<b>Lat</b>	45.99155628	<b>Long</b>	-112.52823891
<b>Notes (e.g. orgin of outfall, if</b>	Water inside of outfall, no flow		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	In-Stream	<b>Material:</b>	
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**


INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

Partially full with water and sediment but it is in stream

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	--	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-15	<b>Date:</b>	2021-11-19
<b>Time:</b>	14:29	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	46
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential, Open Space	<b>Known Industries:</b>	
<b>Lat</b>	45.99158319	<b>Long</b>	-112.52803542
<b>Notes (e.g. origin of outfall, if</b>	Outfall next to walking trail, no flow		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Open drainage	<b>Material:</b>	Earthen
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	---	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-7	<b>Date:</b>	2021-11-19
<b>Time:</b>	14:16	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial, Open Space	<b>Known Industries:</b>	
<b>Lat</b>	45.9854166	<b>Long</b>	-112.5090195
<b>Notes (e.g. origin of outfall, if</b>	Outfall has no distinct pipe that can be found, some ponding to the Nw of outfall sign, wetland area no signs of flow		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Open drainage	<b>Material:</b>	
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>	Poor Pool quality	
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> Colors,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-8	<b>Date:</b>	2021-11-19
<b>Time:</b>	14:03	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Commercial	<b>Known Industries:</b>	
<b>Lat</b>	45.98534879	<b>Long</b>	-112.50745776
<b>Notes (e.g. origin of outfall, if</b>	Outfall underneath parking lot of hotel/restaurant.		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Other
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	44	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**



INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>			
<b>Outfall</b>		<b>Deposits/Stains</b>	Flow Line, Other,
<b>Abnormal</b>		<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

Some biological growth in bottom of pipe, staining of flow

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILICIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	---	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-24	<b>Date:</b>	2021-11-19
<b>Time:</b>	13:55	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential	<b>Known Industries:</b>	
<b>Lat</b>	45.97912012	<b>Long</b>	-112.4991028
<b>Notes (e.g. origin of outfall, if</b>			

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Steel
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	6	<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>	Partially	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	


**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>			
<b>Outfall</b>		<b>Deposits/Stains</b>	,
<b>Abnormal</b>	Excessive	<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

Pipe is surrounded by sod, may be inhibiting flow



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	--	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BC-O-2	<b>Date:</b>	2021-11-19
<b>Time:</b>	13:36	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Industrial	<b>Known Industries:</b>	Airport
<b>Lat</b>	45.969936	<b>Long</b>	-112.50180581
<b>Notes (e.g. origin of outfall, if</b>			

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Steel
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	120	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
<b>Indicator</b>			
<b>Outfall</b>		<b>Deposits/Stains</b>	Flow Line,
<b>Abnormal</b>		<b>Poor pool quality</b>	,
<b>Pipe benthic</b>	,		
<b>COMMENTS</b>			

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab	No	Collected from	
Intermittent flow trap	No	Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTUCTURE REPAIRS)?			
No			





**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BTC4-O-1	<b>Date:</b>	2021-11-19
<b>Time:</b>	13:04	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>		<b>Known Industries:</b>	
<b>Lat</b>	45.98164155	<b>Long</b>	-112.48925138
<b>Notes (e.g. orgin of outfall, if</b>	No outfall exists here		

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>		<b>Material:</b>	
<b>Shape:</b>		<b>Number of Pipes:</b>	
<b>Dimensions (in):</b>		<b>Submerged in Water:</b>	
<b>Submerged in Sediment:</b>		<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> , ,
<b>Abnormal</b>		<b>Poor pool quality</b> , ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		

SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
SECTION 7: DATA COLLECTION			
Sample for the lab		Collected from	
Intermittent flow trap		Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTUCTURE REPAIRS)?			

--	--	--	--

**CITY OF BUTTE-SILVER BOW COUNTY  
OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE  
COLLECTION FIELD SHEET**



**Consulting Scientists & Engineers  
480 East Park Street Butte, Montana  
59701 Phone: 406-782-5220**

**SECTION 1: BACKGROUND DATA**

<b>Outfall ID:</b>	BT-O-29	<b>Date:</b>	2021-11-19
<b>Time:</b>	12:58	<b>Investigators</b>	DL
<b>Form completed by:</b>	DL	<b>Temperature (F)</b>	43
<b>Rainfall in Last 24 hours:</b>	No	<b>Rainfall in Last 48 hours:</b>	No
<b>Landuse in Drainage Area:</b>	Suburban Residential	<b>Known Industries:</b>	
<b>Lat</b>	45.98157653	<b>Long</b>	-112.48934742
<b>Notes (e.g. origin of outfall, if</b>			

**SECTION 2: OUTFALL DESCRIPTION**

<b>Location:</b>	Pipe	<b>Material:</b>	Steel
<b>Shape:</b>	Circular	<b>Number of Pipes:</b>	Single
<b>Dimensions (in):</b>	30	<b>Submerged in Water:</b>	No
<b>Submerged in Sediment:</b>	No	<b>Open Drainage Depth:</b>	
<b>Open Drainage Width:</b>		<b>Flow Present</b>	No
<b>Flow Description:</b>			

**SECTION 3 QUANTITATIVE CHARACTERIZATION**

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Measured length		Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			F	Thermometer
pH			pH Units	Test strip/Probe
Conductivity			EC	Probe
Ammonia			mg/L	Test strip

**SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY**


INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicators</b>		
<b>Odor</b>	,	
<b>Color</b>	,	
<b>Turbidity</b>	See severity	
<b>Floatables (Not</b>	,	

**SECTION 5: PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS**

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
<b>Indicator</b>		
<b>Outfall</b>		<b>Deposits/Stains</b> ,
<b>Abnormal</b>		<b>Poor pool quality</b> ,
<b>Pipe benthic</b>	,	
<b>COMMENTS</b>		



SECTION 6: OVERALL OUTFALL CHARACTERIZATION			
Unlikely			
SECTION 7: DATA COLLECTION			
Sample for the lab		Collected from	
Intermittent flow trap		Type	
SECTION 8: ANY NON-ILLCIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?			
No			

			
--	--	--	--

## **Appendix J**

### **Post Construction Inspections**



# THE CITY-COUNTY OF Butte-Silver Bow

October 12, 2021

Berkley Pit Polishing Plant  
Butte MT 59701

RE: Berkley Pit Polishing Plant Construction Stormwater inspection

BSB with its Contractor WET conducted an inspection of the stormwater infrastructure associated construction of the Berkley Pit discharge water polishing plant. The findings of this inspection are listed below.

In general, the stormwater ponds, swales, and routing look appropriate and is consistent with the approved design. The following items need to be finalized.

- Temporary BMP's can be removed from the permanent structures (see Photo 1 attached).
- Straw wattles protecting inlet structures should be replaced with more permanent rock wattles or rock check dams. (See Photo 2 attached).
- Revegetation/Stabilization is complete. 2020 BSB Engineering Standards Section 11.4.5 VEGITATION AND LANDSCAPING requires – "All pond landscaping shall provide for slope stability, erosion control, and low maintenance." Additionally, the MPDES permit requires the area achieve stabilization of 70% of pre-construction vegetation density.
  - All the pond areas and areas surrounding the pond meets or exceeds the revegetation standards – (See Photo 1 attached)
- Spoil piles and construction laydown area. (See Photo 3, 4, & 5)
  - Spoil piles need to be removed.
  - What is the plan for the material laydown area? Area should be either organized as a formal 'Bone' yard or removed.

Please address these areas of concern and notify BSB once complete. If you have any questions or concerns with this response, please contact me at [mneary@bsb.mt.gov](mailto:mneary@bsb.mt.gov) or 406.497.6519.

Sincerely,

Mark Neary  
Butte-Silver Bow Public Works Director



Photo 1 – Silt Fence along southern border can be removed – Vegetation appears to be stabilized.



Photo 2 – Replace straw waddle with rock waddle or rock check dam to protect inlet





Photo 3&4 – Spoil Piles





Photo 5 – Construction Lay down area







# THE CITY-COUNTY OF Butte-Silver Bow

October 12, 2021

Brian Ranf  
Facilities Manager  
Northwestern Energy  
11 E. Park St.  
Butte MT 59701

**RE: Northwestern Energy South Harrison Stormwater Inspection**

Mr. Ranf

BSB with it's Contractor WET conducted an inspection of the stormwater infrastructure associated with the recent fence and parking lot expansion. The findings of this inspection are listed below.

In general, the stormwater ponds, swales, and routing look appropriate and is consistent with the approved design. The following items need to be addressed prior to the release of the Storm Water Construction Bond.

- Temporary BMP's need to be removed from the permanent structures (see Photo 1 attached)
- Revegetation is minimal. 2020 BSB Engineering Standards Section 11.4.5 VEGITATION AND LANDSCAPING requires – “All pond landscaping shall provide for slope stability, erosion control, and low maintenance.” Additionally, the MPDES permit requires the area achieve stabilization of 70% of pre-construction vegetation density.
  - Significant Erosion and washout were observed at the NW pond. A formal inlet with riprap would help prevent future erosion. (See Photo 3 attached)
  - All the pond areas and areas surrounding the pond does not meet the revegetation standards – The pond and disturbed areas need to be revegetated to provide stabilization of the ponds. Please complete the revegetation and stabilization of these areas. (See photo 4 attached)

Please address these areas of concern and notify BSB once complete. If you have any questions or concerns with this response, please contact me at [mneary@bsb.mt.gov](mailto:mneary@bsb.mt.gov) or 406.497.6519.

Sincerely,

Mark Neary  
Butte-Silver Bow Public Works Director

Photo 1 – Temporary BMP still in place



Photo 2 – Temporary BMP still in place





Photo 3 – Pond bank washout and erosion and lack of stabilization



Photo 4 – Example of Pond needing revegetation and lack of stabilization





**Appendix K**  
**Standard Operating**  
**Procedures (SOP)**



# Butte-Silver Bow MS4 Program

## Standard Operating Practices (SOP)

12/12/2018

ID	Division	SOP
SOP #1	MS4	Construction and post-construction inspections
SOP #2	MS4	Sampling (MS4 Permit Part IV Monitoring)
SOP #3	MS4	Annual review of Storm Water Management Plan (SWMP)
SOP #4	MS4	Annual review of existing SOPs / BMPs
SOP #5	MS4	Inform new BSB employees about BSB storm water
SOP #6	Operations	Outfall Inspections
SOP #7	Operations	Inlet/catch basin & storm drain system cleaning
SOP #8	Operations	Sanitary Sewer Overflow (SSO's)
SOP #9	Road Dept	Track-out management
SOP #10	Road Dept	Snow removal / Storage
SOP #11	Road Dept	Chip / Crack sealing & pothole patching and Paving & milling / Overlay procedures
SOP #22	Road Dept	Equipment Fueling
SOP #29	Road Dept	Salt Storage
SOP #30	Road Dept	Street Sweeping & Flushing
SOP #31	Road Dept	Parking lot maintenance (Municipal Building)
SOP #12	Maintenance Center	Metals recycling
SOP #13	Maintenance Center	Oil cleanup procedure (minor spills)
SOP #14	Maintenance Center	Oil filter recycling
SOP #15	Park & Rec	Mowing procedures / Grass disposal
SOP #16	Park & Rec	Swimming pool drain-down
SOP #17	Park & Rec	Pool chlorine storage & handling
SOP #22	Park & Rec	Equipment Fueling
SOP #25	Park & Rec	Fertilizer storage, handling, application, & cleanup
SOP #27	Park & Rec	Pet waste management
SOP #28	Park & Rec	Irrigation
SOP #26	Park & Rec	Herbicide storage, handling, application, & cleanup
SOP #18	Water Dept	Hydrant flushing/Blowoff flushing
SOP #19	Water Dept	Materials management / Chemical storage
SOP #20	Water Dept	Water Main Breaks & Repairs
SOP #22	Water Dept	Equipment Fueling
SOP #23	Water Dept	Materials Management
SOP #21	Fire/Operations	Illicit Discharge Detection & Elimination
SOP #22	Metro	Equipment Fueling
SOP #23	Metro	Materials Management
SOP #24	Metro	Outfall / Pond Maintenance
SOP #32	Metro	Root Killer (foam) application and management