

City of Missoula

PUBLIC WORKS & MOBILITY



Annual Report 2023



Director's Message



We are pleased to present the 2023 Public Works & Mobility Annual Report. This report highlights our accomplishments in 2023, our goals for 2024, and the metrics we use to measure our success.

We know you rely on us for clean water, reliable sewer, and safe streets. We maintain hundreds of miles of pipes, pumps, streets, and sidewalks to keep them in good working order. When a water pipe breaks, we are there to answer the phone and respond quickly. When you have a traffic safety concern, we investigate and work to solve the problem. We build new infrastructure, we make sure it meets the City's long-term needs.

Those challenges feel bigger and more complex as Missoula grows, so we continue to reinvent ourselves to get better, be more efficient, and focus our resources to accomplish the City's goals.

In this report, you will find information about how PWM is working to implement the City's strategic plan and the purpose, organization, key facts, metrics, revenues, and expenditures for each PWM division. We will use this report to measure our progress during the year to ensure we are on track to accomplish our goals.

We take pride in helping you, our citizens and our customers, navigate the changes in your lives by providing reliable and dependable service. As always, we welcome your feedback. Please feel free to reach out at keenej@ci.missoula.mt.us.

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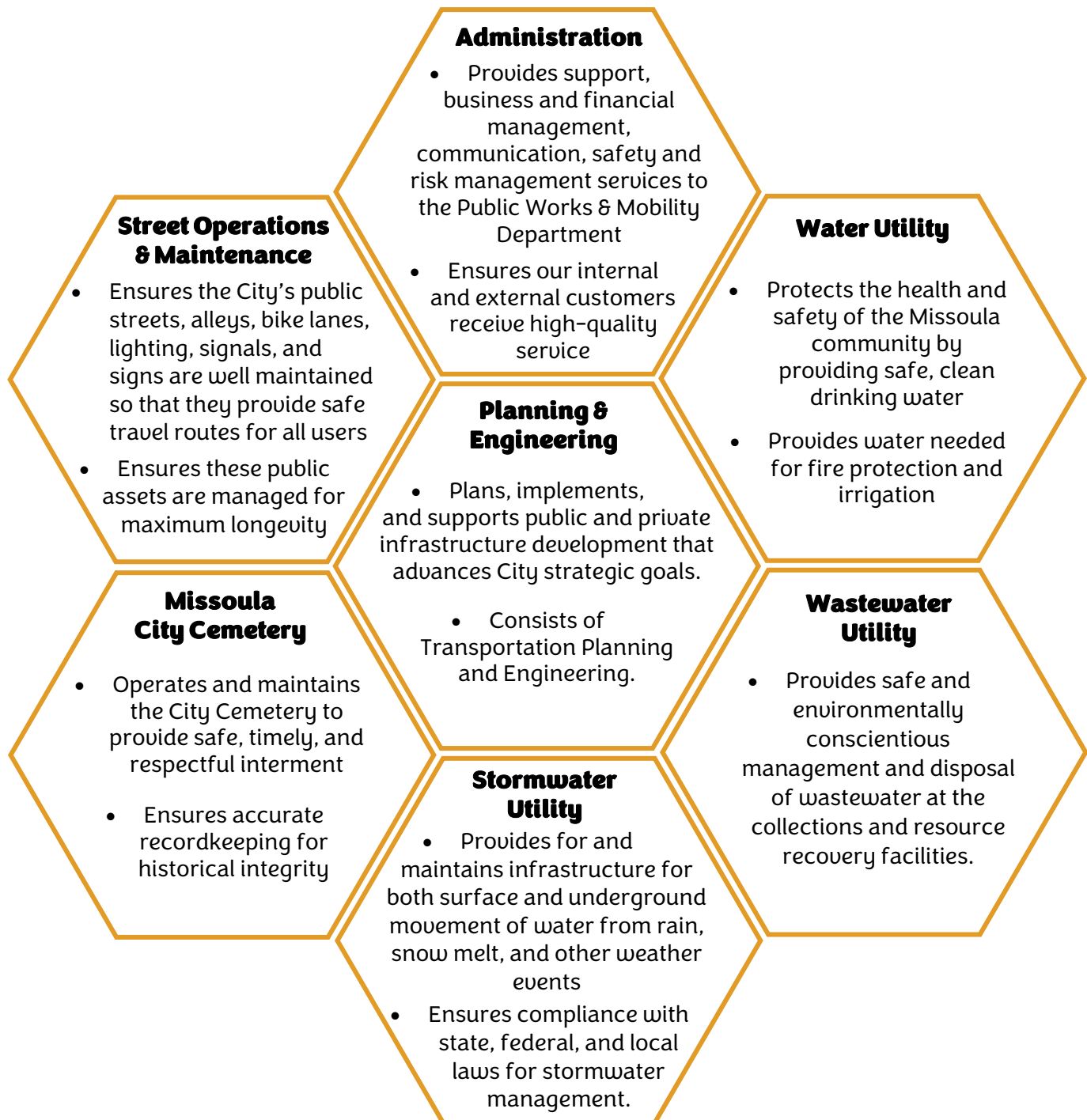
Front cover, top: Missoula Water and Engineering staff participate in safety training; bottom left: Street Operations & Maintenance Division's Traffic Safety employees install speed detector sign at the Scott St. bridge; bottom right: Bicyclists on the Bitterroot Branch Trail wait for the signal at the Johnson St. and South Ave. intersection.

Mission

The Public Works & Mobility Department delivers high-quality public infrastructure for Missoula's residents, visitors, and businesses by providing safe streets, reliable utilities, and responsive customer service.

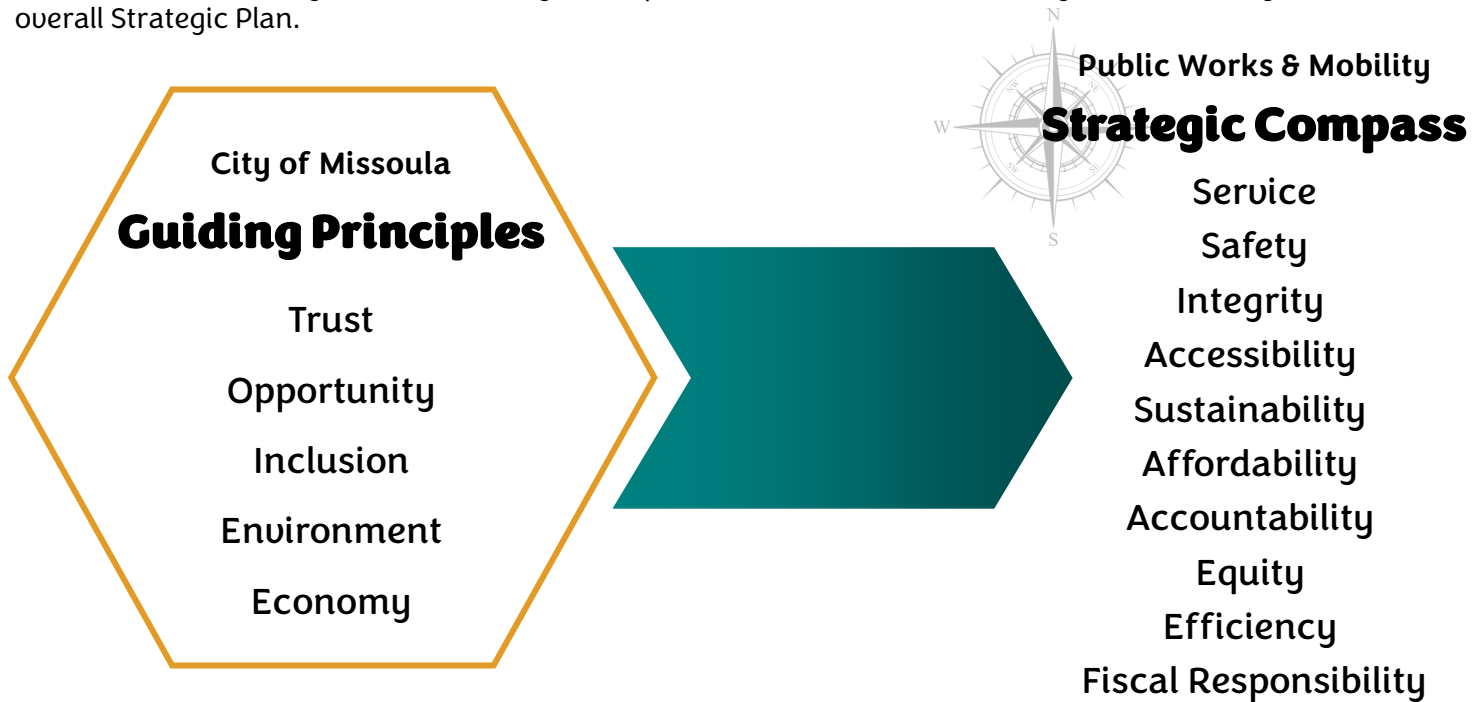
About Us

We love solving problems. We are innovators, creative thinkers, and collaborators who believe we can make people's lives better by providing reliable services and safe transportation networks. We also build and maintain infrastructure that helps facilitate affordable housing, ensures a healthy environment, and creates a sustainable place to live. We challenge ourselves to make a positive difference in our community!



Strategic Planning

Public Works & Mobility created a Strategic Compass to ensure that our work aligns with the City of Missoula's overall Strategic Plan.



- ① Community Safety, Health and Well-Being
- ② Community Design and Livability
- ③ Economic Health
- ④ Organizational Excellence and Resilience

City of Missoula Strategic Goals

1 Community Safety, Health and Well-Being

The City of Missoula focuses its efforts in public safety, health and well-being by ensuring that our **core levels of service are maintained**, our programs are innovative and efficient, and outcomes are clear and measurable.

Public Works & Mobility provides the following core services:

- Clean drinking water
- Wastewater collection and resource recovery
- Water quality and flood protection
- Streets, sidewalks, and bikeways
- City Cemetery services



Above: Streets Division personnel clear not only streets but also sidewalks on bridges and sidewalks adjacent to City-owned property.

Left: Wastewater treatment plant at sunset. The plant treats more than 7 million gallons of wastewater each day.

2 Community Design and Livability

The City of Missoula will create policy and support development that promotes economically and environmentally responsible growth that prioritizes equitable, responsive and adaptive outcomes that prioritize people and place.

Public Works & Mobility contributes by:

- Improving our process and regulations to support sustainable and equitable development and a diversity of housing types,
- Looking at our space needs to leverage City-owned land to create opportunities for growth and redevelopment,
- Investing in public infrastructure that supports safe, vibrant, and walkable neighborhoods with a variety of options for housing,
- Prioritizing maintenance and repair of existing infrastructure, particularly in underserved areas,
- Coordinating grant opportunities for key projects, and
- Promoting sustainability and resiliency to reduce negative impacts on the environment and offset the impacts of climate change



Phase 1 of the Eaton Street Community Involvement Project included facilities for transit users, pedestrians, and bike, in addition to street improvements.

3 Economic Health

The City of Missoula fosters an environment that creates partnerships that result in increased economic vitality for the community.



Public Works & Mobility furthers this by:

- Working collaboratively with external partners, including the Montana Department of Transportation, Missoula County, state legislators, and the federal delegation, on policymaking,
- Increasing our grant writing capacity as well as staffing to administer grants, and
- Building partnerships to help set grant priorities, build support for projects, and remove roadblocks.

A ribbon-cutting ceremony was held in June 2023 to celebrate completion of the first phase of the Mullan BUILD Project.

4 Organizational Excellence and Resiliency

The City of Missoula fosters an inclusive, transparent and nimble organization that provides support and training for its employees and works collaboratively to provide high-quality, responsive and innovative services efficiently and effectively.

Public Works & Mobility contributes by:

- Developing a results-oriented management culture,
- Recruiting and retaining an engaged, innovative, and diverse workforce,
- Managing space and technology needs to provide safe, healthy, and productive workspaces.
- Increasing community engagement to promote a better understanding of City services, initiatives, and resources, and
- Supporting employee safety and wellbeing by promoting a culture that integrates safety into all tasks we perform.



Water utility and engineering staff attended trench safety training.



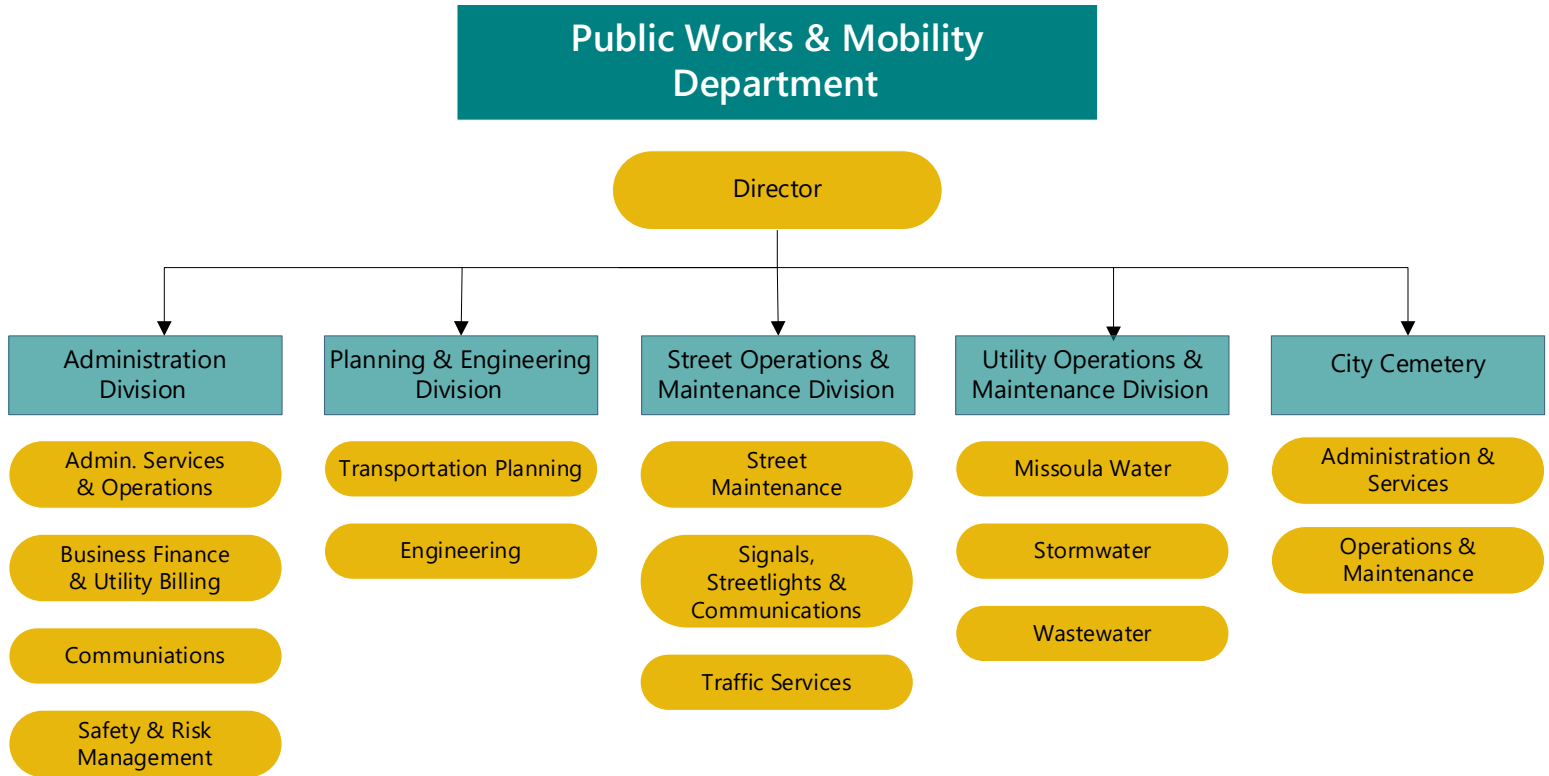
Above: Engineering, Stormwater, and Communications employees attended several City Chats in the Park events during the summer of 2023 to enhance public outreach efforts about projects and other initiatives.



Right: Stormwater Utility staff provided public education about water quality during downtown farmers markets and other events during FY23.

Organization

The Public Works & Mobility Department has 175 dedicated employees across five divisions who provide and maintain essential public infrastructure and services.



Keeping our city streets safe, in good condition, and available to all users are goals for multiple Public Works & Mobility divisions.



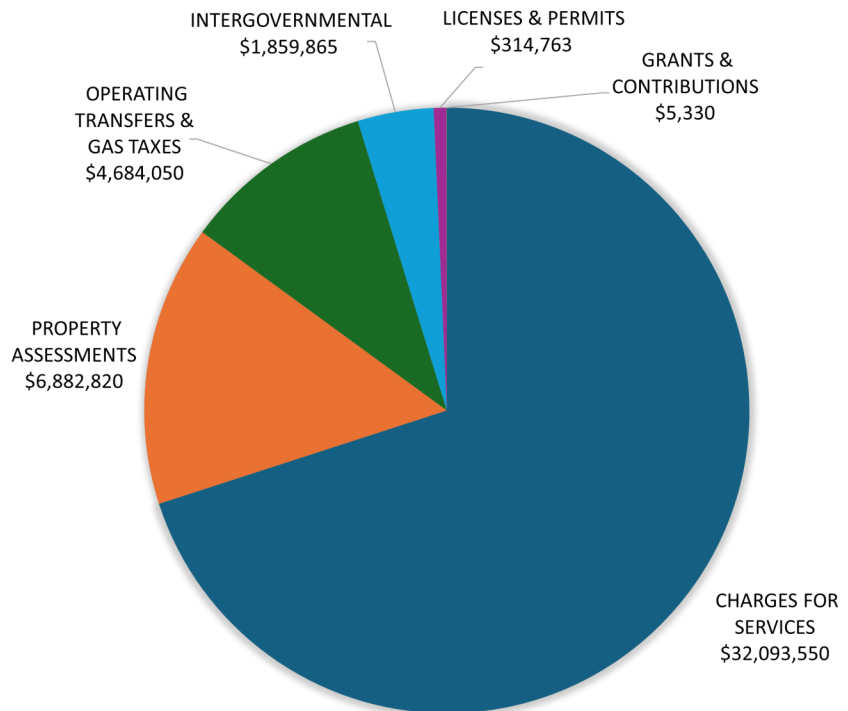
Water utility staff repair a leaking water main.

Operating Budget – FY23

PWM's annual operating budget comes from multiple sources, the majority of which are charges for utility services (Charges for Services, 70%) and property assessments (Road District tax, 15%). Other revenue comes from state gas taxes (about 10%) and payment for work we've done for other governmental agencies (Intergovernmental, 4%). Most of our expenditures are people-related (Personnel, 42%) as well as financing for capital projects and acquisition of the Water Utility (Debt Service, 25%). Other expenditures include our electricity, phone, internet, etc., costs (Utilities, 15%).

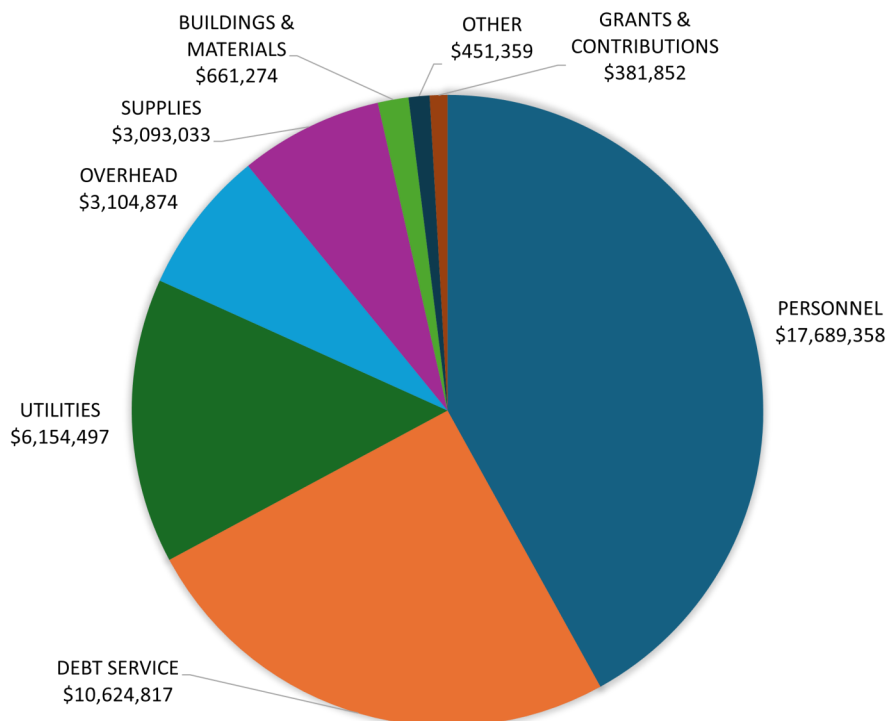
REVENUE

\$45,840,378



EXPENDITURES

\$42,161,064

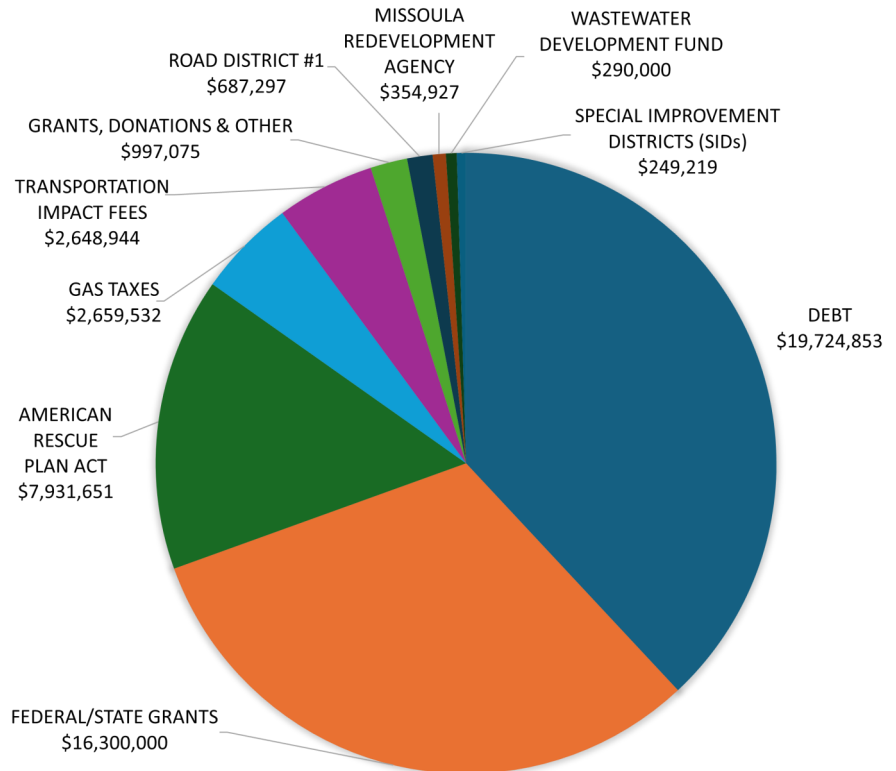


Community Investment Program – FY23

PWM's Community Investment Program (CIP) consists of capital projects included in the City's 5-year CIP and usually take multiple years to complete. The budgets shown below reflect the FY23 authorizations for projects underway during 2024. The "debt" shown under revenue includes low-interest State Revolving Fund loans and bond sales for sidewalk projects that were previously completed.

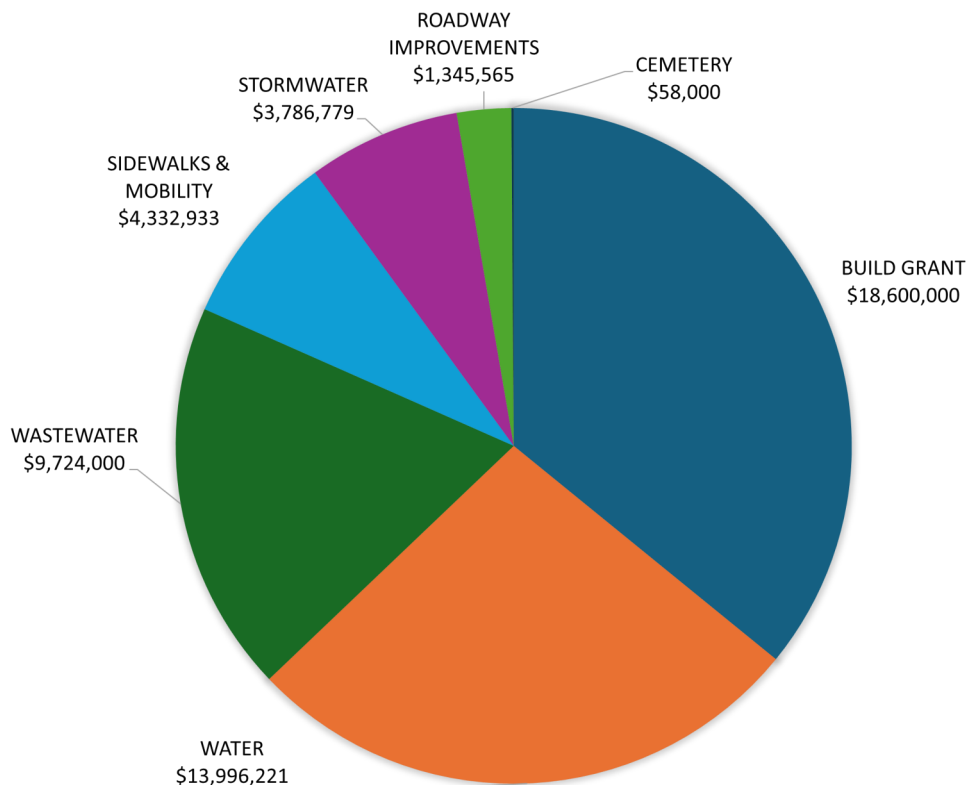
REVENUE

\$51,843,498



EXPENDITURES

\$51,843,498

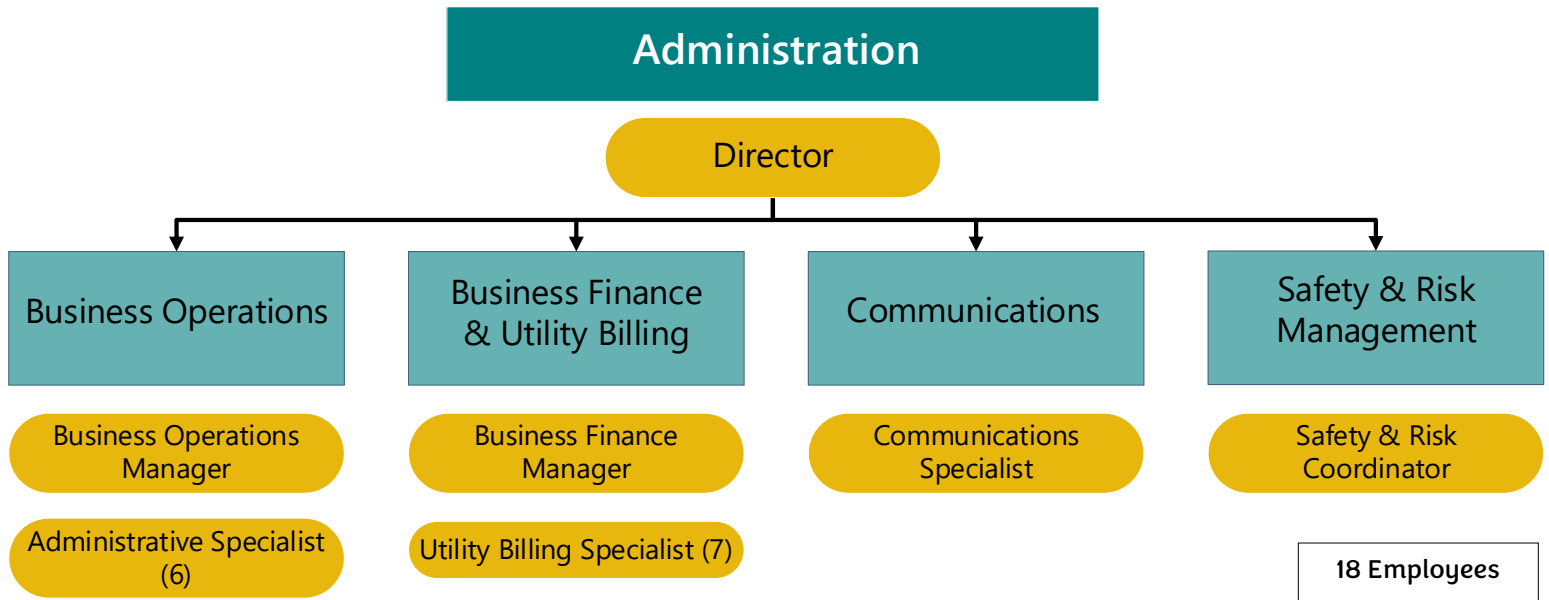


Administration

Purpose

- Provide support, business and financial management, communication, safety and risk management services to the Public Works & Mobility Department.
- Ensure our internal and external customers receive high-quality service.

Organization



Key Facts



18 Staff Members



Supports 5 Divisions, 169 employees, and 5 Office Locations



Provides Customer Service for about 27,000 Utility Customers



Staffs 5 Public Boards and Committees

Administration

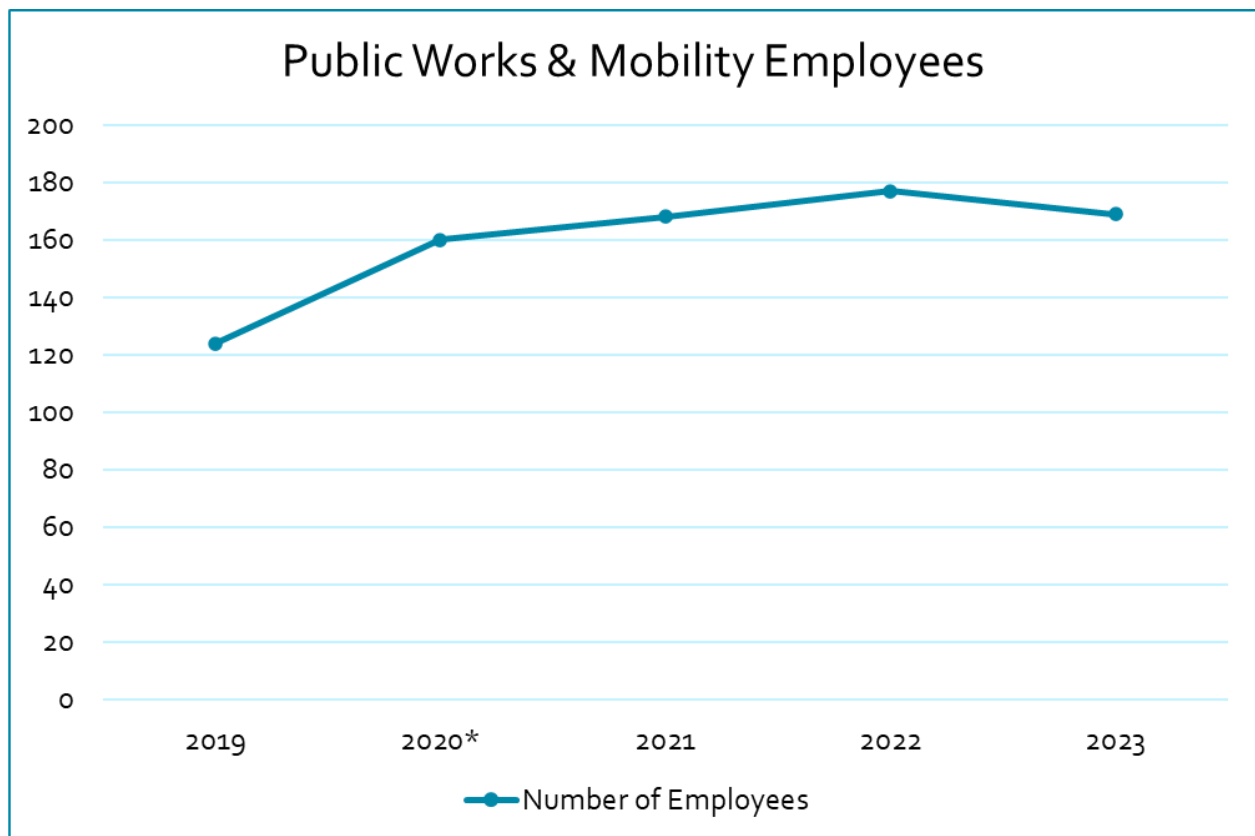
FY23 Highlights

- Improved project communication process
- Improved recruitment, retention & transition planning
 - ⇒ 38 Total Recruitments
 - ⇒ 20 New Hires
 - ⇒ 5 Transfers within the Department
 - ⇒ 7 Promotions
 - ⇒ 9 Current Vacancies (5%)
- Implemented career ladders & new employee onboarding
- Improved safety training & procedures

FY24 Goals

- Address space planning
- Increase engineering capacity through federal funding and grants
- Implement financial management policies
- Complete emergency response planning
- Provide targeted public outreach and engagement for neighborhood projects and other activities

Metrics



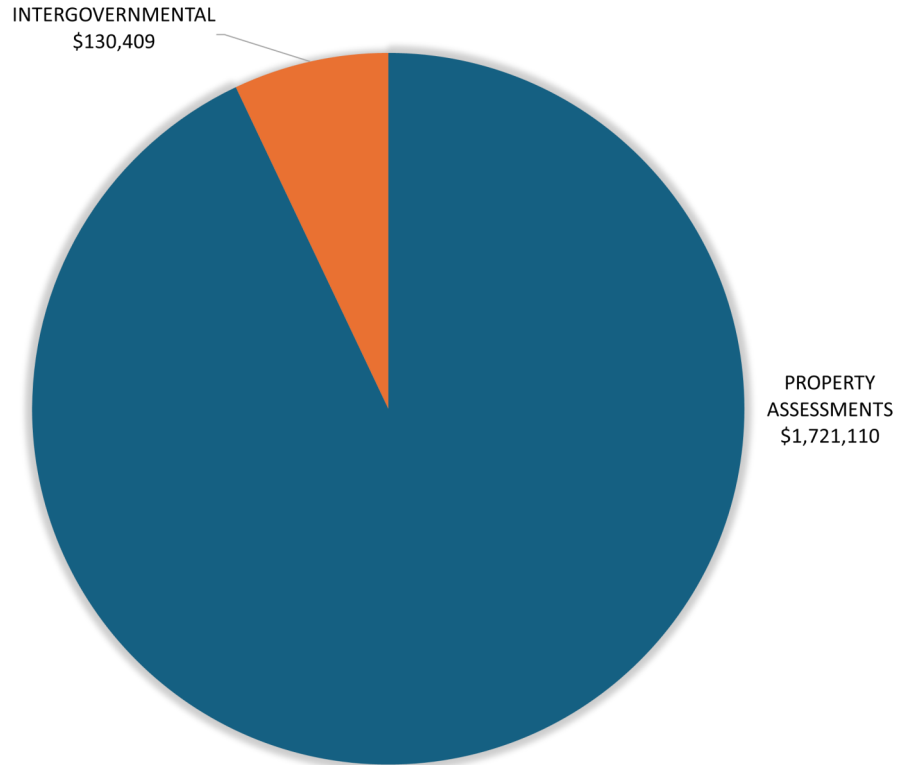
* 2020 Reorganization moved Transportation Planning & Engineering staff from Development Services to Public Works & Mobility

Administration Budget - FY23

Road District #1

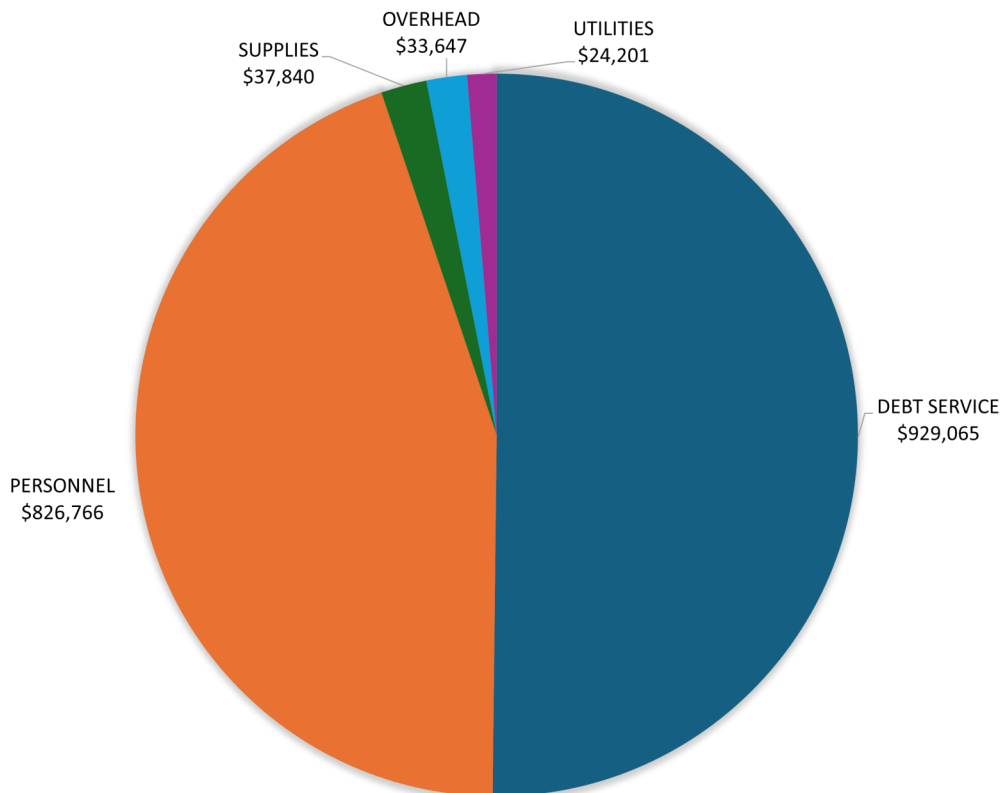
REVENUE

\$1,851,519



EXPENDITURES

\$1,851,519

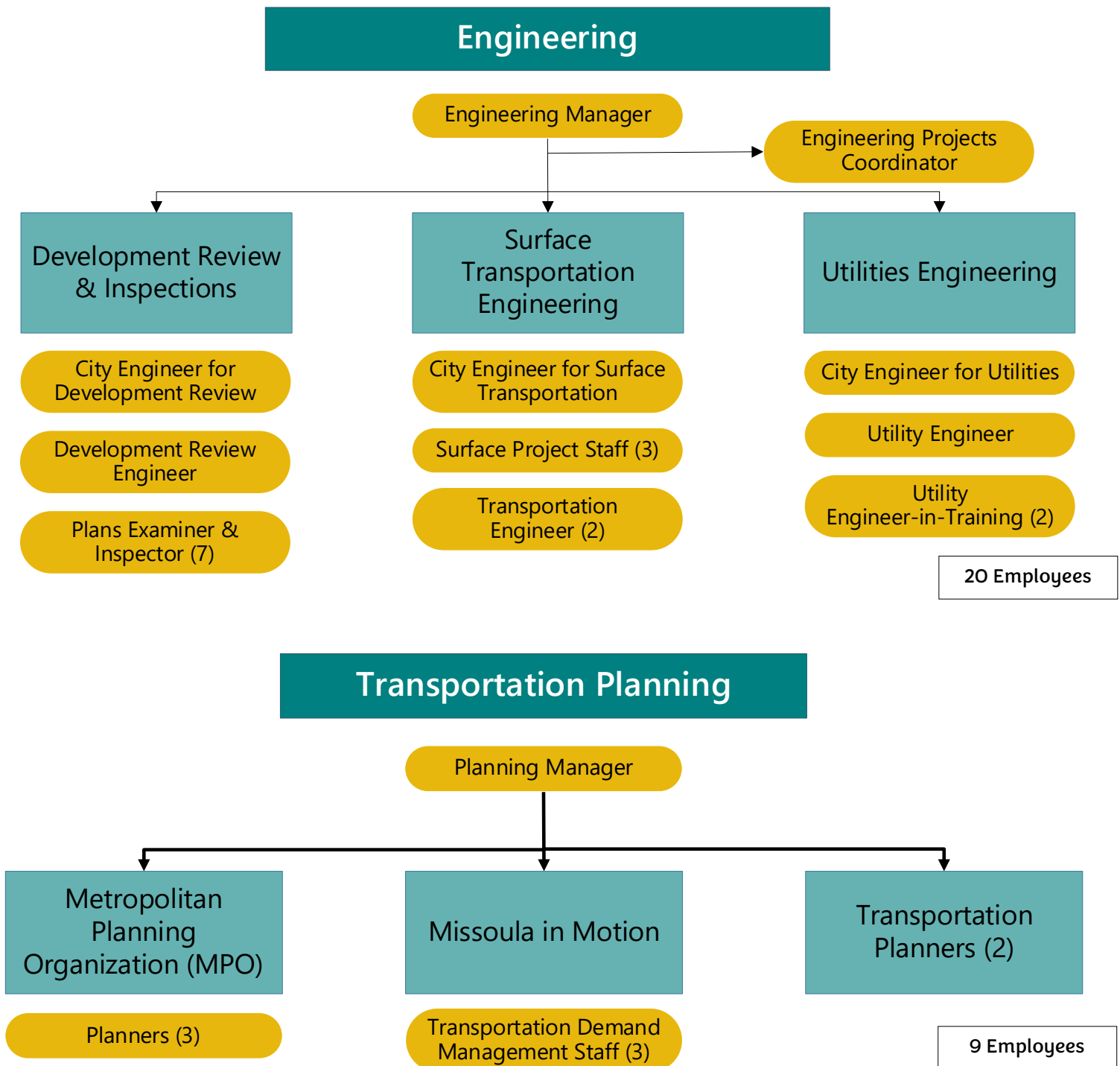


Planning & Engineering

Purpose

- Plan, implement, and support public and private infrastructure development that advances City strategic goals.
- Consists of Transportation Planning and Engineering subdivisions.

Organization



Planning & Engineering

Key Facts



15 Water main projects completed



5% annual increase in bike & ped traffic across the primary commuter network (2019 - 2021)



17% increase in serious & fatal injuries (5-year average) from crashes



697 building permits issued and approved in FY23



Constructed 948 solar panels at the Wastewater Resource Recovery Center at no cost to ratepayers. Planning is underway for Missoula Water solar project in FY24.

FY23 Highlights

- Installed rectangular rapid-flashing beacons (RRFBs) and enhanced crossings at 7 locations
- Added 4 new miles of bike lanes (centerline) since 2020; average 1.3 miles per year
- Submitted 7 grant applications; received \$34M in federal funds and \$6.1M for Metropolitan Planning Office (MPO)

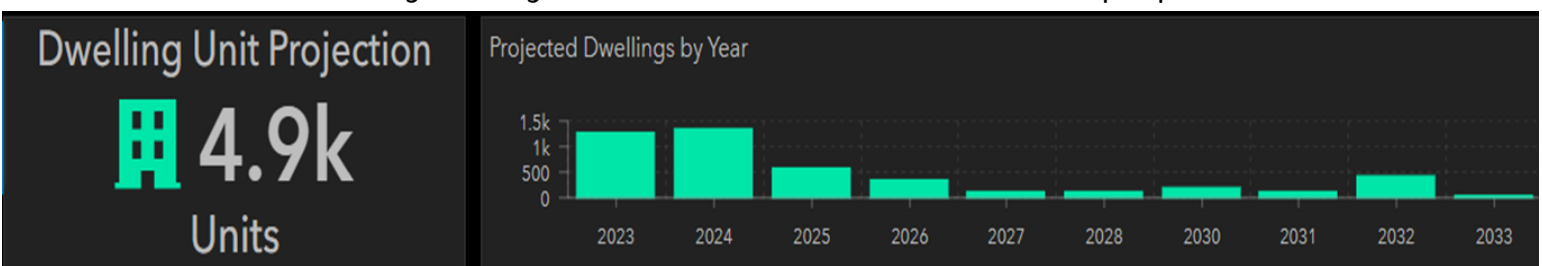
FY24 Goals

- Complete the Street Typologies Project
- Start design on federal grant projects. Hire staff to manage these projects.
- Start construction on 7 water distribution and 2 wastewater collection projects (funded through ARPA grant and SRF loans).
- Improve project management and City processes.
- Initiate utility facility plan updates.

Metrics

Future Development Pipeline

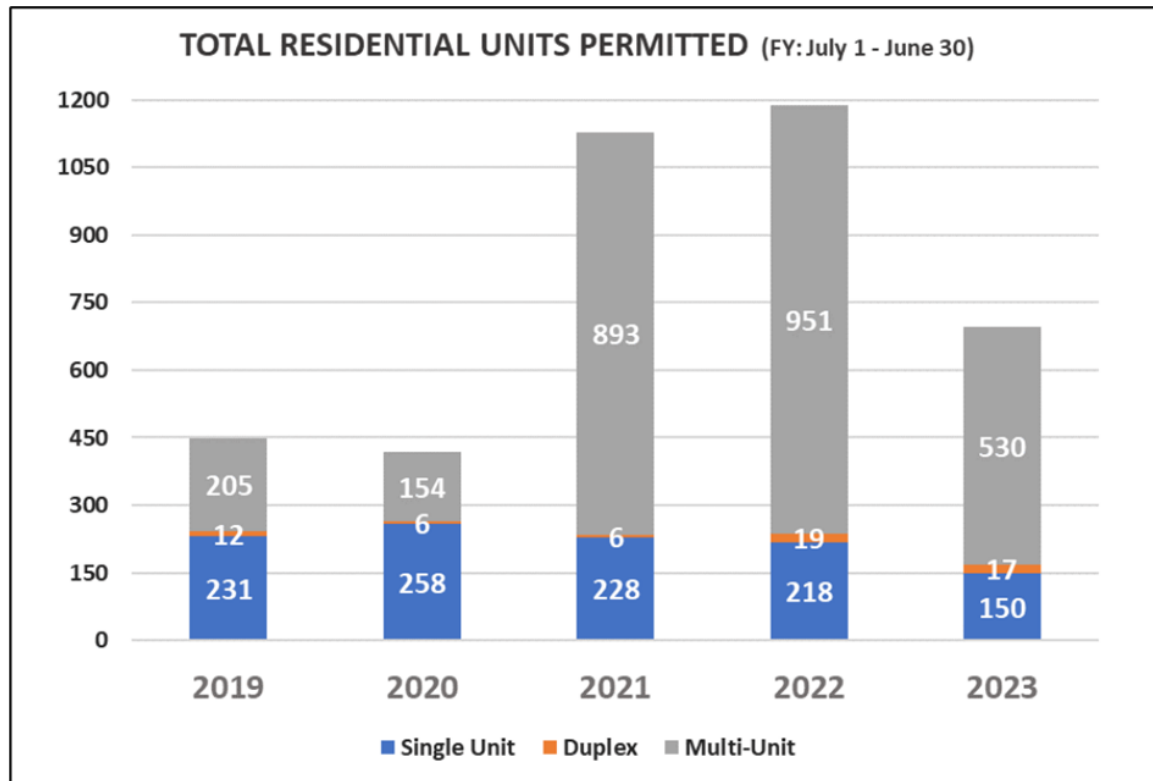
Predicts 4,900 new dwelling units by 2033, based on entitled lots and developer plans



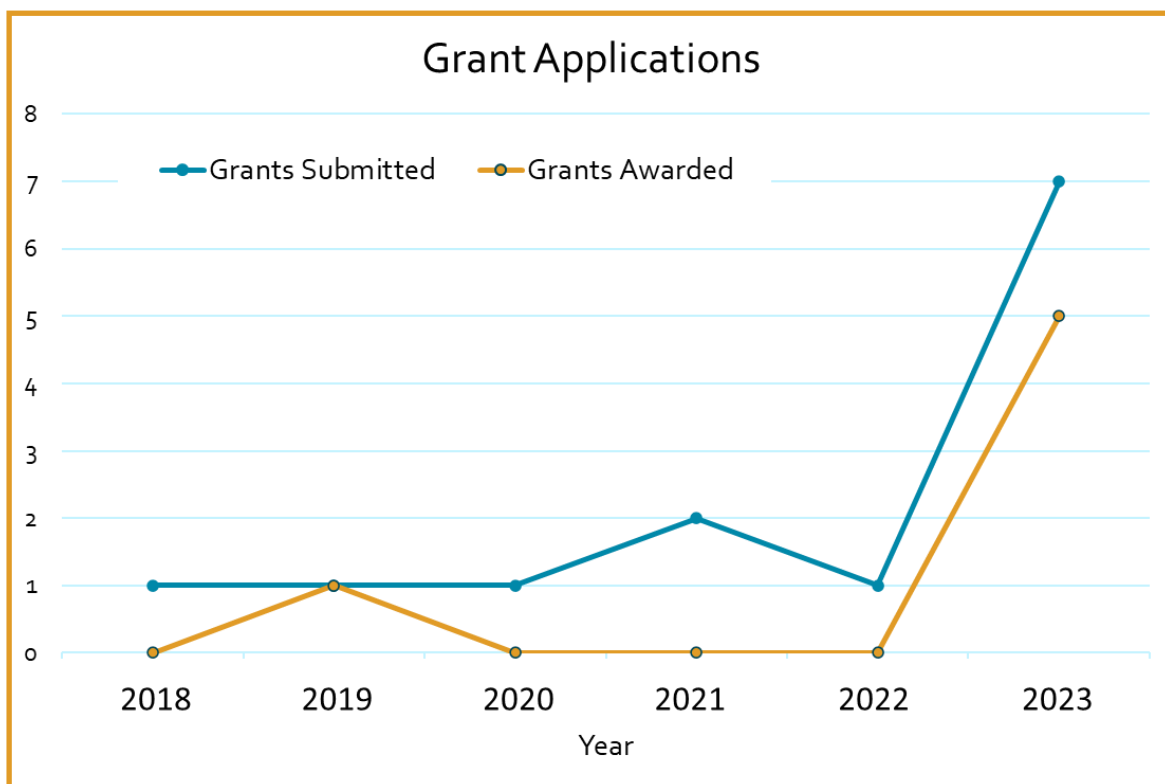
Source: City Development Map dashboard

Planning & Engineering

Metrics

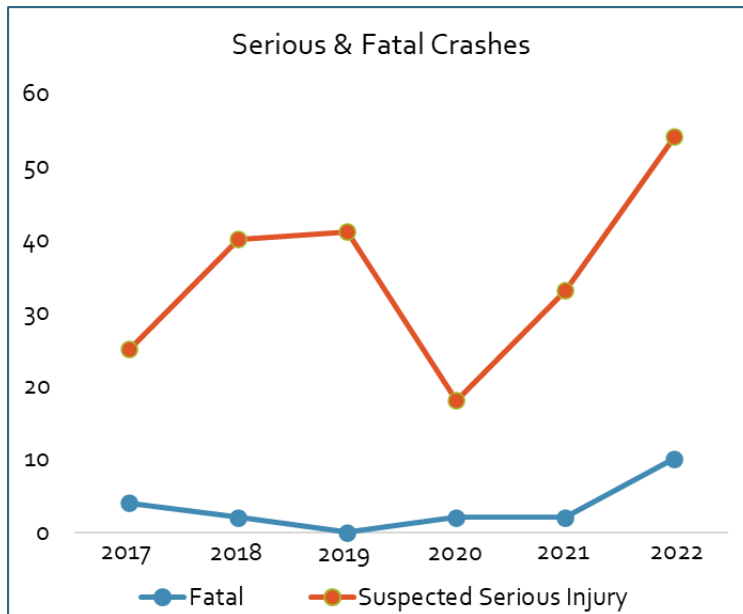


Source: CPDI Budget Presentation, July 19, 2023

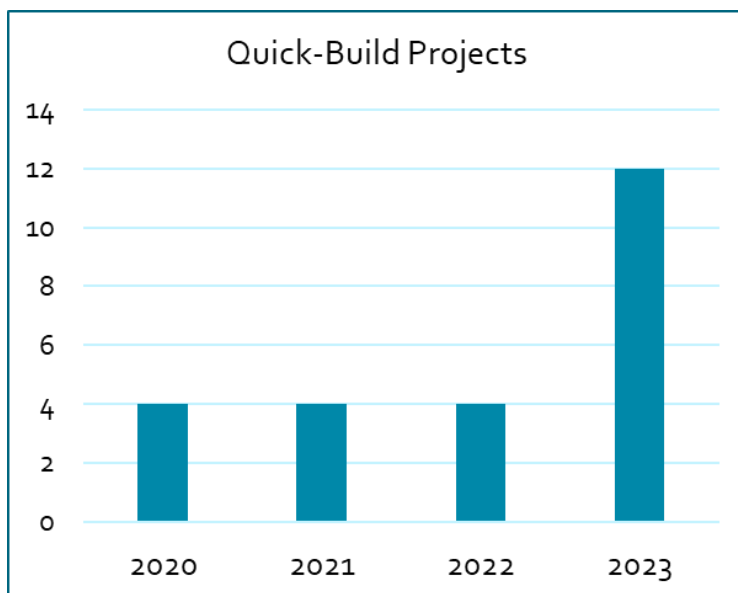


Planning & Engineering

Metrics



- The rise in serious and fatal crashes in Missoula is a concern. There were 10 fatal and 54 serious injury crashes in 2022.



- 24** Quick-build traffic calming/safety projects have been installed to date, resulting in:
 - ⇒ 25 - 60% volume reduction
 - ⇒ 5 - 30% speed reduction



Above: Rectangular rapid-flashing beacons (RRFBs) are pedestrian-activated safety features that are installed at locations where drivers may need enhanced notification that people are crossing the street.

Engineering Budget – FY23

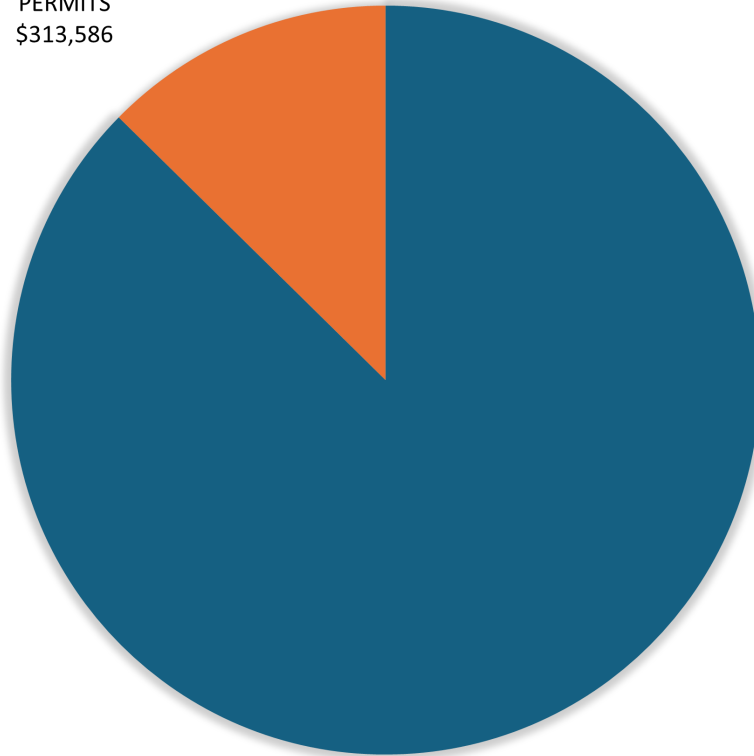
Road District #1

REVENUE

\$2,483,989

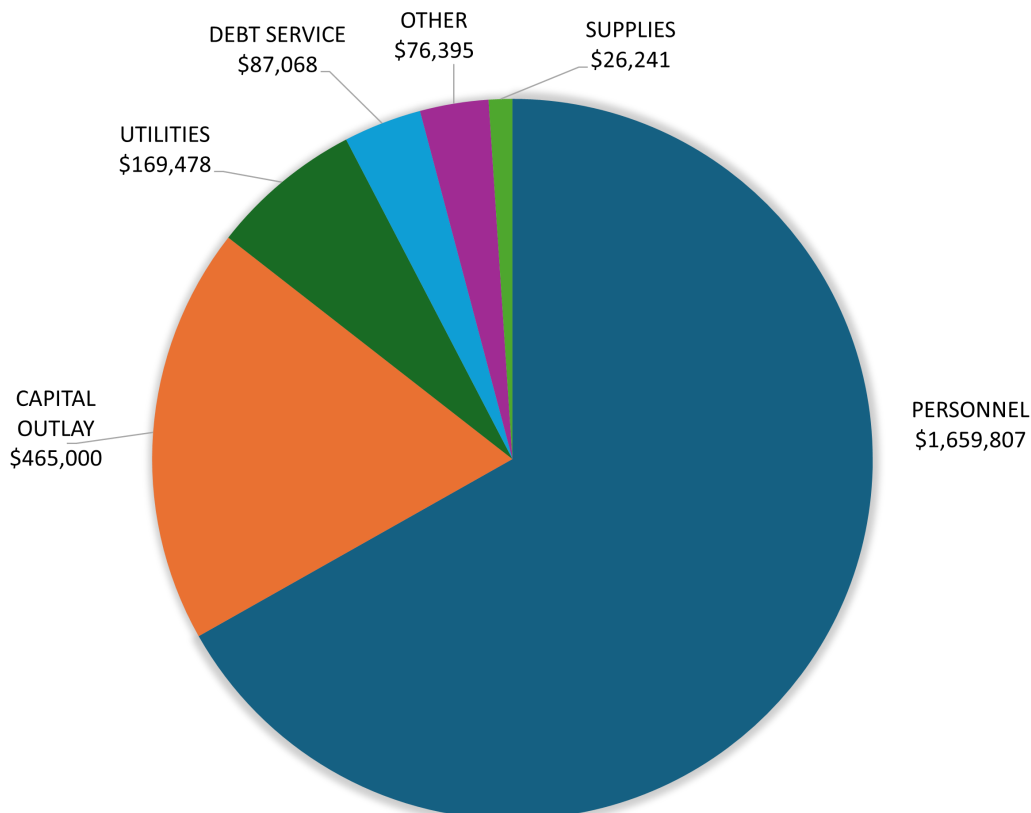
LICENSES &
PERMITS
\$313,586

PROPERTY
ASSESSMENTS
\$2,170,403



EXPENDITURES

\$2,483,989

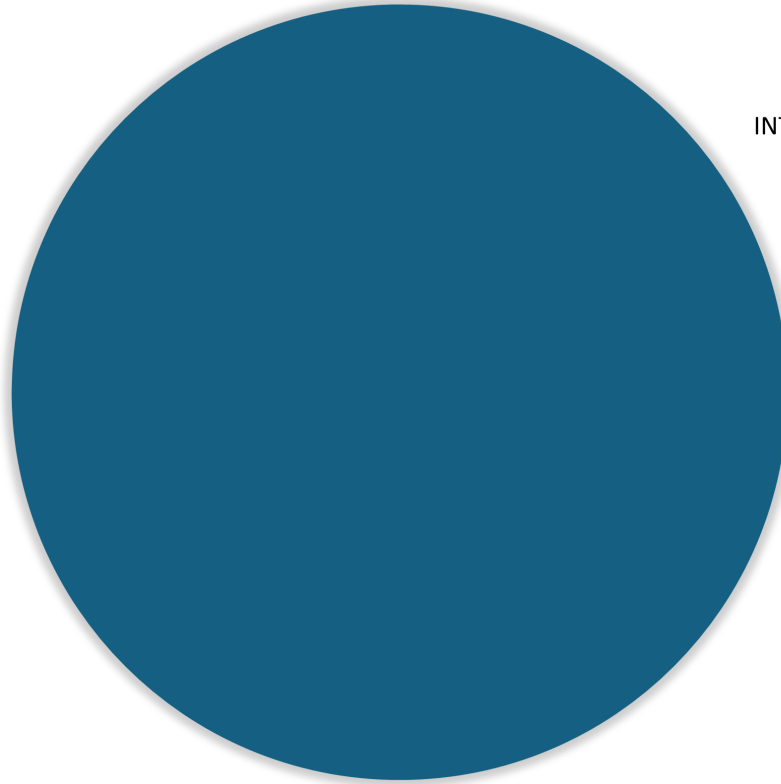


Transportation Planning Budget - FY23

Special Revenue Fund

REVENUE

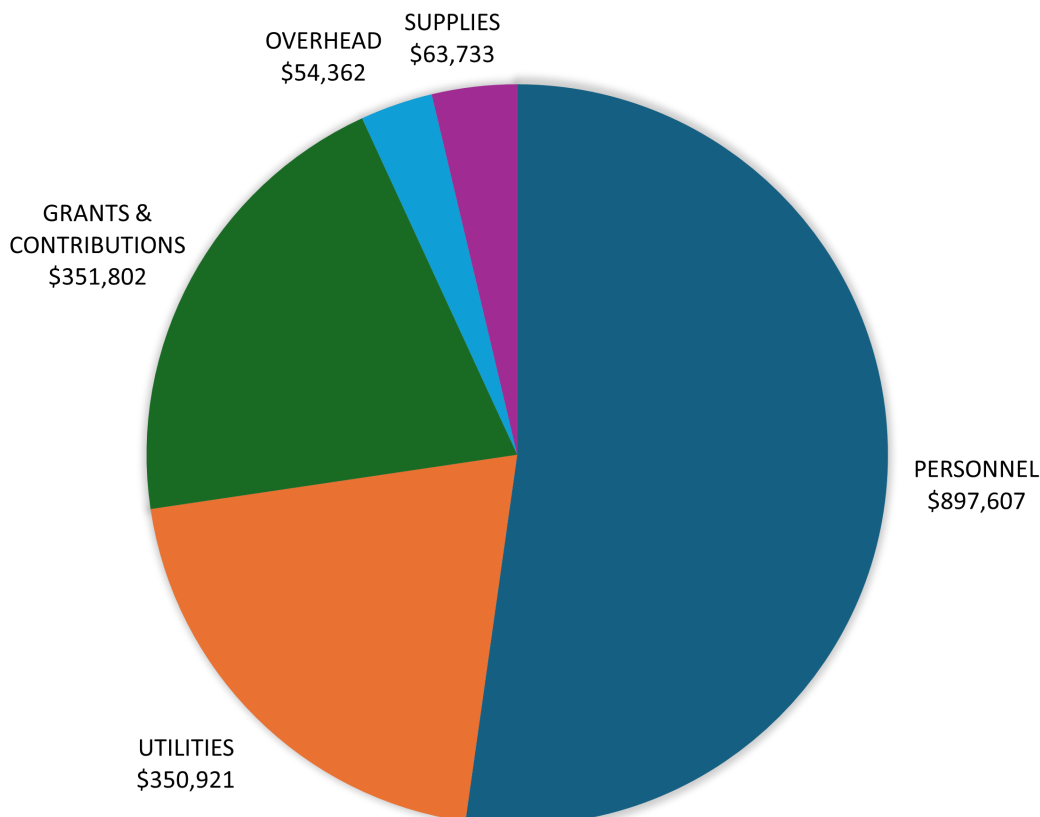
\$1,718,425



INTERGOVERNMENTAL
\$1,718,425

EXPENDITURES

\$1,718,425



PERSONNEL
\$897,607

UTILITIES
\$350,921

GRANTS &
CONTRIBUTIONS
\$351,802

OVERHEAD
\$54,362

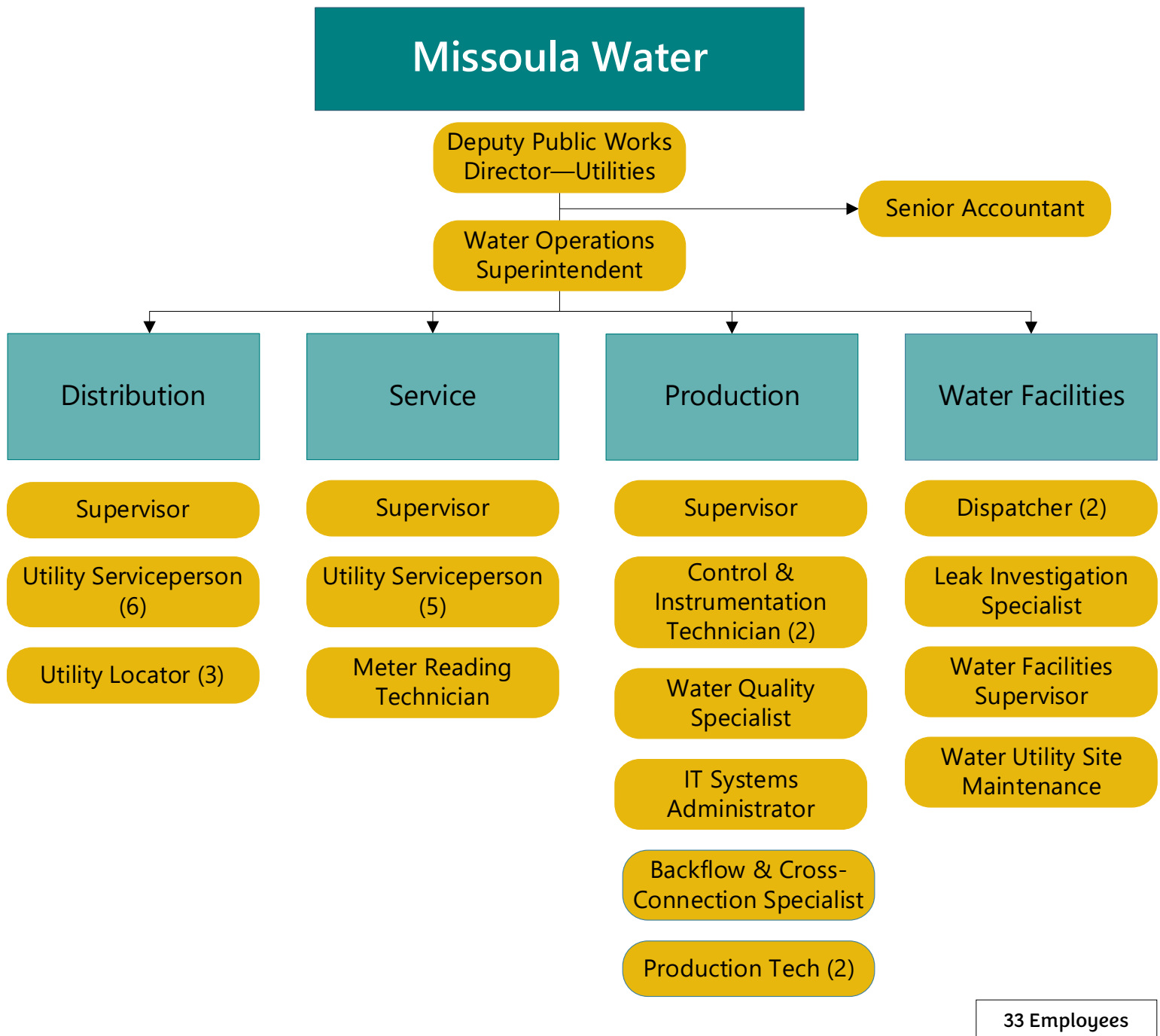
SUPPLIES
\$63,733

Water Utility

Purpose

- Protect the health and safety of the Missoula community by providing safe, clean drinking water, and
- Provide water needed for fire protection and irrigation.

Organization



Water Utility

Key Facts & Metrics



Maintained all 340 miles of mains, 40 wells, 26 storage facilities, 22 booster stations, and 36 pressure reducing stations



Produced 9.4 billion gallons of water, meeting all drinking water standards in 2022



Conducted 1,480 hydrant inspections and operated 1,406 valves in FY23



Replaced 2,625 water meters in FY23, bringing the total to 13,700 meters replaced



Collected thousands of water samples to test for bacteria, lead & copper, nitrate, volatile organics, synthetic organics, inorganic chemicals, radionuclides, per- and polyfluoroalkyl substances (PFAS), and many other parameters

FY23 Highlights

- Completed installation of 3 tanks
- Reduced leakage by over 1,000 gallons per minute (equivalent to a 100-horsepower pump running 24/7)
- Replaced 1.5 miles of water main

FY24 Goals

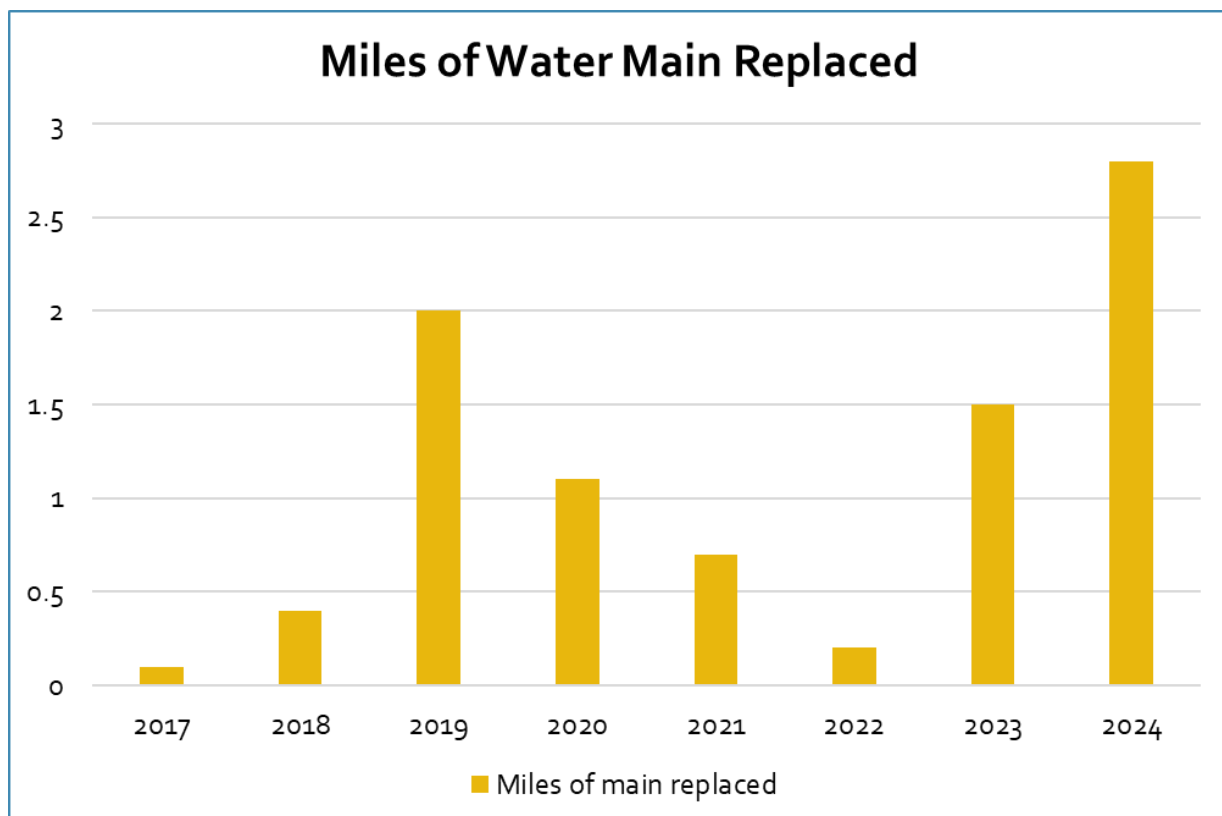
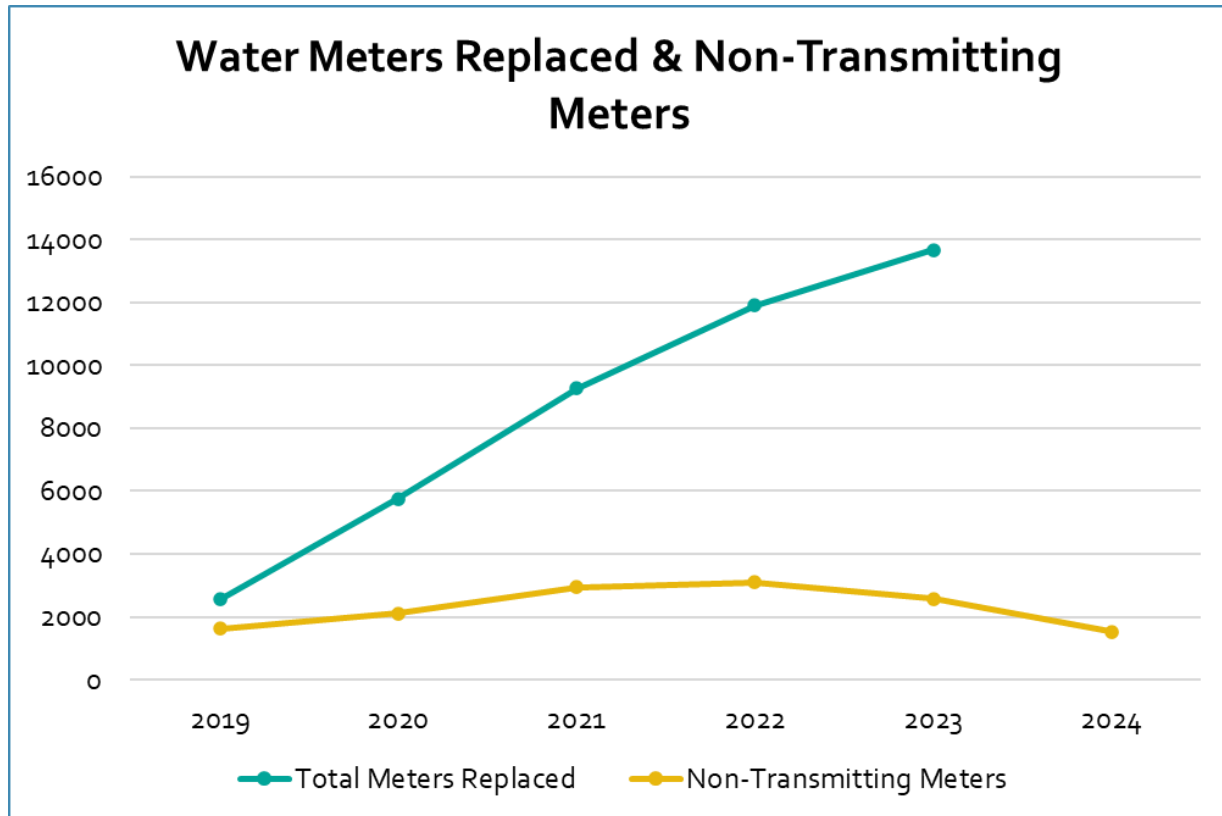
- Continue locating and repairing water main and service line leaks
- Upgrade SCADA/telemetry
- Continue water meter replacement project
- Install solar at 9-10 well sites to reduce energy usage (targeting 500 KW total generation capacity)
- Complete lead service line inventory



One of three new water tanks completed in 2023 that will increase the City's water storage capacity.

Water Utility

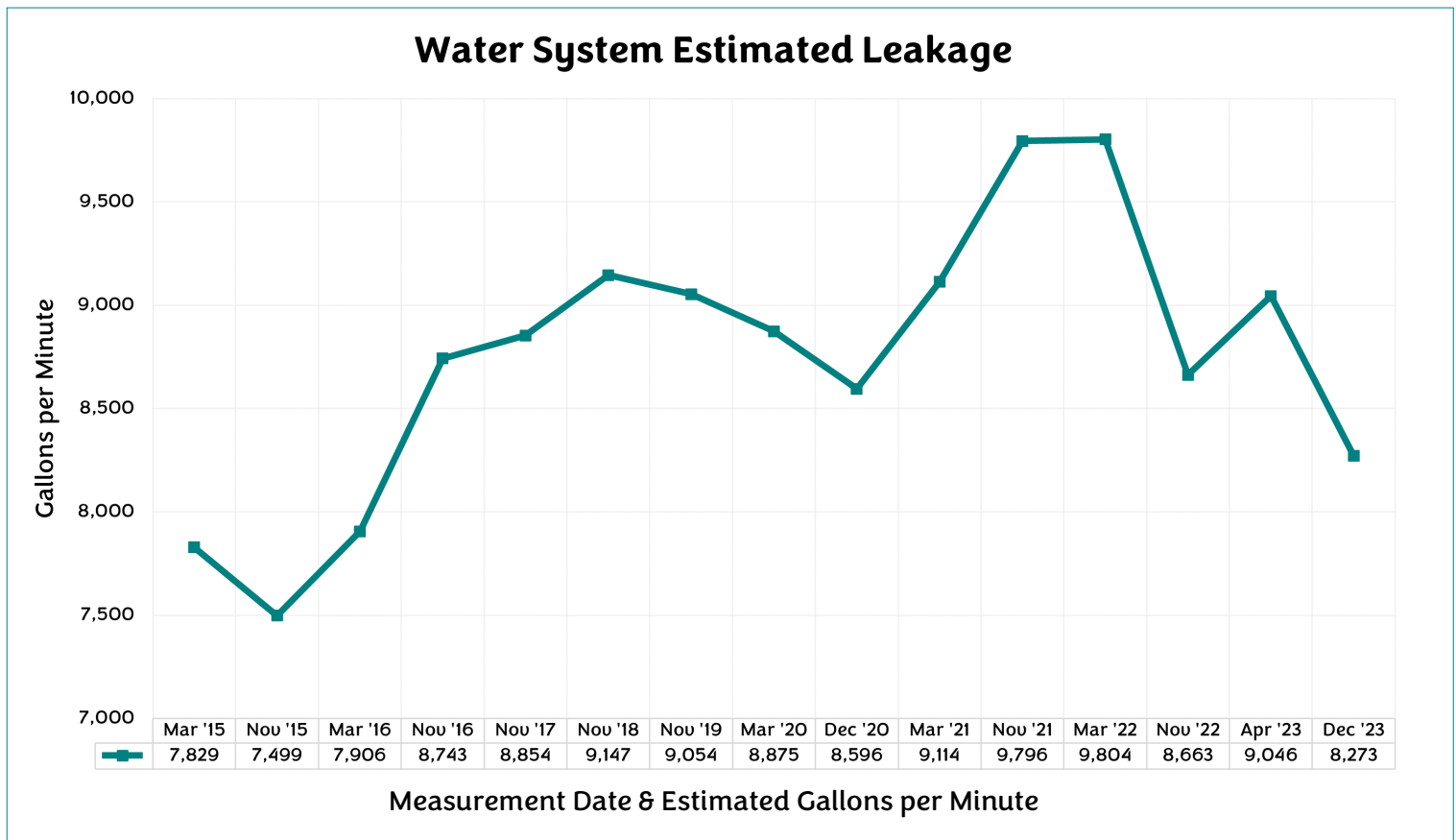
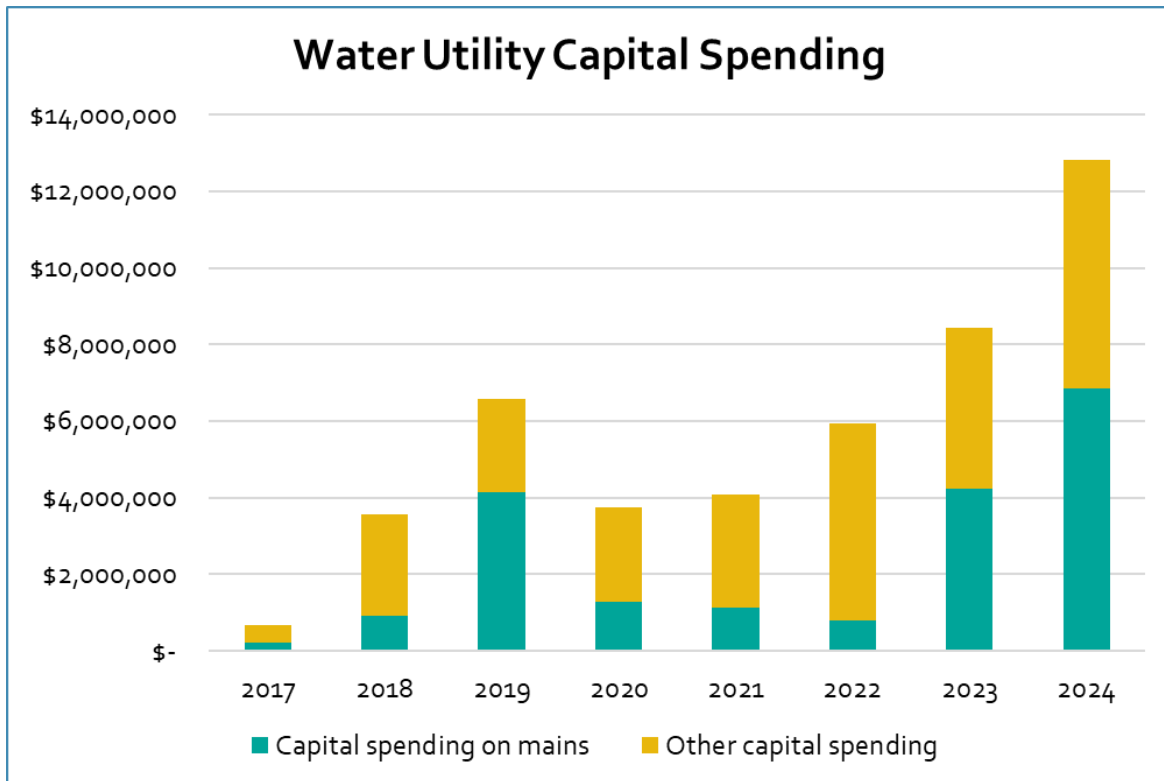
Metrics



Goal: Replace 1% per year (3.4 miles)

Water Utility

Metrics

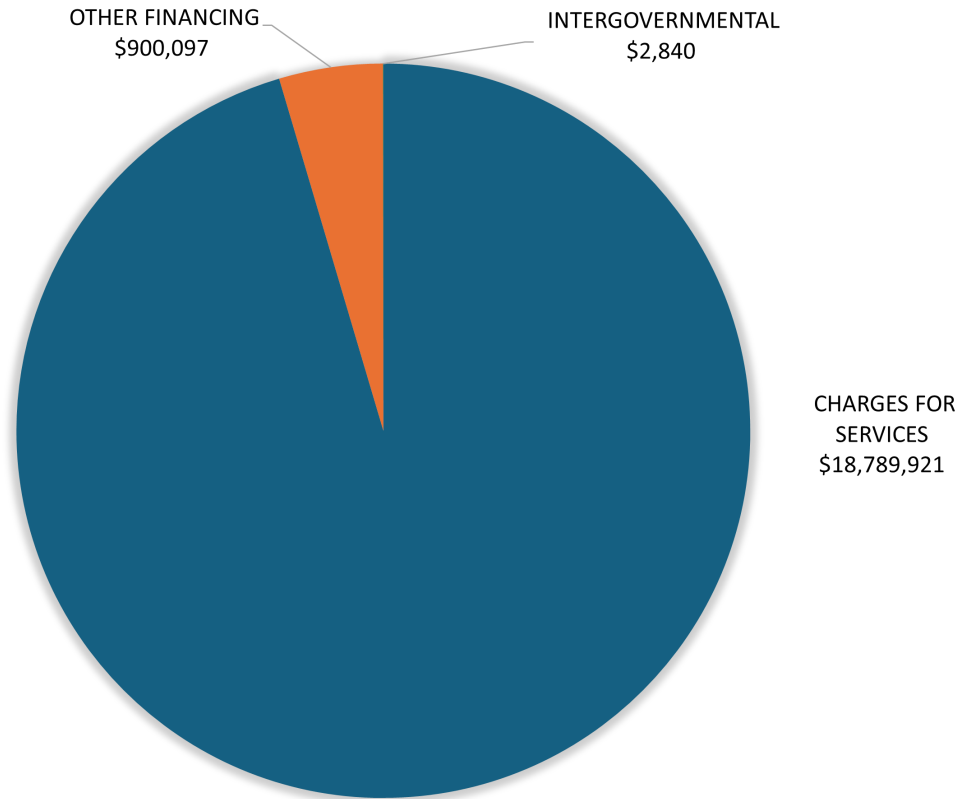


Water Utility Budget – FY23

Enterprise Fund

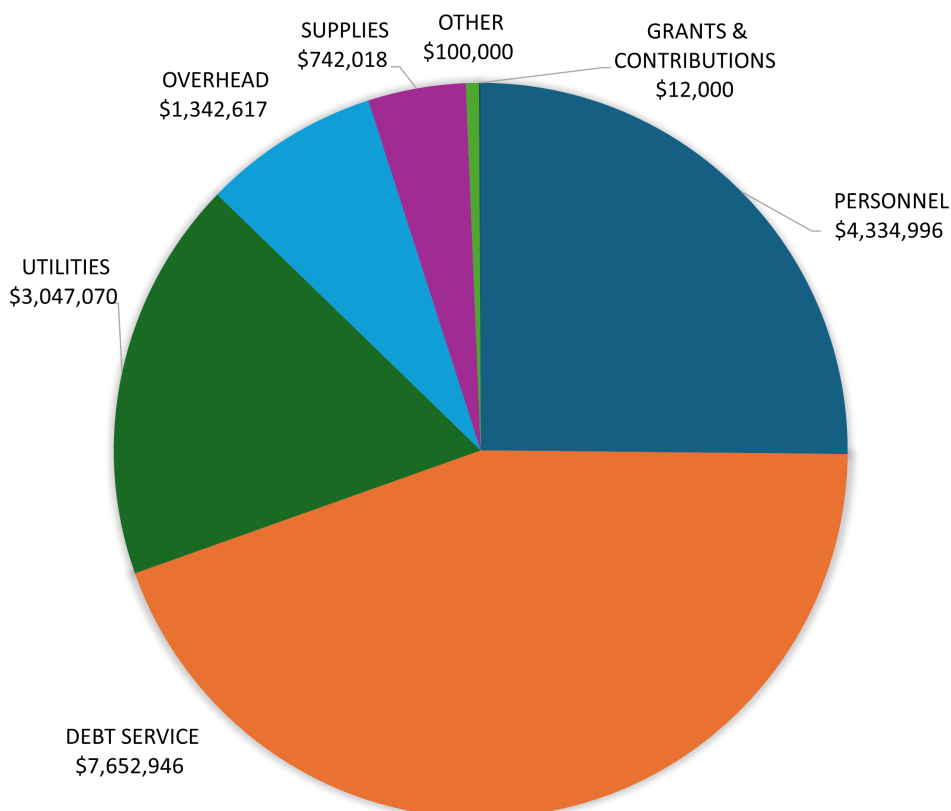
REVENUE

\$19,692,858



EXPENDITURES

\$17,231,647

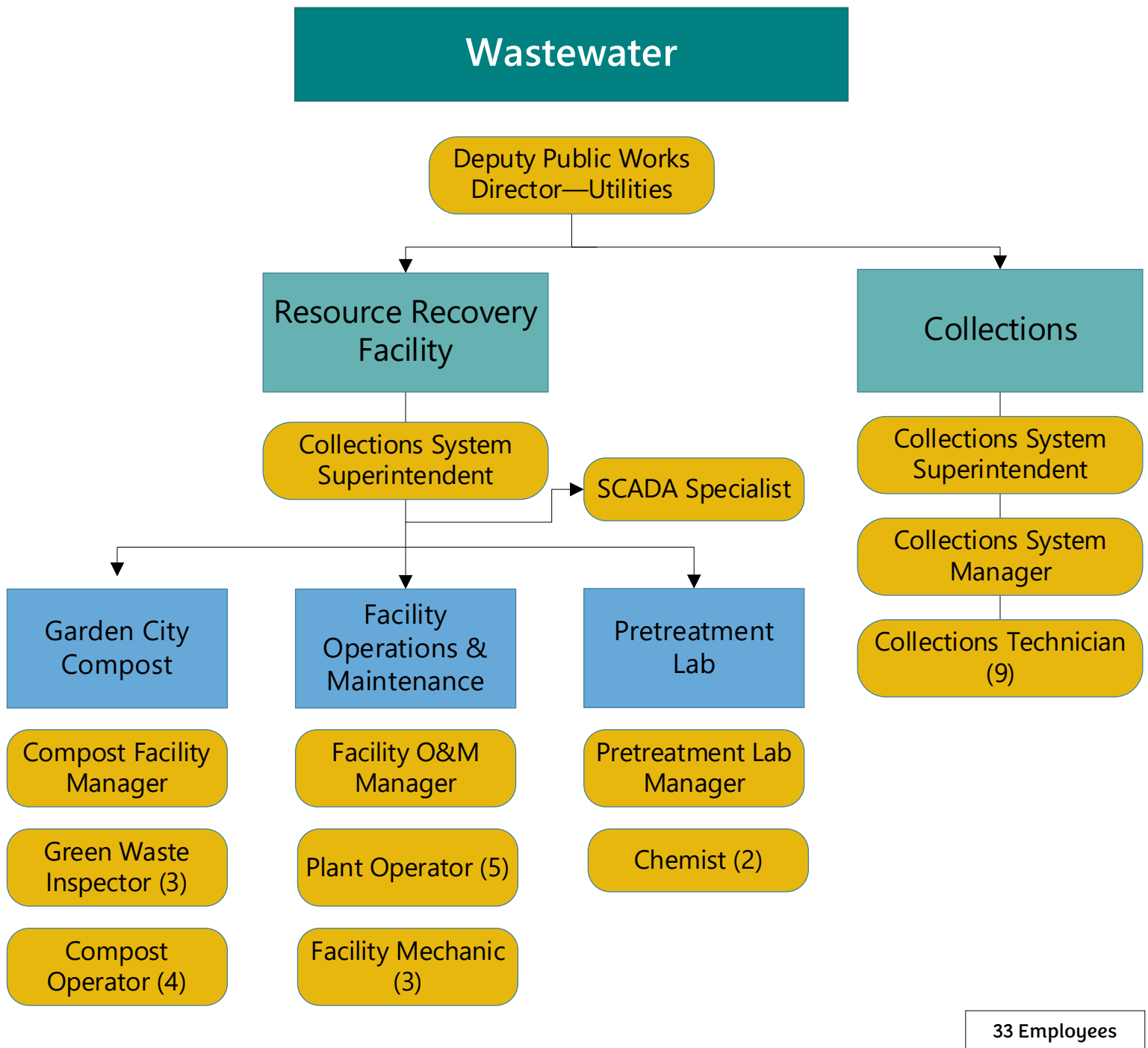


Wastewater Utility

Purpose

Provide safe and environmentally conscientious management and disposal of wastewater at the collections and resource recovery facilities.

Organization



Wastewater Utility

Key Facts & Metrics



Maintains 28 lift stations and 1,700 residential and commercial sewer tank effluent pumping (STEP) systems



Treats 2.8 billion gallons of wastewater annually, removing 78% of nitrogen and 90% of phosphorus



Produces and sells 28,000 cubic yards of compost



Generates over 700,000 kWh of electricity per year



Diverts 155 million gallons of treated wastewater from the Clark Fork River to irrigate 36,000 poplar trees



Jets and cuts roots from 170 miles of sewer main per year

FY23 Highlights

- Began using electricity produced by solar farm
- Received recognition with National Association of Clean Water Agencies (NACWA) Peak Performance Award--Silver Level
- Made progress on evaluation of compost expansion alternatives
- Completed or continued numerous Resource Recovery Facility projects

FY24 Goals

- Complete compost facility upgrades (including biofilter for odor control)
- Finalize plan for the future of the poplar farm
- Develop sewer main replacement program
- Continue progress on treatment facility equipment upgrades

The City's "Solar Farm" went live in 2023, providing up to 20 percent of the wastewater treatment plant's power needs.



Wastewater Utility

Metrics – Solar Farm Output Dashboard



Wastewater facility staff can see real-time power production from the Solar Farm.

Metrics – Compost Facility

- Total revenue (compost sales + tipping fees) = \$872,000
- Total operating costs (including debt service) = \$1,400,000
- Revenue has increased 33 percent since 2021 fiscal year
- Facility diverts more than 15,000 tons of biosolids and green waste from the landfill each year



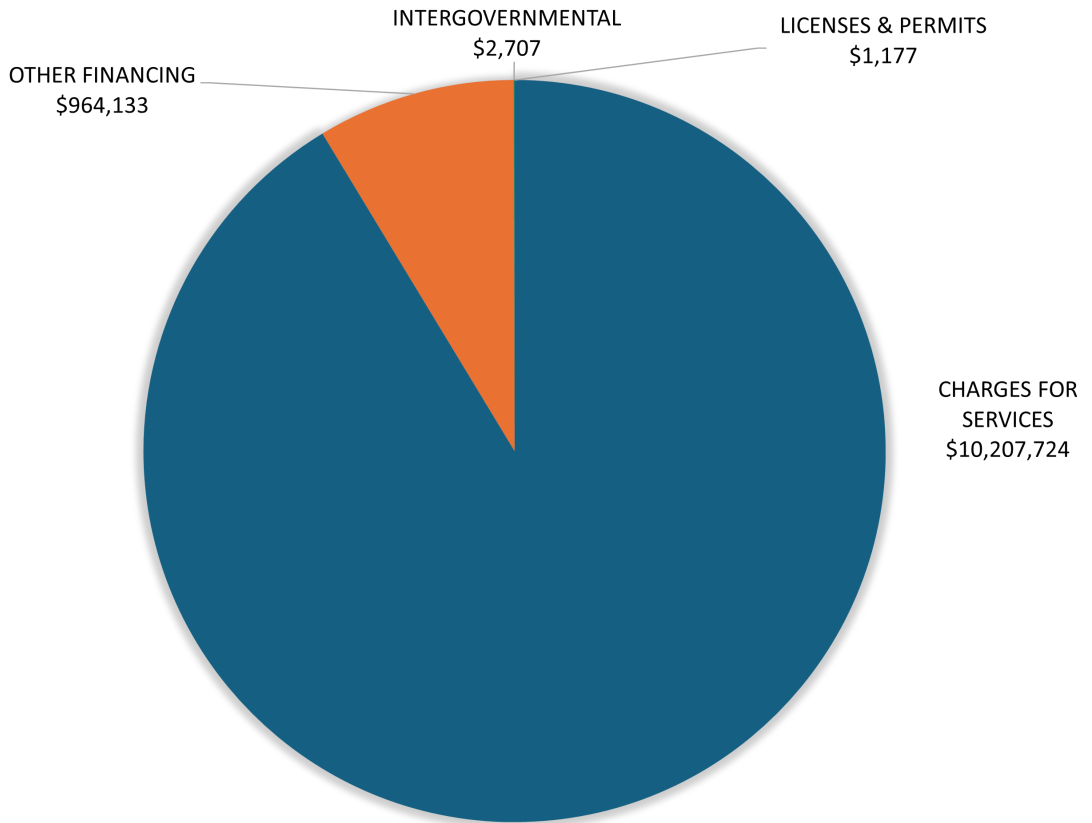
Garden City Compost produces and sells about 28,000 cubic yards of compost each year.

Wastewater Utility Budget – FY23

Enterprise Fund

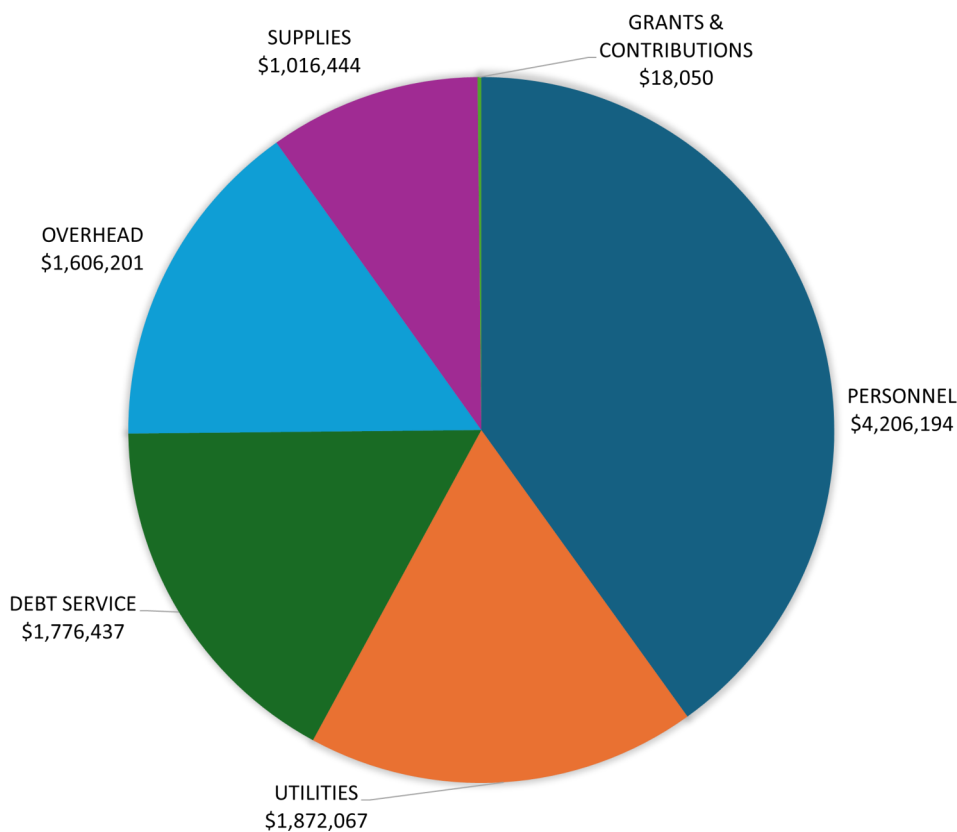
REVENUE

\$11,175,741



EXPENDITURES

\$10,497,433

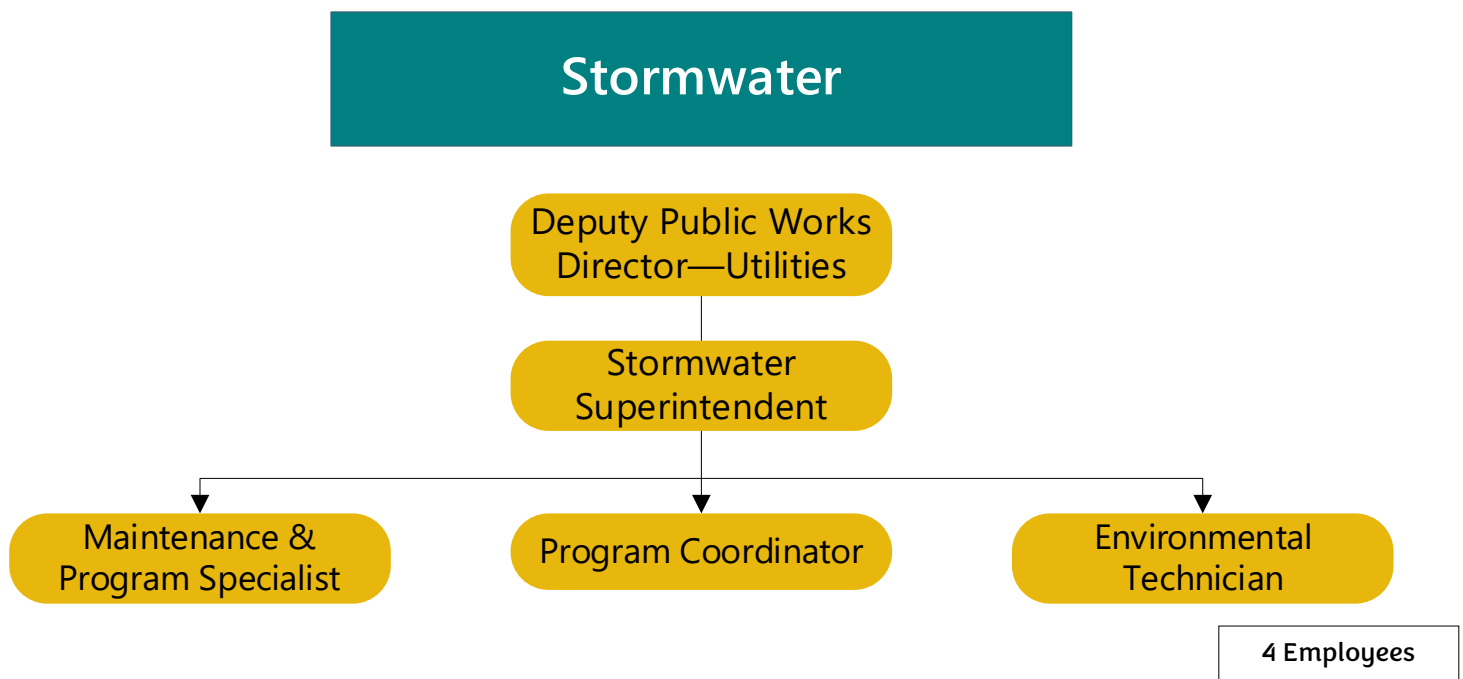


Stormwater Utility

Purpose

- Provide for and maintain infrastructure for both surface and underground movement of water from rain, snow melt, and other weather events, and
- Ensure compliance with state, federal, and local laws for stormwater management.

Organization



Stormwater Utility staff receive assistance from elementary school students and other volunteers to plant native vegetation as part of the second phase of a project to restore Pattee Creek. The new plants will better cool the creek water, prevent the buildup of sediment, and provide a healthier habitat for aquatic species.

Stormwater Utility

Key Facts & Metrics



Cleaned 196 dry wells and 14 stormwater inlets; 188 cubic yards of debris removed



Collected 16 water quality samples



Jetted 1,654 linear feet of storm drains



Trained 33 contractors and consultants on best management practices and 111 City employees on green infrastructure and spill prevention



222 Stormwater Permits issued; 223 inspections conducted at 61 sites

FY23 Highlights

- Completed levee recertification
- Began construction on South Hills Stormwater Improvement Project, utilizing American Rescue Plan Act (ARPA) funds
- Continued levee vegetation management

FY24 Goals

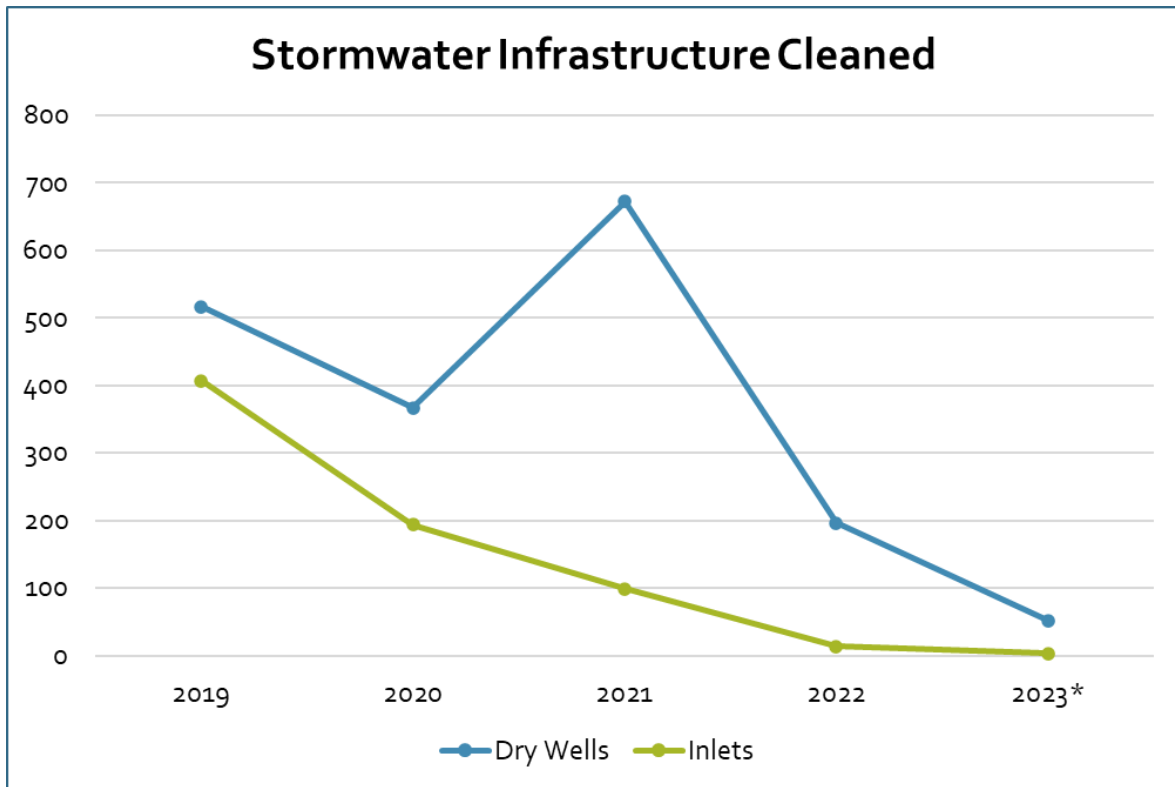
- Complete all three phases of the South Hills Stormwater Improvement Project, including Gharrett and 55th streets, Grandview Way, and Cattail Corner
- Finish design and permitting of Bitterroot Outfall improvements projects
- Develop a comprehensive stormwater management plan using Renewable Resource Grant funding
- Conduct condition assessment of Missoula Development Park stormwater facilities



Stormwater Utility staff collect stormwater samples to measure and monitor water quality throughout Missoula.

Stormwater Utility

Metrics



* As of June 30, 2023



Above: Public education about stormwater and its effects on our waterways is a major component of the utility's public outreach efforts.

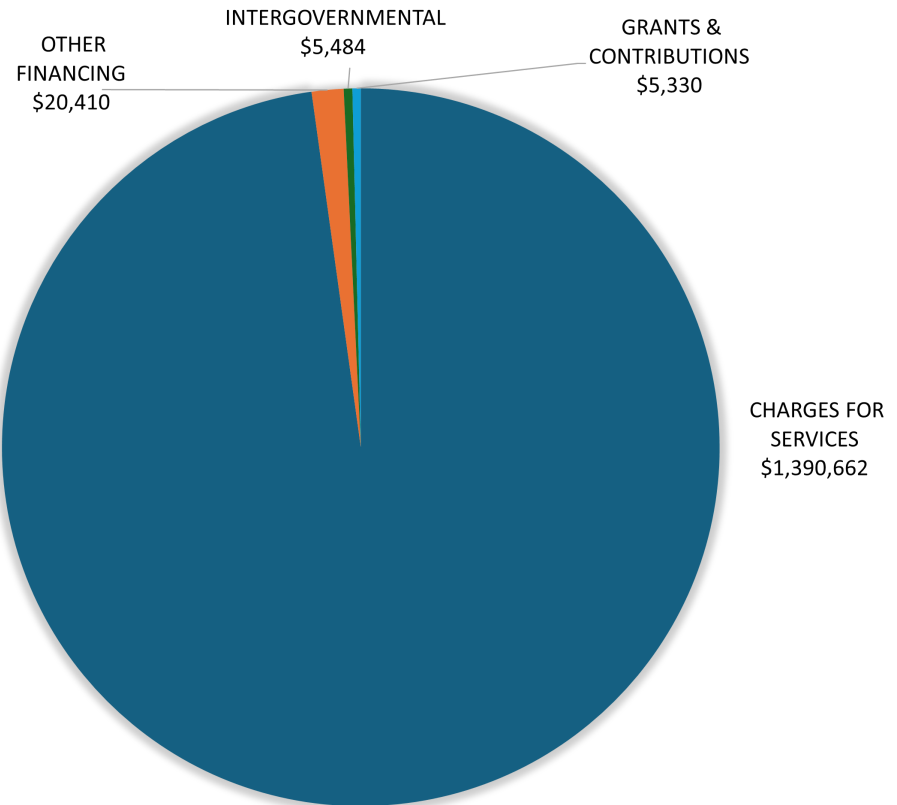
Left: Stormwater staff take numerous water samples throughout the year to test for nutrient levels and other factors that affect water quality.

Stormwater Utility Budget – FY23

Enterprise Fund Budget

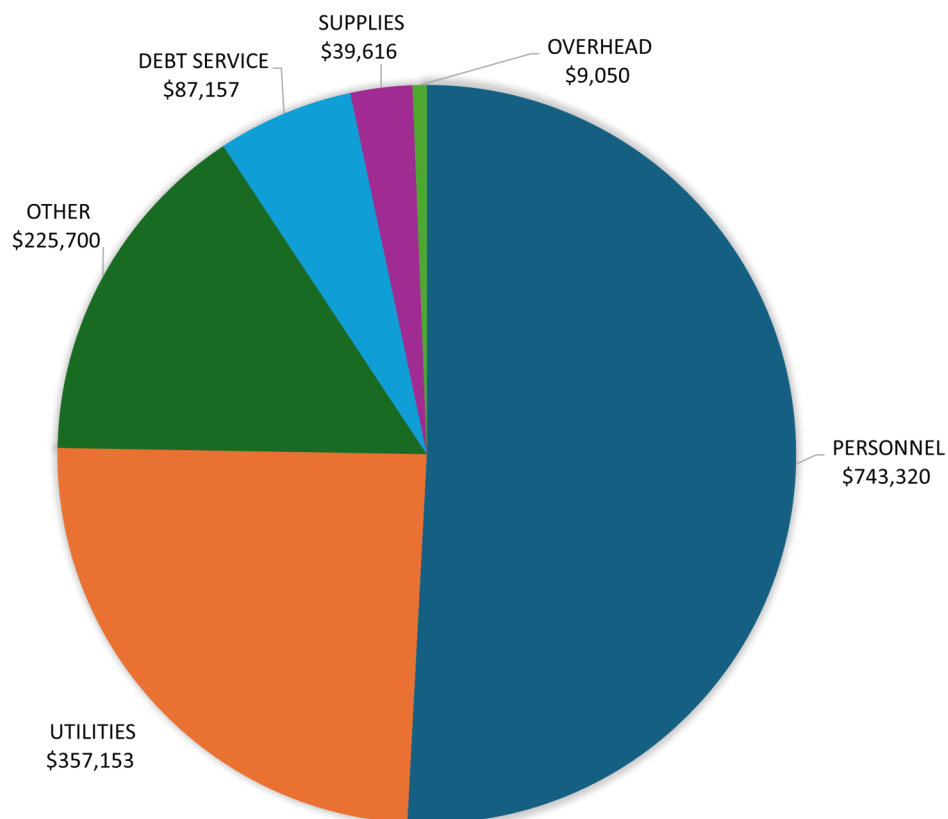
REVENUE

\$1,421,886



EXPENDITURES

\$1,461,996



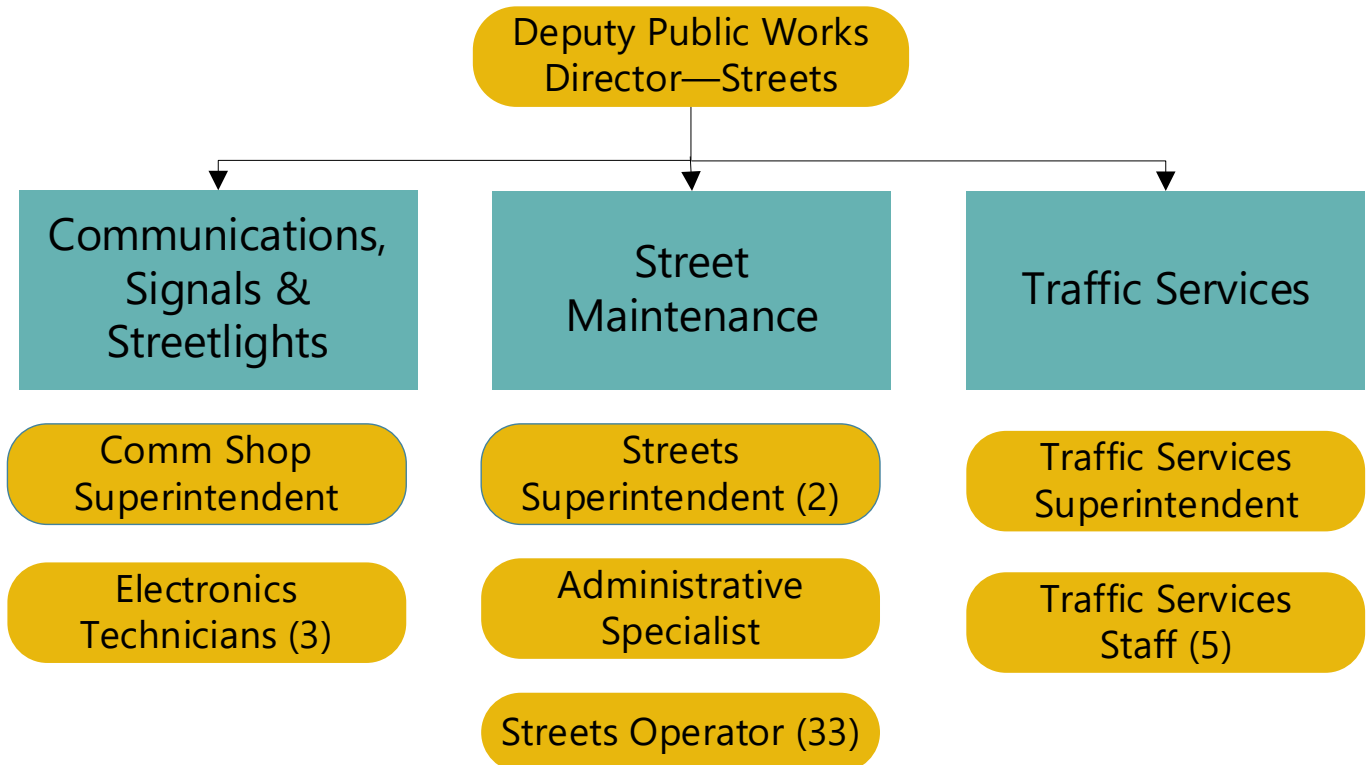
Street Operations & Maintenance

Purpose

- Ensure the City's public streets, alleys, bike lanes, lighting, signals, and signs are well maintained so that they provide safe travel routes for all users, and
- Ensure these public assets are managed for maximum longevity.

Organization

Street Maintenance & Operations Division



45 Employees

Street Operations & Maintenance

Key Facts & Metrics



Milled and paved 4.3 miles, chip sealed 9.3 miles of city streets, and applied 93 miles of street striping in FY23



Performed snowplowing, street sweeping, leaf collection, and street pavement maintenance on 337 miles of streets and 65.2 miles of alleys



Maintained and tested 11 City-owned and 62 Montana Department of Transportation-owned traffic signals



Patched 12,168 potholes (3,822 more than in FY22)



Installed electronics and safety equipment on 1 Police vehicle and 41 other City vehicles

FY23 Highlights

- Increased use of recycled materials
- Identified locations for material storage
- Increased special project revenue
- Continued effort to establish Road District fund reserve

FY24 Goals

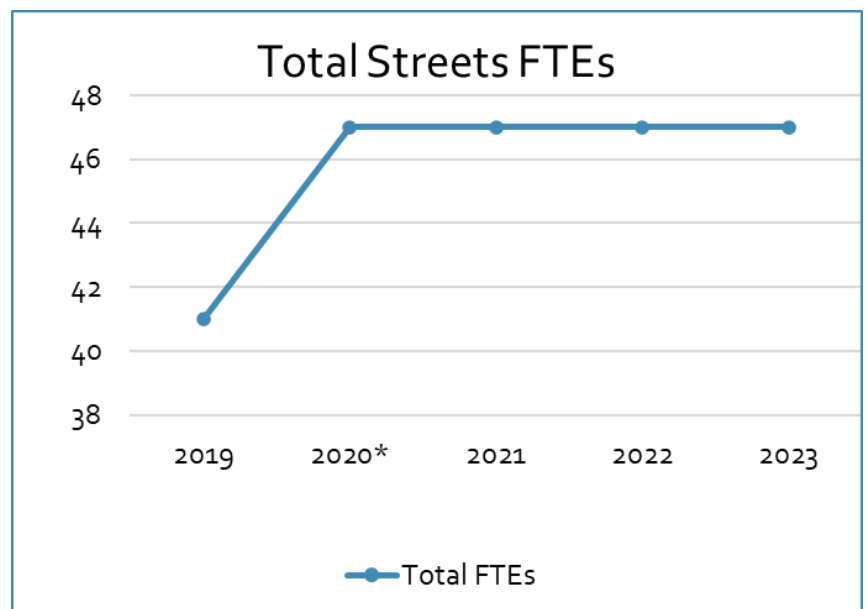
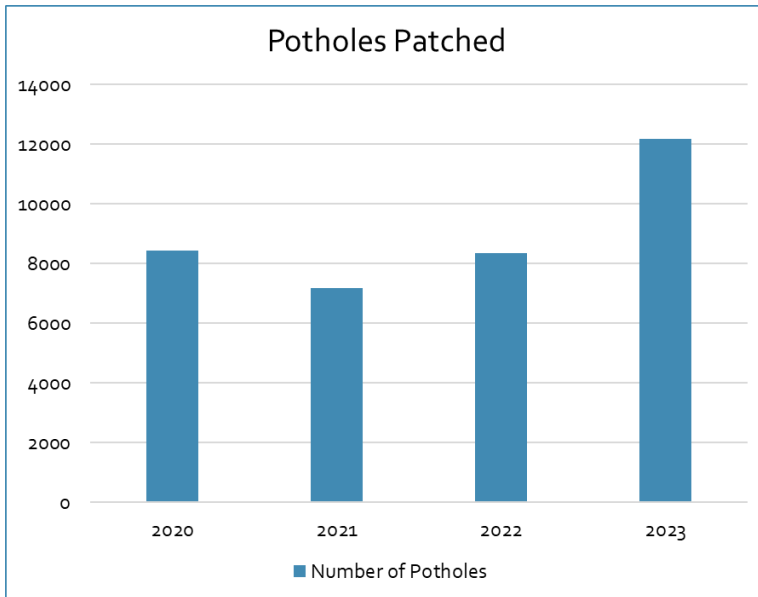
- Purchase street sweepers
- Review maintenance priorities, including bridge and culvert inventory, leaf pickup, and green infrastructure
- Complete radio upgrade project



Street maintenance crews milled and paved 4.3 miles of damaged streets all over Missoula in FY23.

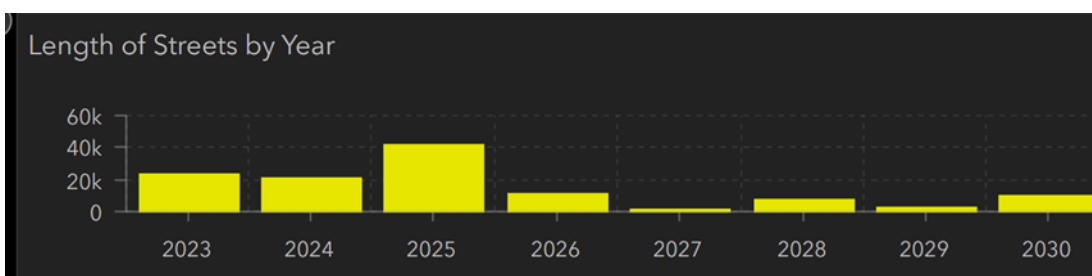
Street Operations & Maintenance

Metrics



**Added 4 residential plow drivers and increased 2 part-time staff to fulltime*

Projected increase of 15.98 miles of new streets through 2025:



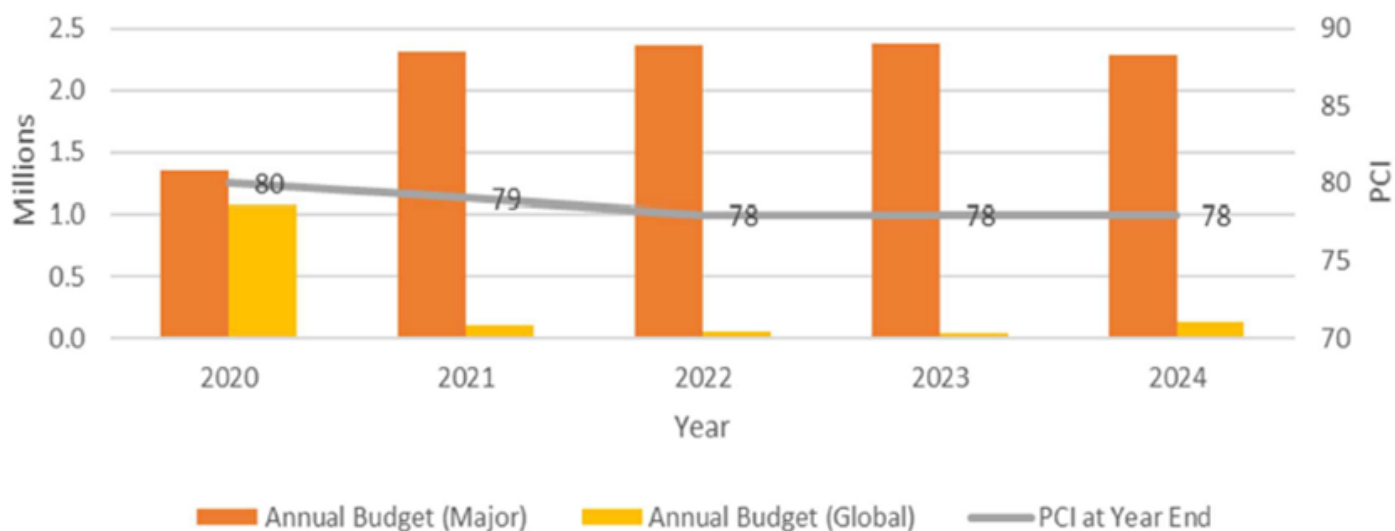
Source: City Development Map dashboard

Street Operations & Maintenance

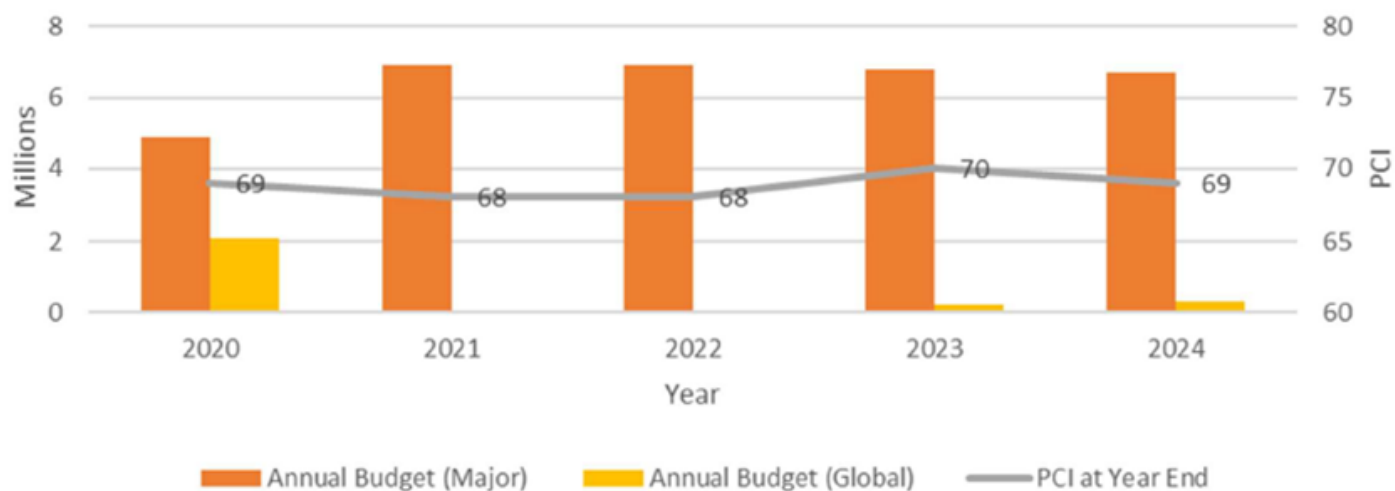
Metrics

Pavement Condition Index (PCI) for City Streets

City of Missoula, MT
Arterials & Collectors
\$2.418M to Maintain PCI 78



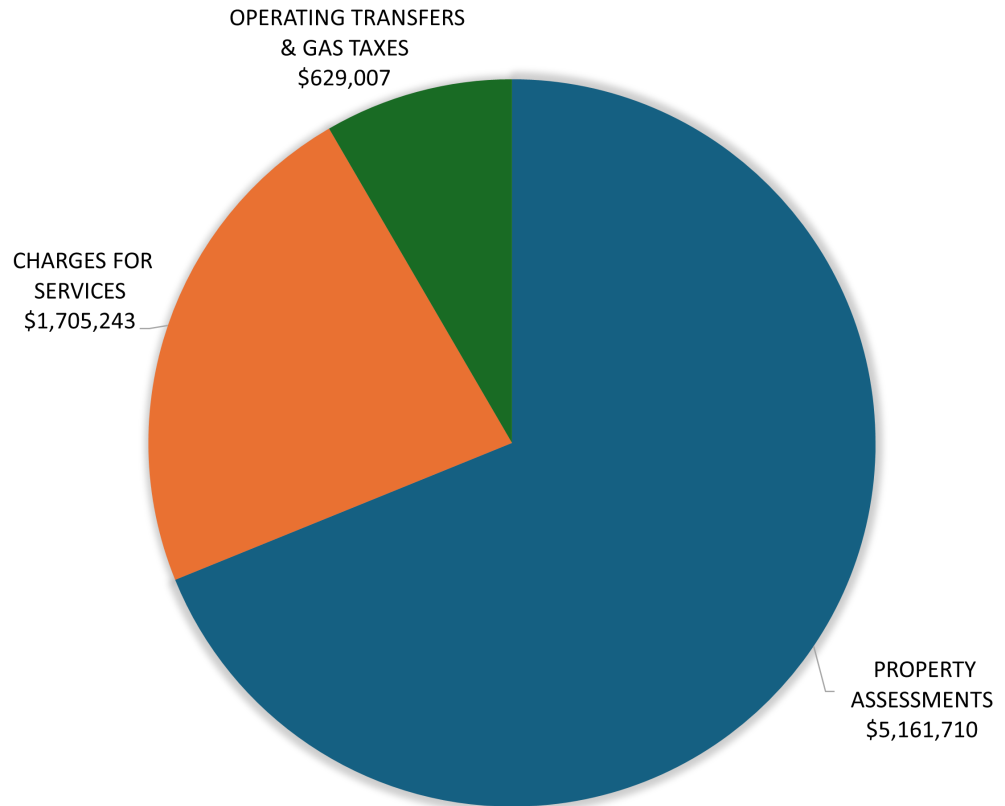
City of Missoula, MT
Local
\$6.991M to Maintain PCI 69



Street Operations & Maintenance Budget – FY23

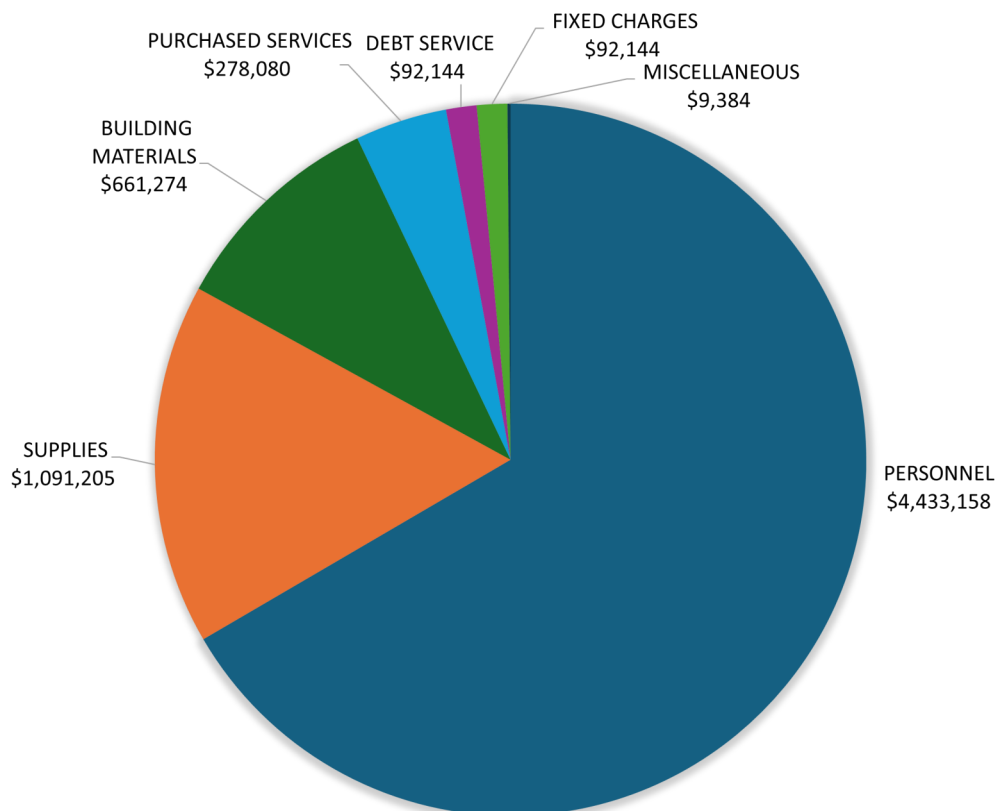
REVENUE

\$7,495,960



EXPENDITURES

\$6,657,389

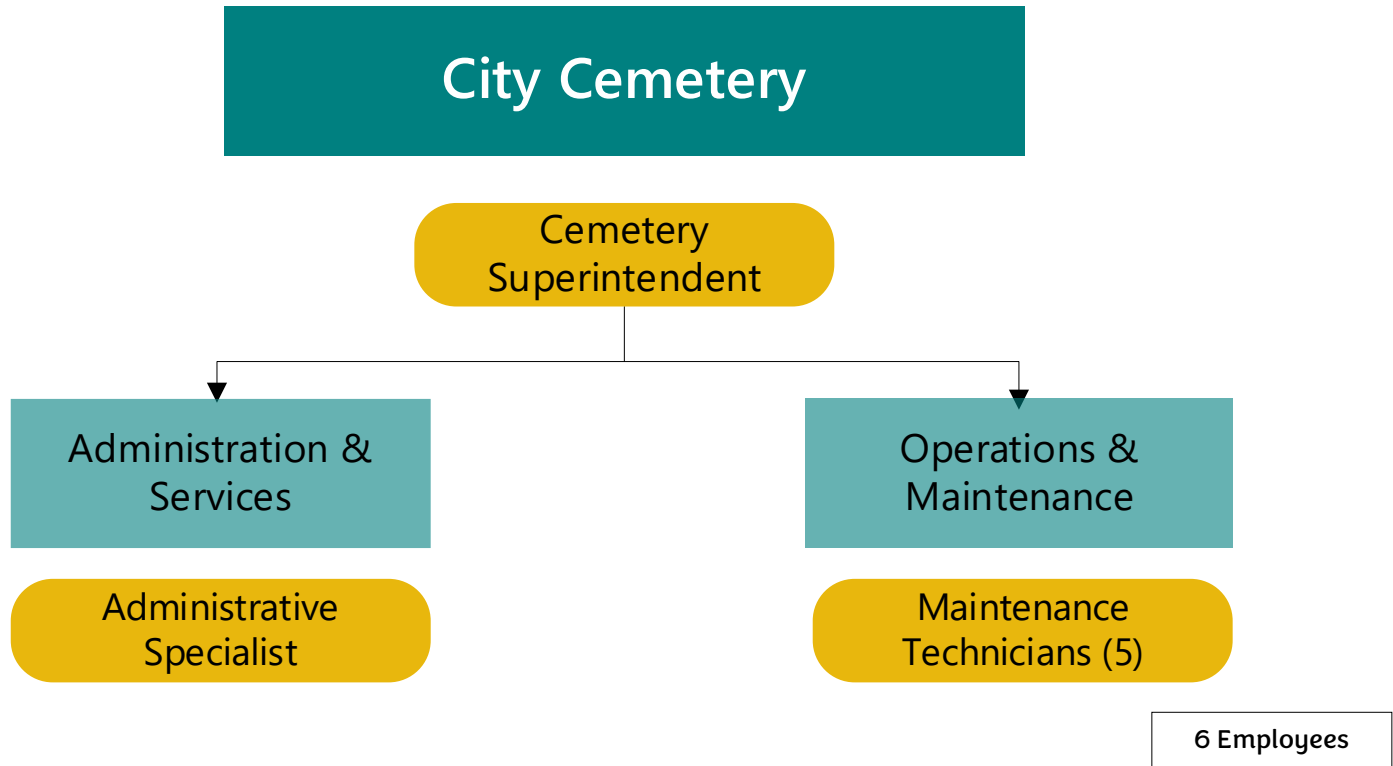


Missoula City Cemetery

Purpose

- Operate and maintain the City Cemetery to provide safe, timely, and respectful interment, and
- Ensure accurate recordkeeping for historical integrity.

Organization



Niche walls are becoming more popular as an alternative to traditional gravesites with headstones.

Street Operations & Maintenance

Key Facts & Metrics



Founded in 1884 and purchased by the City in 1901 for \$1.00. Part of Missoula history for more than 120 years.



50 acres of irrigated and maintained public green space



Currently has more than 21,000 interments with 85 performed in FY23



Most revenue generated in Cemetery history at \$169,981 in FY23

FY23 Highlights

- Planted 10 additional trees
- Hired an architect to design a new office building
- Application for historical site designation moved to “in review” stage

FY24 Goals

- Complete historical site designation
- Complete GIS map database of all grave sites and interment data
- Prepare architectural construction drawings
- Make gate improvements
- Continue popular Stories and Stones event

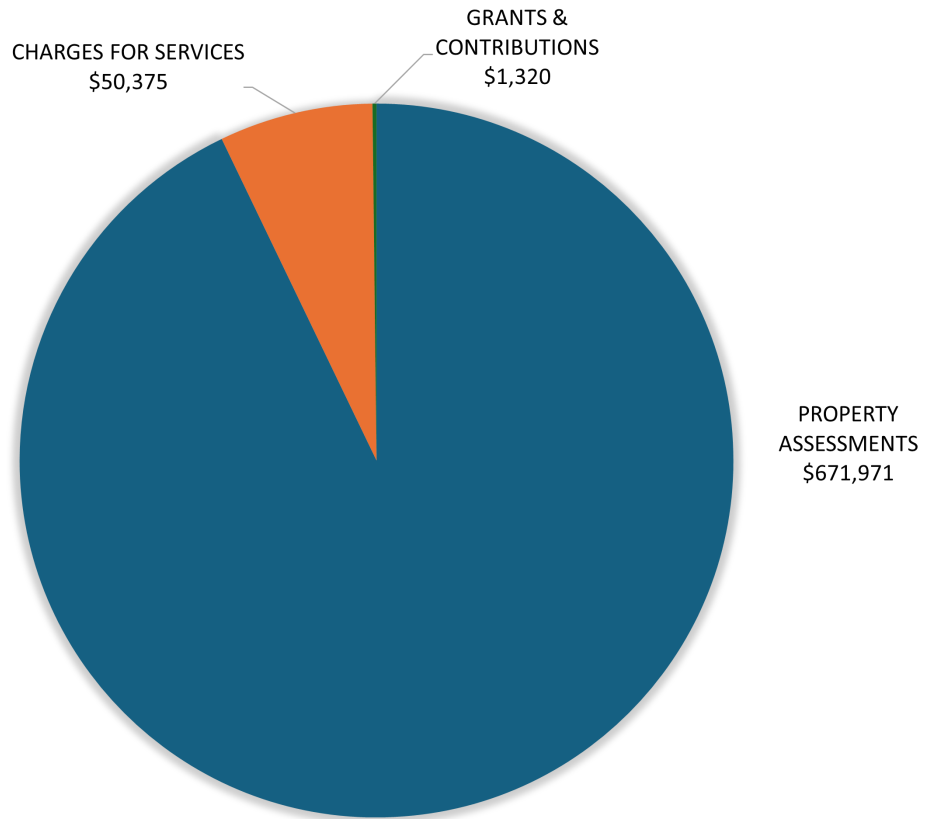


In 2023, the Stories and Stones event was rebooted following its cancellation during Covid. The event includes volunteers who portray historical figures interred at the cemetery, telling their life stories and impacts on Missoula and Montana history.

Missoula City Cemetery Budget - FY23

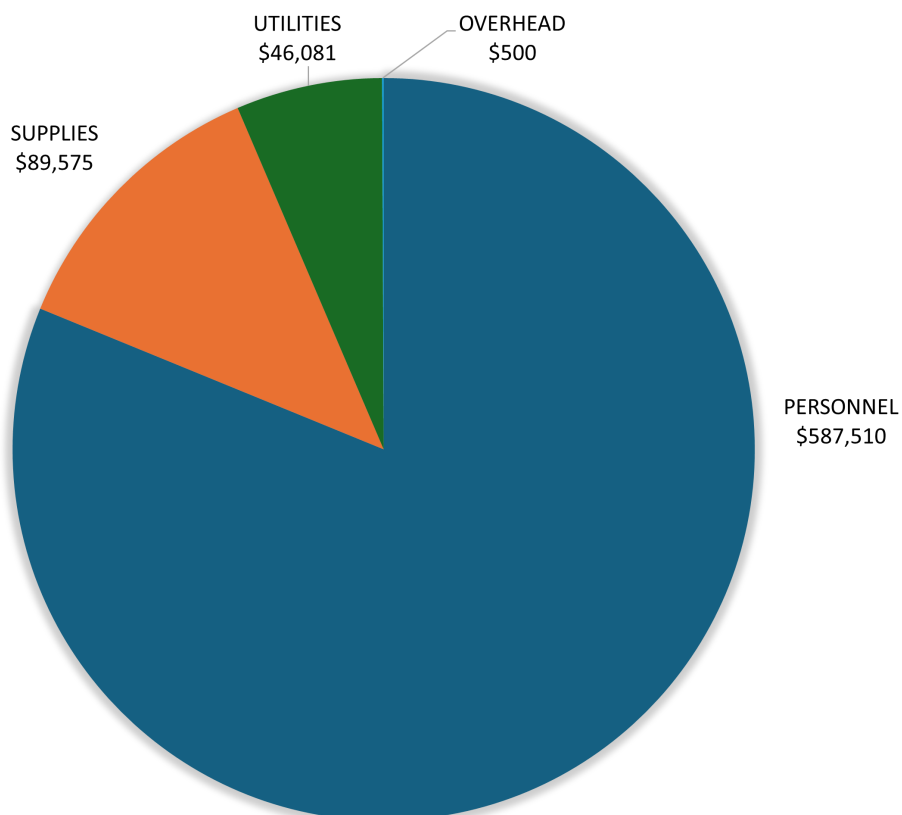
REVENUE

\$723,666



EXPENDITURES

\$723,666



City of Missoula

PUBLIC WORKS & MOBILITY

