This report covers:

• Transit Division
• Water Division
• METRO Division
• Road Division

A future report will cover:

• CEM
• Landfill
• Cemetery
Transit Division

- Cory Johns - Division Manager
- Chellie Kissel – Dispatcher/Admin Asst
  - 12 Transit Union

- Three Enterprise Funds
  - Transit HUB $26K operating budget
  - Transit Para $0.3M operating budget
  - Transit Fixed $1.0M operating budget
  - Capital Budget $33K
Butte-Silver Bow Transit and Para Transit System
Fixed Routes

Monday – Friday
6:45 AM to 6:15 PM

- Montana Tech / Harrison Ave
- Walkerville / Harrison Ave
- Oregon Ave / Racetrack
- Around the Town – Service Route

Saturday
8:45 AM to 4:15 PM

- Saturday Service Route
Fixed Route

MT Tech / Harrison Ave

Year: 2013 - 2017

- 2013: 46595
- 2014: 48252
- 2015: 50527
- 2016: 54024
- 2017: 63625
Fixed Route

Oregon Ave. / Racetrack

- 2013: 24824
- 2014: 23603
- 2015: 26278
- 2016: 28527
- 2017: 30424

Series2
Fixed Route

Service Route

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>9504</td>
</tr>
<tr>
<td>2014</td>
<td>12457</td>
</tr>
<tr>
<td>2015</td>
<td>19303</td>
</tr>
<tr>
<td>2016</td>
<td>23049</td>
</tr>
<tr>
<td>2017</td>
<td>17451</td>
</tr>
</tbody>
</table>
Ridership from 2013-2017

BSB Fixed Route System

<table>
<thead>
<tr>
<th>Year</th>
<th>Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>129039</td>
</tr>
<tr>
<td>2014</td>
<td>138207</td>
</tr>
<tr>
<td>2015</td>
<td>154362</td>
</tr>
<tr>
<td>2016</td>
<td>193414</td>
</tr>
<tr>
<td>2017</td>
<td>199271</td>
</tr>
</tbody>
</table>

Fixed Route Passengers
Para Transit

• Complementary para transit service provides comparable service to the BSB fixed route bus service for citizens who disabling conditions prevent their use regular bus service.

• Para Transit service is provided to the guidelines set forth in the Americans with Disabilities Act of 1990.
Para Transit System Eligibility

Physically unable to get to the regular fixed route bus.

Unable to navigate regular fixed route system once on board.

Unable to board and exit the bus at some locations.

Live within or up to $\frac{3}{4}$ of a mile from the fixed route system.
Para Transit

Ridership

• 2016  10522
• 2017  10237
Bus Shelters

Walmart

Platinum and Idaho
Bus Shelters

- Bus shelter currently at Mural Park on Park Street will be removed and replaced by cover bench outside the new parking garage.

- This spring two additional bus shelters will be placed on the Harrison Route.

- Four additional bus shelters are in stock to be placed in locations to be determined.
Updates

- The last 5-year Transit Development Plan was completed in September of 2011.

- Will seek grant available through MDT to conduct transit development plan.
Updates

Oregon Ave / Race Track route will change route to provide service to Ridge Waters Pool hourly during the summer.
Water Utility Division

• Brian Wilkins - Division Manager
• Bob Boone - Engineering Technician
  – 14 Operating Engineers Union
  – 18 Laborers Union
  – 1 IBEW Union

• Two Enterprise Funds
  – Municipal Water  $7.4M operating budget
  – Silver Lake Water $0.7M operating budget
  – Capital Budget  $5.6M
Water Utility Division
Butte Water System (Distribution)
Construction Projects

- **Holmes Ave. Intersection Water Main Replacement**
  - Engineer: Butte-Silver Bow
  - Contractor: H&H Contracting
  - Coop with Department of Transportation
  - Replaced 200 linear feet of 20” steel with 16” new ductile iron pipe thru intersection.

- **Basin Creek Water Treatment Plant**
  - Engineer: HDR Engineering
  - Contractor: Swank Construction
  - Completed 2017
  - Provides 7 MGD of filtered water to the South-Side Pressure Zone

- **Basin Creek PRV Building**
  - Engineer: Robert Peccia & Assoc.
  - Contractor: Diamond Construction
  - Completed 2017
  - Provides system pressures for the urban area

- **South Side Pump Station**
  - Engineer: Robert Peccia & Assoc.
  - Contractor: Diamond Construction
  - Completed 2017
  - Provides means to transport water throughout the system
Construction Projects Cont.

- **Holmes Ave. Intersection Water Main Replacement**
  - Engineer: Butte-Silver Bow
  - Contractor: H&H Contracting
  - Coop with Department of Transportation
  - Replaced 200 linear feet of 20” steel with 16” new ductile iron pipe thru intersection.

- **Meyer’s Dam (Silver Lake) Renovations**
  - Engineer: Butte-Silver Bow
  - Contractor: Zylar Construction
  - Added a new HDPE line to bypass the old abandon the spring line
  - Addition and removal of the inlet to Meyers Dam and
## 2017 Water Main Replacement Projects

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Footage (feet)</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marcia Street</td>
<td>Massachusetts Avenue</td>
<td>Sherman Avenue</td>
<td>2,970</td>
<td>12” Steel → 12” PVC</td>
</tr>
<tr>
<td>C Street</td>
<td>Oregon Avenue</td>
<td>Lowell Street</td>
<td>990</td>
<td>6” PVC Extension, removes 3 dead end lines</td>
</tr>
<tr>
<td>W. Quartz Street</td>
<td>Montana Street</td>
<td>Mid-block of Alaska &amp; Montana</td>
<td>225</td>
<td>6” HDPE replacement under sidewalk</td>
</tr>
<tr>
<td>N. Montana Street</td>
<td>Granite Street</td>
<td>Quartz Street</td>
<td>298</td>
<td>10” PVC Relocation → courthouse retaining wall</td>
</tr>
<tr>
<td>S. Arizona Street</td>
<td>Motorview Road</td>
<td>Sage Street</td>
<td>616</td>
<td>6” extension, removes 2 dead end lines</td>
</tr>
<tr>
<td>Water Line Road</td>
<td>S. Arizona Street</td>
<td>Wynne Avenue</td>
<td>2,975</td>
<td>6” extension, pressure zone modification</td>
</tr>
<tr>
<td>Basin Creek Transmission Main</td>
<td>Davidson’s Property</td>
<td></td>
<td>315</td>
<td>24” Steel → 24” Ductile Iron Pipe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>8,388</strong></td>
</tr>
</tbody>
</table>
Water System Control & Monitoring

- **Hardware**
  - **Pressure Regulating Vault (PRV)**
    - A structure (i.e. underground vault, and/or building) that houses pressure regulating apparatuses such as pressure reducing valves, pressure sustaining valves, or pressure relief valves.
  - **Pressure Transducer**
    - sensor that shows the pressure at a certain point.
    - Installed on upstream and downstream sides of PRVs.
  - **Flow meter**
    - sensor that shows the flow rate at a certain point.
    - Installed on a downstream port located on the PRV.
  - **Antenna**
    - Transmits the data collected from the sensors to the Moulton Treatment Plant. The information received at the Moulton gets logged and dispersed into the system facilities for read out.
Software

- Wonderware® by Schnieder Electric
  - Updates display in real-time data every 15 seconds
  - Data presented – (5 Menu Screens)

All values menu  Overview menu  Level menu  Flow menu  Pressure menu
Flowmeter
In downstream port of PRV
Noted by “FLOW”

downstream Pressure transducer

Upstream Pressure transducer
Remaining 2 sources projected for monitoring
Butte Distribution System Leaks
Leak History

- Average Leaks per Year (1963 – 2016) was 402.7
- 2017 Leaks (through 10/31) is 110.
- Pressure Zone SCADA monitoring was operational by 10/1/2016 allowing personnel to make system adjustments with real-time data.
- Majority of older pipe in Butte is located on the flats (Southside Zone).

- We Now Have the Ability to do Data Analysis
Historical Data

Butte Silver Bow Department of Public Works - Water Utility Division - Leak History

- Leaks
- SCADA Installed
METRO Division

- Matt Moore - Division Manager
- Jonathan Bargmann - Engineering Technician
- Bob Farren - Rate Analyst
  - 18 Operating Engineers Union
  - 4 Laborers Union
  - 1 Clerks Union

Two Enterprise Funds
- Municipal WW $5.9M operating budget
- Storm Water $0.4M operating budget
- Capital Budget $2.1M
2017 Metro Maintenance and Construction Projects
2018 Butte-Silver Bow Engineering Excellence Waste Water Treatment Plant Award
2017 Sanitary Construction Totals

Raised Manholes = 28
Skirted Manholes = 41
Point Repairs = 22
Repaired Manholes = 13

Initiated a smoking program to assist in locating and fixing illicit connections between the Sanitary and Storm Sewer Systems.

Skirted Inlets = 39
New Inlets = 12
Repaired or Replaced Inlets = 27

Butte High Storm Water Improvements: 5 new Inlets, 6 repaired inlets, 130 Feet of New pipe, 200 Feet of upsized pipe. A 8000 cubic foot retention gallery to abate storm water.
Gold and Alabama Street Re-Route Project 2017

- This Re-Route Project was completed to add onto the existing infrastructure to provide better service to St James and surrounding community.
- The total footage of new pipe installed: 655 Linear Feet
- Total Cost: $121,322.30
2017 Foam And Jet Maintenance Totals

- Camera footage of 74,000 feet of Pipe in 2017.
- Jetted 74,000 Feet of Pipe in 2017.
- Foamed 42,000 Feet of Pipe in three months in 2017. Our Foamer was down for two Months prior to the acquisition of the new Vactor truck. (Foam Kills Roots)
2017 Storm Water Low Impact Design Projects

Original Mine Yard
Total Storage Volume: 8,000 Cubic Feet

Parking Lot on Front and Utah
Total Storage Volume: 2,000 Cubic Feet
2017 Surplus Materials
Liquidation for Butte-Silver Bow through:
PublicSurplus.com

Total Units Liquidated: 16
Total Funds from sales: $99,122.55
Units Liquidated from Water, Metro, Roads, and BSB Fire Department.

We continue to expand the utilization of the Public Surplus Website to other Divisions within the County.
2017 Retaining Wall Project

The total Weight of Block Installed in the wall is 1.3 million Pounds.
There is a Total of 635 Pre-cast concrete blocks.
The total Length of Fence installed is 287 linear feet of 6 foot tall Ornamental Three Rail Industrial Steel Fence.
The 15 New Angled Parking Spaces are a very Popular Addition to the Courthouse Area.
2017 Retaining Wall Project

- Independent Engineers Estimate
  - $548,634
  - 143 Calendar Days to Substantial Completion

- Design and Construction Oversight Probable Cost
  - $96,000

- Total Project Cost via Conventional Design/Bid
  - $644,634

- Butte-Silver Bow Constructed Cost
  - Outside Costs $211,651       Force Account Costs $179,670
  - Total Costs $391,321
  - 157 Calendar Days to Substantial Completion
  - 22 Days were Lost Accommodating the Court
Road Division

- Nick Sandford - Division Manager
  - 6 Operating Engineers Union
  - 5 Laborers Union
  - 9 Teamsters Union
  - 1 Clerks Union
  - 1 IBEW Union

- Seven General Funds
  - Road $3.4M operating budget
  - Traffic $0.4M operating budget
  - Bridge $0.3M operating budget
  - MD #1&4 $0.4M operating budget
  - MD #2 $0.1M operating budget
  - MD #3 $0.01M operating budget
  - Sidewalk Program $0.35M operating budget
  TOTAL OPERATING FUNDS $4.96M

- Capital Budget $1.6M
Road Division
2017 Road Projects

- Paved 16 Locations
  - 10,782 Tons of Asphalt Produced
  - 2.75 Miles of Roads Paved
  - Includes Original Mine Yard Trail, Copper Mtn Parking Lot, Skyline Park Trail Section, and Stamp Mill Parking Lot Section

- Installed Millings at 3 Locations
  - 1.58 Miles of Rural Roads Milled

- Scrub Sealed and Fog Sealed 23 Streets
  - 5.06 Miles of Streets Scrub and Fog Sealed
2017 Concrete Work

• The 2017 BSB Sidewalk Program constructed 18 sidewalks and/or curb and gutter
• Our contractors constructed ADA corners, curb and gutter, and median islands at 8 locations
2017 Road and Concrete Work
Maintenance Work

- 9,799 Potholes patched
- 23 Roads crack sealed
- 95 Alleys improved
- 43 Rural roads graded and/or graveled
- 1,015 Signs built, installed, or replaced
- 14 Locations where culverts were installed or replaced
- 88 Streets striped
Grants/Studies

• Moulton Road Safety Realignment Study FLAP Grant

• Roosevelt Drive Upgrade Study FLAP Grant

• Montana Air and Congestion Initiative (MACI) Equipment Purchase Program – 2 Flusher Trucks and 1 De-icer Tank

• Empire Street Bridge Evaluation
Asphalt – 3 Bin Mix

• Butte-Silver Bow Produces a 3 Bin Asphalt Mix
  – Using a Mix Design – Prepared by Pioneer Technical
  – Calibrated Aggregate and Oil Quantities
  – Test Strips
Dewey Blvd – Possible 2018 Project

• Public Works is evaluating reconstruction of the western section of Dewey Blvd.
  Replace Water Main, Rebuild Roadway.
  • Access to Business and the Post Office
  • General Disruption of Normal Traffic Patterns
Questions

• Transit Division
• Water Division
• METRO Division
• Road Division