

# PUBLIC WORKS DEPARTMENT

The Mission of the Public Works Department is...

*...to anticipate, plan and provide exemplary public services and facilities that support the needs of our growing community in an efficient, customer-focused and financially responsible manner.*



# *Message from the Director*

This year, the City of Meridian was recognized as the 9th Fastest Growing Large City in the United States. It's no small task keeping up with the pace of growth, not to mention adjusting our operations to meet ever changing environmental regulations. This year we received our new Wastewater discharge permit which will fundamentally change the way we manage our treatment processes. We are also planning a massive expansion to our Wastewater Resource Recovery Facility.

Staff has been busy planning out the next ten years of projects to accommodate the growth and keep the City in compliance with the new standards. We also continue to add water treatment facilities to our drinking water wells which are showing great promise in reducing discoloration associated with iron and manganese precipitation.

Our inspection team has been working through a tremendous upswing in

construction projects and we continue to make major advancements in developing our asset management program.

There is so much more to tell so I hope you enjoy this Department overview and that it helps you understand more

about the activities and services we provide. But don't stop there—give us a call at 898-5500 to schedule a facility tour or to volunteer to get involved in any of our Departmental or City activities. I appreciate your interest in Meridian's Public Works Department!



## *Meet the Director*

Tom Barry has been serving as the Director of Public Works since 2008. He is responsible for providing broad and high level administrative, technical, operational, and financial oversight of eight divisions and 14 sections, with a staff of approximately 100 Full Time Employees. Tom holds a Bachelor's degree in the geotechnical sciences and three Master's degrees in environmental hydrogeology, business management, and public administration.

Possessing more than 20 years' experience in the water management

field, Tom holds licenses in three states, has authored many professional papers and award-winning presentations, and is a nationally recognized educator. He has worked in both the private and public sectors and obtained experience at the federal, state and local levels. Prior to Meridian, Tom worked for nearly a decade in two full-service Public Works Departments in the greater Seattle region.

Some of Tom's accomplishments include creating a nationally recognized, statewide model for wellhead protection for the State of Washington, leading

the development of the first Class A municipal reclaimed water program in the State of Idaho, and being selected by the Idaho Business Review as one of the State's Top Emerging Leaders in 2010.

Tom is a member of the American Public Works Association and currently sits on the Public Works Technical Analysis Team and the Legislative and Environmental Committees of the Association of Idaho Cities. He also serves as the President of the Idaho Association of Public Works Professionals.

# Meet Our Executive Team



As the Deputy Director of Public Works, Mike is accountable for the Department's Engineering, Inspection, Environmental, Capital Projects, and Facility Maintenance teams. Previous to his current role, he was the Department's Business Operations Manager.

Armed with over two decades of experience in federal and local government, higher education administration and instruction, training and development, business consulting, logistics, and human resource management, Mike brings a well-rounded career to the Public Works Department.

Mike holds a Master's degree in Business Administration, a Bachelor's degree in Occupational Education, and two Associate degrees in Logistics and Occupational Instruction. He is a member of the American Public Works Association, the Association of Idaho Cities, and the Veterans of Foreign Wars.



John McCormick has been with the City of Meridian for over five years. During that time, he served as the Department's Deputy Director for three years before moving into his current position as Business Operations Manager for the Department. He has a BA Degree in Economics from Carroll College (Helena, MT) and an MBA from the University of Oregon (Eugene, OR).

John had a lengthy career at Hewlett Packard Company, where he worked in a variety of positions prior to his retirement in 2005. He also worked for Image National, a national sign company, for about four years prior to joining the City of Meridian Public Works Department.



Dale Bolthouse has been with the Public Works Department for the City of Meridian for 1-½ years as the Deputy Director of Utility Operations. In that role, Dale has oversight for Wastewater Operations, Water Operations, Pretreatment Inspections and SCADA/ Instrumentation. Dale is also a co-manager of the Department's employee safety program.

Prior to joining the City, Dale held various management positions in private industry manufacturing including food processing and metal fabrication. Dale has a Bachelor of Science Degree from Oregon State University in Food Technology with emphasis in Business Management. Dale, his wife Salli, and their three sons have lived in the Treasure Valley for over 30 years.

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# Department Overview

*Revenues for the City of Meridian are comprised of two funds that support the City's financial needs. The Public Works Department utilizes the Enterprise Fund, while the remaining City departments, which include Fire, Police, Parks and Recreation and City Hall administration, are supported by the General Fund. The graphic below demonstrates each fund's income sources and uses.*

## GENERAL FUND

### FUNDING SOURCE

- Tax Payers
- Users of Fee-based Services
- Developers, Contractors
- State of Idaho
- Interfund Transfers
- Granting Organizations

### FUNDS

- Property Taxes
- State Revenue Sharing — Liquor Apportionment, Sales Tax, etc.
- Fees — Assessments, Impact, Franchise
- Licenses & Permit Fees
- Grants
- Usage Fees — Parks & Rec Fees
- School Resource Revenue
- Planning Filing Fees
- Fines and Forfeitures
- Interest Earnings

### USE

- Police, Fire
- HR, Legal, IT, Finance
- Parks & Recreation
- Community Development
- City Infrastructure
- Community Programs
- Capital Projects

## ENTERPRISE FUND

### FUNDING SOURCE

- Rate Payers — Water
- Rate Payers — Sewer
- Developers, Contractors
- Republic Waste Management
- Banks
- Granting Organizations

### FUNDS

- Base Fees — Water
- Base Fees — Sewer
- Use Fees — Water
- Use Fees — Sewer
- Reimbursements
- Assessments — Residential, Commercial
- Garbage — Admin Fee Revenue
- Donated Capital
- Interest Earnings

### USE

- Infrastructure — Water, Sewer, Recycled Water
- Environmental Programs
- PW Administration/Engineering
- Public Outreach
- Water, Sewer Billing
- Interfund Transfers

# Major Areas of Service

## Administration

- Policy Development & Implementation
- Overall Departmental Management & Oversight
- Strategic Initiatives Development & Guidance
- Staff Development & Training
- Community Outreach
- Environmental Programs
- Public Records Requests

## Capital Projects & Facilities

- City Capital Project Management
- Administration of Project Contracts
- Facility Maintenance
- Tenant Improvements

## Inspections

- Constructability Reviews
- Above & Below Ground Infrastructure Inspections
- Local, State & Federal Construction Standards Adherence

## Business Operations

- Financial Planning & Forecasting
- Water, Sewer & Recycled Water Infrastructure Data Administration
- Performance Management & Continuous Improvement
- Planning & Modeling New Utility Infrastructure
- Inventory Management
- Global Positioning System/ Surveying Services
- Capital & Expense Budgeting
- Asset Management
- Legislative Efforts
- Geographic Information Services
- Public Education & Outreach

## Engineering

- Utility Master Planning
- Technical Transportation Analysis & Planning
- Plan Review
- Roadway Design Review
- Water Supply & Distribution Design
- Transportation & Utility Project Coordination
- Water & Sewer Modeling
- Streetlight Installation & Maintenance
- Infrastructure Assessment & Design Reconstruction
- Floodplain Administration

## Water

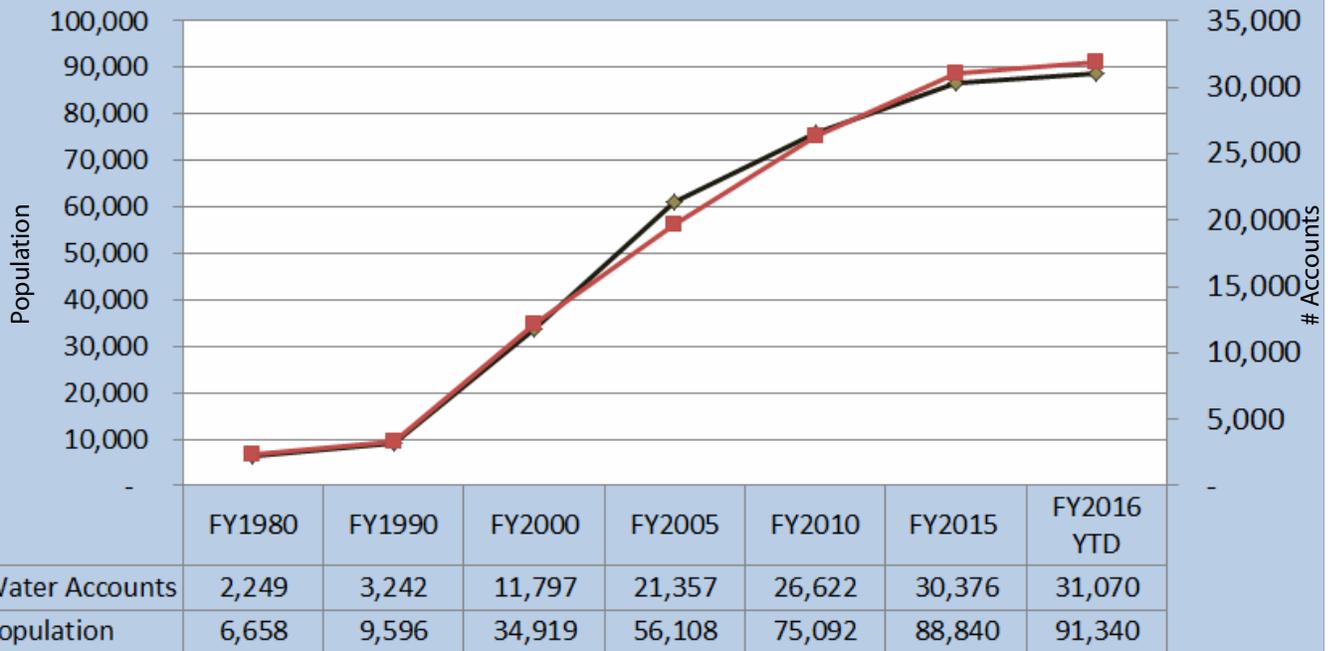
- Distribution
- Water Quality Management
- Backflow Prevention
- Cross Connection Control
- Customer Service
- Well Operation & Maintenance
- Regulatory Compliance

## Wastewater

- Wastewater Treatment
- Wastewater Collection, Inspection, Maintenance & Repair
- Regulatory Compliance
- Operations & Maintenance
- Laboratory Analyses
- Biosolids Treatment & Disposal
- Recycled Water Production
- Industrial Pretreatment

# Utility Rates & Demographics

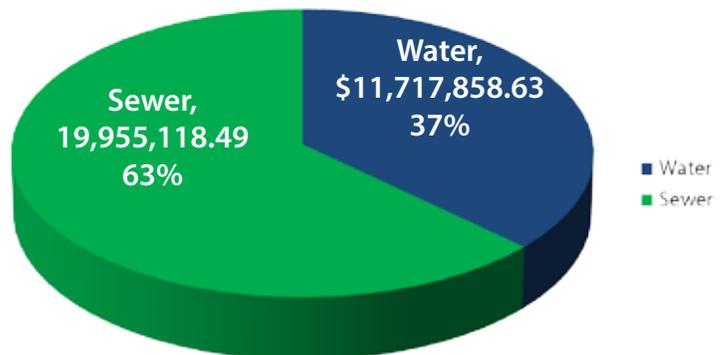
## Population & Water Accounts



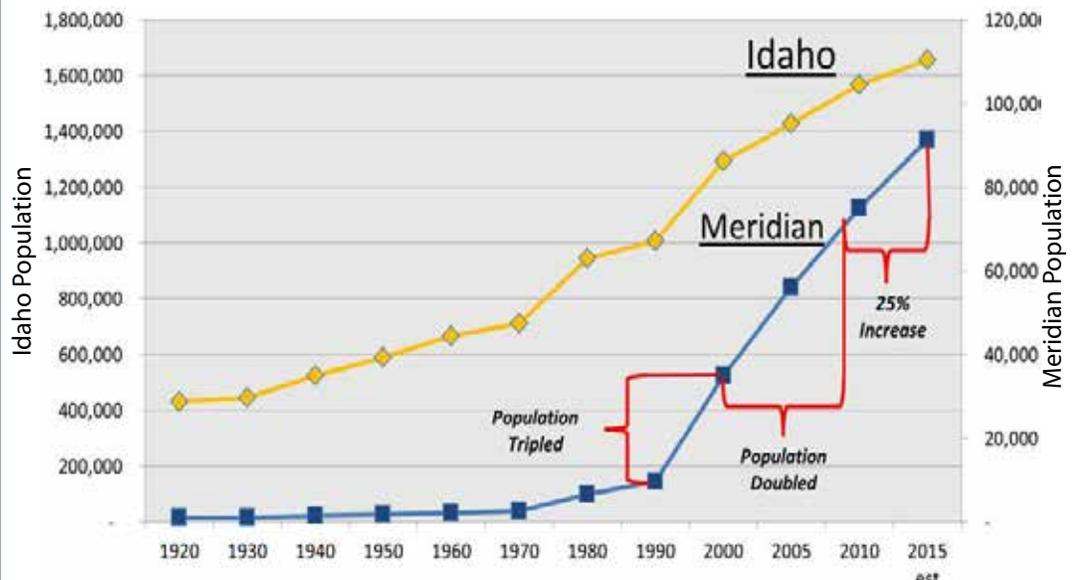
## Current Utility Rates

|       | Base Rate | Usage Rate<br>(Per 1,000 Gallons Used) | EPA Compliance Fee |
|-------|-----------|--|--------------------|
| Water | \$5.49    | \$1.90                                 |                    |
| Sewer | \$8.65    | \$5.54                                 | \$3.75             |

## Annual Utility Sales Revenue - FY2015



For more than two consecutive decades, the City of Meridian has been the fastest growing City in the State of Idaho. The City's population tripled between 1990 and 2000 and then doubled again between 2000 and 2008. Since then, Meridian has expanded another 25%. Meridian continues to be in the top 10 fastest growing cities in the nation. As the City has grown, so has the complexity of its public works services and facilities. In 2015, *24/7 Wall Street* named Meridian the #1 Place to Live in America.



# Balanced Scorecard Focus

## FY 2016 Top 10 Focus Areas

The balanced scorecard is a strategic planning and management system that is used extensively to:

- Align business activities to the vision and strategy of the organization,
- Improve internal and external communications, and
- Monitor organization performance against strategic goals.

Each year, the Public Works Department proactively determines what topics in each area of the Balanced Scorecard will be a focus for the coming year. This helps the Department concentrate attention on opportunities to intentionally advance the mission of the City and the utilities.

### **Financials**

- Financial Planning – To effectively address capital requirements associated with regulatory and growth needs, the Department’s financial planning will include a Department-wide Fee Analysis, Fee Leveling (ERUs), Dash-Boarding, Council Updates, Budget Forecasting, Capital Improvement Plan (CIP) Leveling, and Assessment Fee Methodology Analysis.
- Asset Management – In order to adopt a comprehensive approach to capturing and managing assets, Public Works will configure, test, and implement solutions in a managed and efficient/effective fashion including the full implementation of a new Utility Billing Software (UBS) solution.

### **Customer Satisfaction**

- Water System Improvements – To address potable water quality issues associated with iron and

manganese, Public Works will construct, test, and implement water treatment improvements in a section of the water distribution system.

- Public Education and Outreach – For communicating with the community and stakeholders, efforts will address improving messaging, timeliness, and delivery methods.

### **Strategy**

- Strategic Plan – In addition to updates to the Sewer Master Plan and WRRF Facility Master Plan, Public Works will update the Department’s 2010-2015 Strategic Plans to incorporate initiatives that address challenges in the 2016-2020 timeframe.
- South Meridian – Public Works will integrate the South Meridian Plan into City of Meridian’s infrastructure and operational processes.

### **Employee Satisfaction**

- Workforce Development – To improve quality of applicant flow for open positions, a pro-active approach will be used to recruit the best qualified candidates. The continuation of an effective succession planning program will promote growth opportunities and replace institutional knowledge drain. Public Works will intentionally build a culture that emphasizes recognition, rewards performance, and honors teambuilding.



### **Operations**

- Performance Management and Improvement – With the aim of sustaining execution rates at a high level regarding the Department’s work plans, operating budget, and capital improvement plan, the Department will track, monitor, and measure performance in these three areas against established goals and benchmarks.
- WRRF Operations – To enable the Department to deploy the NPDES Implementation Plan to meet new permit requirements, the plan will effectively address capacity requirements at the WRRF, consistent with resource requirements and available funding.
- Automation and Control Improvements – Efforts will be made to implement and improve system solutions for various operational automation and control systems.

# Customer Accomplishments

In the City's C.A.R.E. Values of Customer Service, Accountability, Respect and Excellence, Customer Service is #1. Public Works emphasized its commitment to this through several outreach and educational events. In addition, the Department strengthened its ability to deliver and improve upon the services it provides to the community. A few examples of the Department's activities in this area are emphasized in the examples below.

## ***Main Line Repair***

In 2015, the Meridian Public Works Department concentrated its efforts on expanding the ability to respond to and repair/replace underground water line infrastructure. Staff training and the purchase of needed equipment and tools have strengthened skills and abilities. To date, efforts have paid off as the Department handled six major main line repairs in-house (i.e.: Franklin Road, Hickory Road, and Washington Ave). These repairs, completed solely by staff, improved response/repair times with realized savings of approximately \$45,000. This program expansion is reducing service interruption times and improving reliability in the services provided to citizens at a lower cost.

## ***Locust Grove, Blackrock to Reflection Ridge Water Main Extension***

This project continues development of Pressure Zone 5 in South Meridian by connecting two previously separate pressure zone "islands". This connection will enable future growth and improves control of water pressure, fire flow, and water quality by allowing the Victory Booster station to directly serve the Blackrock Subdivision area and more effectively circulate water within the distribution system.

## ***Planning Time-frame***

The Public Works Department expanded the planning time-frame from five to 10 years. This increased timespan will

improve the longer term view of rates and assessment fees required to sustain customer service, utility operations and ensure financial accountability.

## ***Public Outreach***

The Public Works Department continually engages in Public Outreach to keep the community informed and advised of issues that will impact them.

- The Engineering Division hosted open houses to educate community members on the City's new Design Standards.
- The Department made sure affected stakeholders were educated regarding assessment fees and the need to increase them to provide capacity expansion to accommodate growth.

## ***Public Works Week***

The Meridian Public Works Department celebrated National Public Works through a series of outreach activities and events including a community expo, facility tour and a 3K/5K fun run/walk during the week of June 1-6, 2015. All of the free, family-friendly events were attended with great community participation. Public Works Week is held with the intent to enhance our community's



*Part of the Public Works Department's mission is to keep up with the needs of our growing population of customers —ensuring that our infrastructure is sufficient and that customers are educated about the services Public Works provides.*

Customers

Employees

Operations

Financial

Strategy

understanding and awareness of the importance of public works infrastructure and operations as well as how both improve the quality of life of all Meridian citizens and engage the community's support for Public Works.



Ribbon Cutting at WRRF

*Come join us for  
Public Works Week  
2016!  
June 6-11*

Public Works Week Events:

- Monday, Wastewater Resource Recovery Facility Ribbon Cutting Ceremony
- Tuesday, Proclamation of "Meridian's Public Works Week"
- Wednesday, Public Works EXPO
- Thursday, "Go with the Flow" Facility Tour
- Saturday, 7th Annual Poop Scoot 3K/5K Fun Run/Walk

We are grateful for the over 1,000 people that joined us at the Public Works Week EXPO, those who donated over 275 pounds of food for the Meridian Food Bank at the Poop Scoot event, and those who helped raise \$2,191.51 for the Meridian Food Bank.



Go With the Flow Tour



PWW EXPO



Poop Scoot Fun Run/Walk

# Employees

At the heart of any organization are its employees. Public Works made a concerted effort this year to focus on employee needs. This emphasis led to several employee-centric initiatives: improvements to safety, opportunities for advancement, development of an on-boarding process, expansion of a leadership development program and creation of a formalized recognition and reward program. Details and the outcomes of these undertakings are highlighted below.

## Workplace Safety

Workplace safety is of paramount importance to employees and the Public Works Department. An operations-wide Safety Audit was conducted and several improvements were made. Field staff Public Works vehicles were outfitted with vehicle safety lighting and striping, additional safety equipment was procured and safety upgrades were made at Department facilities. At the Wastewater Resource Recovery Facility, routine safety briefings and drills are conducted. Each employee was required to complete a Department-wide OSHA 10-hour Safety Certification program. Continued emphasis on workplace safety has also led to the development of a Safety Coordinator position and the accompanying Safety Program components.

## Opportunities for Advancement

The deployment of a Skills & Capabilities Assessment for every staff member helped the Department understand existing strengths of staff and tailor future training as well as provide assistance with career counseling and guidance. This focus on skill-based training ensures the right staff are getting the right training. Next, the Leadership Development Program was developed to help improve the skill and capability of existing staff and supervisors in addition to increasing the preparedness of staff and supervisors for future opportunities.

Other initiatives included a career counseling focus, modification of general hiring practices and formal succession planning in specific areas. The results: 20% of the Public Works workforce was promoted over the last three years.

## On-Boarding process

Based on industry research, 70% of new hires make their decision to leave or stay with an organization within the first six months, so we developed a standardized, Department-wide On-Boarding Plan and process for use with all new hires and promoted employees.

## Leadership Development Program

Some supervisors and leaders rise up through the ranks with no formal management or leadership training. To fill the need for a program to improve the skill and capability of existing staff and supervisors, the Leadership Development Program was established. This training program provided leadership training, coaching and mentoring opportunities for the Strategic Leadership Team and the next level of managers and supervisors.



*Employees are the most valuable resource any organization has. Public Works recognized the importance of having an engaged, productive, and safe workforce. This led to a focus on several employee-centric initiatives.*

Customers

Employees

Operations

Financial

Strategy

## *Recognition & Reward Program*

Acknowledgment, recognition and celebration of staff accomplishments through a formalized Recognition and Reward program, a top factor in staff motivation, helped increase focus on Department accomplishments and individual achievements. This year, the following teams and individuals were recognized:

### **INTACT TEAM AWARD:**

For a cohesive team demonstrating teamwork, an intact unit, seen as positive and constructive based on accomplishment(s), results, behavior and attitude

**Winner:** Water Division Construction

Team members include: Marcos Hernandez, Bill Vallely, and Joel Rodriguez

### **CROSS-FUNCTIONAL TEAM AWARD:**

For a cohesive team demonstrating teamwork, an intact unit, seen as positive and constructive based on accomplishment(s), results, behavior and attitude plus results

from Communication, Collaboration and Coordination

**Winner:** NPDES Workgroup

Team members include: Travis Kissire, Laurelei McVey, Clint Dolsby, and Warren Stewart

### **INDIVIDUAL ACHIEVEMENT AWARD:**

Proactive, assertive, creative, team leader, courageous leader, an individual who displays wit and tact and exemplifies The Meridian Way

**Winners:**

Matt Hagler, Employee of the Year  
Kathi Buttars, Supervisor of the Year

**Pacific Northwest Clean Water Association's (PNCWA) Idaho Lab Analyst of the Year:**

Deana Smith,  
Laboratory Analyst III



Kathi Buttars



Deana Smith



Matt Hagler

*Congratulations  
To All!*

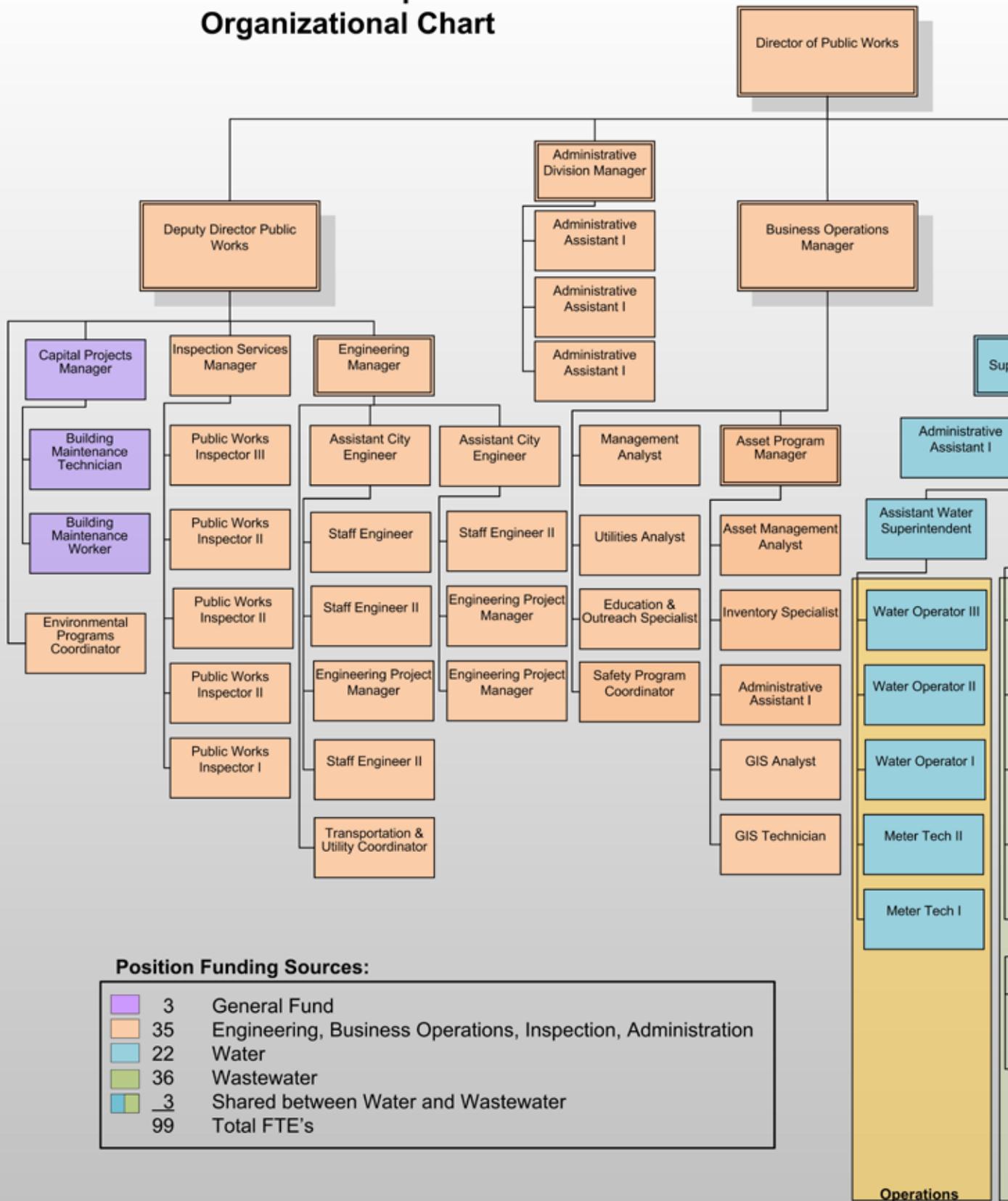


Water Construction Team:  
Joel Rodriguez, Marco Hernandez, Bill Vallely



NPDES Workgroup:  
Travis Kissire, Laurelei McVey, Clint Dolsby, Warren Stewart

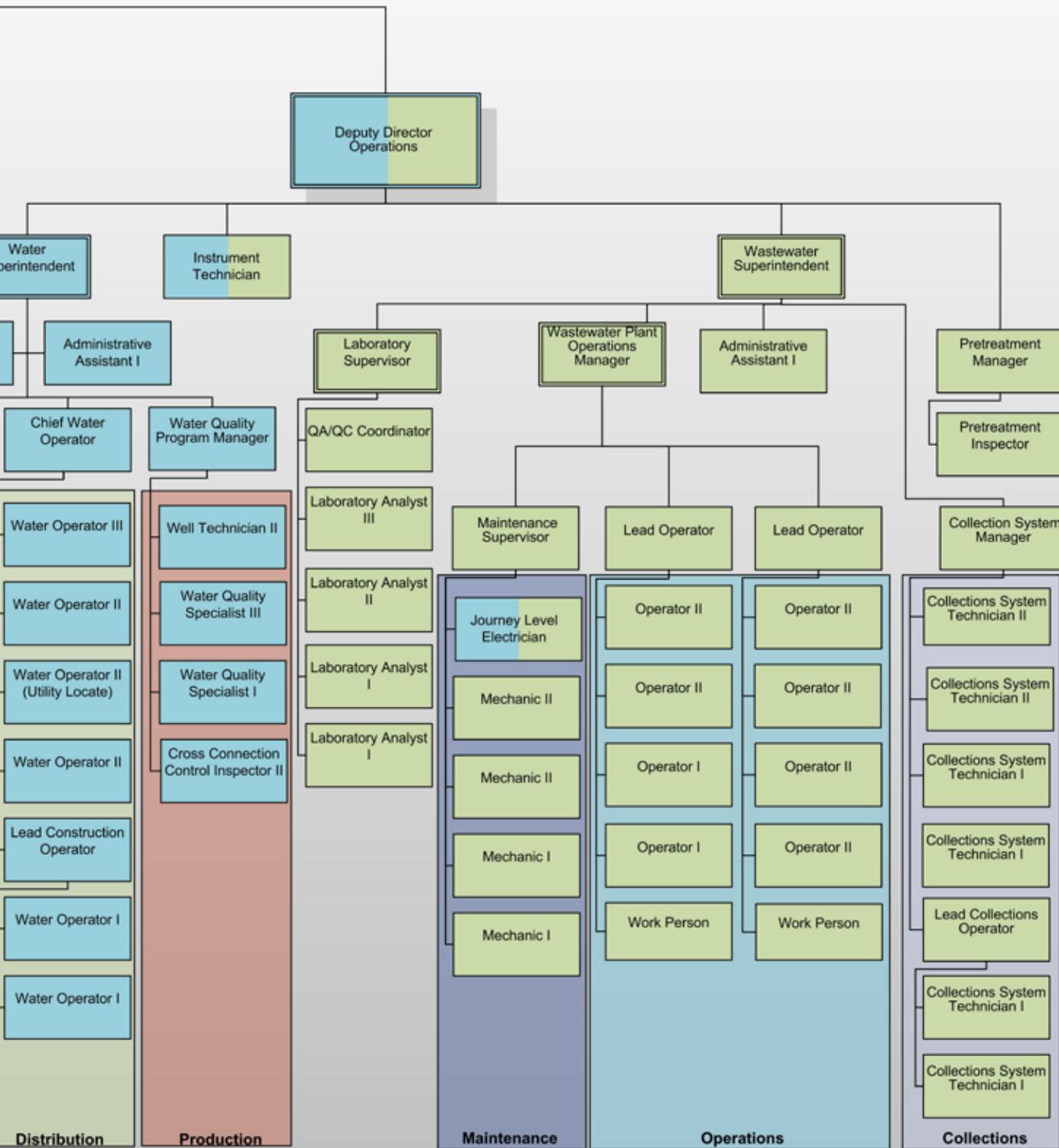
# Public Works Department Organizational Chart



**Position Funding Sources:**

|    |  |
|----|--|
| 3  | General Fund   |
| 35 | Engineering, Business Operations, Inspection, Administration |
| 22 | Water  |
| 36 | Wastewater   |
| 3  | Shared between Water and Wastewater                          |
| 99 | Total FTE's  |

Operations



# Financial Accomplishments

The Public Works Department utilizes a 10-year financial model to forecast anticipated expenses against projected revenues. This ensures solvency, promotes stability, and reduces variability in our financial operations. The result attempts to level-load costs and stabilize revenue streams to reduce the financial impact on our rate payers. While there continues to be great demands on the Utilities, namely growth and regulatory compliance changes, the Department endeavors to manage its financial affairs in a fiscally conservative manner recognizing the need to balance stewardship of the public trust with the need for requisite infrastructure. Following are a few highlighted accomplishments for the year.

## ***Utility Rates***

Data inputs and assumptions were updated regarding the impact of EPA regulations associated with the City of Meridian's new NPDES (National Pollution Discharge Elimination Systems) permit. These regulations will cost the City of Meridian tens of millions (\$) in wastewater treatment upgrades required to comply with the regulations. Though initial estimates were upwards of \$230 Million, narrowing the scope by applying fiscally conservation financing strategies reduced the cost to \$179 million. To avoid unnecessary hardship on City of Meridian rate payers, Public Works will continue to monitor rates to ensure that funding necessary to comply with the permit requirements is acquired in a planned and thoughtful manner.

## ***Sewer Assessment Fee***

Data inputs, assumptions, and potential scenarios concerning growth and their impact on Wastewater Plant capacity were updated. In order to fund the necessary capacity expansion, Business Operations proposed an increase in the assessment fee, which was approved by Council. This increased fee was benchmarked with other cities in the Treasure Valley. Meridian currently has the third lowest assessment fee out of nine cities in the benchmark survey.

## ***10-Year Capital Improvement Plan***

The planning horizon for capital improvements for sewer and water infrastructure was expanded from five to ten years. This change was necessary to capture and model the long-term financial impact of compliance with the NPDES permit, replacement of aging assets, and increased capacity requirements due to growth. Business Operations worked closely with Water, Wastewater, and Engineering in planning future requirements in a fiscally responsible manner that addresses the long-term reality facing these two utilities.

## ***FY2016 Budget Process***

Using a performance-based budget approach, Business Operations captured, compiled, and validated operating and capital expenses for Public Works. Budgetary inputs were vetted with other partners in this process, namely, Finance, the Mayor and Council Liaison, and all the Divisions within Public Works. Personnel and Operating budgeted expenses for FY2016 were down by 2% from FY2015 levels. The overall FY2016 budget was up 29% over FY2015 levels, largely due to capital spending increases in Wastewater driven by compliance with new EPA regulations and needed capacity expansion due to growth.

***The Public Works Department continued its mission of fiscal responsibility to our community as it prepares to meet the standards of new EPA regulations and increased capacity requirements.***



# Strategy Accomplishments

Strategic planning is one of the most important responsibilities of the leadership of any organization. It is the activity that ensures a clear vision is developed for the organization, that appropriate strategic objectives are developed to achieve the vision, that appropriate resource deployment decisions are made to achieve the strategic objectives, and that measures are put into place that ensure attainment of those objectives within the time specified. The strategic endeavors of the Department include the following.

## ***Capacity Modeling***

In the fall of 2014, influent wastewater flows at the Wastewater Resource Recovery Facility (WRRF) reached nearly 80 percent of the design capacity of the wastewater facility. The benchmark in the wastewater industry recommends initiating design of capacity improvements to the facility when the influent flows reach approximately 80 percent of the design capacity. Public Works Engineering staff led an effort to evaluate alternatives to upgrade the WRRF to a capacity of 15 million gallons a day in order to achieve proposed NPDES Permit limits and accommodate growth. Based on the modeling efforts and pending NPDES permit requirements, the first phase of upgrades at the WRRF has been initiated to meet the new regulations set forth in the NPDES Permit while accommodating growth.



paths for potential contaminants to reach the aquifer we rely on as a water source.

## ***South Meridian Annexation***

Public Works staff led the City's combined efforts to identify, attract, and formalize the annexation of over 40 properties totaling 1,322 acres. The annexation further solidifies the City's boundaries and offers utility services to a previously undeveloped area. Over the next two years, the Public Works Department will be managing the construction of nearly \$8M of utility infrastructure required to service this newly annexed area of Meridian. We are excited to play such a pivotal role in our City's growth!

## ***Public Works***

### ***Strategic Plan Reconciliation***

In 2010, the Public Works Department developed and implemented its first-ever strategic plan, a guiding document that would steer the Department for the next five years. That period has come to an end. The Department's Strategic Leadership Team is actively working with City staff to develop the City of Meridian's first-ever City-wide Strategic Plan and subsequently develop a Public Works Department Tactical Plan that will support the City's plan and advance key initiatives.

## ***Source Water Protection***

Engineering completed several projects directed at protecting groundwater from future contamination. Two wells constructed several decades ago in downtown to improve sewer infiltration were abandoned as well as the Meridian Heights Well #1. These projects eliminated direct

*Strategic planning ensures that the most important Departmental priorities are identified, communicated, and achieved with direction and effective planning so that all may know what is expected and how to achieve success.*





# Operations Accomplishments

The operations divisions in Public Works concentrated their efforts on utility planning, infrastructure upgrades and capacity expansions. With a new wastewater permit pending, several construction projects for expansion of the Wastewater Resource Recovery Facility were completed in addition to planning for compliance of new regulations. On the water side, water quality treatment, upgraded disinfection, and additional storage needs received attention. Upgrades to the monitoring and telemetry systems assist the entire Department in running these 24/7/365 operations efficiently. The following efforts are highlighted to demonstrate the Department's commitment to service and excellence.

*The Public Works Department has been able to celebrate many accomplishments in its operations.*

## Wastewater Resource Recovery Facility Expansion

It was an exciting year of expansion at the Wastewater Resource Recovery Facility (WRRF). Construction was completed on several buildings in an effort to accommodate the City's growth as well as increased regulatory requirements: a new Administration, building, an expanded Laboratory, a new Maintenance facility, and a remodeled Operations building. These help meet the need for growth space, allow the Department to accommodate increased lab analyses, and provide the space required to safely maintain and repair critical equipment,



allowing staff to complete repairs efficiently. The results of these improvements include a reduction in equipment downtime, an increase in staff productivity, and a decrease in outsourcing. Providing support facilities for our staff to operate and maintain the facility is crucial in maintaining regulatory compliance. Additionally, the Department is in the process of constructing facility upgrades to its UV system and Headworks to treat increasing wastewater flows. Additionally, design has begun for a treatment expansion that will allow our facility to treat 15 million gallons of wastewater per day!

## New NPDES Permit & Compliance Implementation Plan

The last EPA issued National Pollution Discharge Elimination System (NPDES) permit for the City was issued in 1999. A new, updated permit is expected to be issued in early 2016.

A multi-year effort to negotiate the updated discharge permit for the WRRF culminated with the issuance of our NPDES permit for public comment in July, 2015. The City negotiated the permit conditions and submitted all of our remaining comments on the permit during the comment period which concluded October 21, 2015.



WRRF 48-inch pipe installation

decrease in outsourcing. Providing support facilities for our staff to operate and maintain the facility is crucial in maintaining

EPA is working on the response to comments and we are currently awaiting the issuance of this document and our final permit, which will be effective 30 days after the issuance of the response to comments.



they enter the distribution system. The presence of iron and manganese in our water distribution system are the main contributors to discolored or “brown water” occurrences. Two wells were constructed at the Well 16 site to access water of different quality from different depths. The pumping facility was designed to blend water from the two wells at prescribed ratios to produce a desirable, low mineral water that meets EPA standards without the need for an expensive treatment facility. This was the City’s first project of this kind and will serve as a pilot for future projects. These differing technologies have improved water quality and reduced our overall water quality complaints by 18% this past year. With continued efforts and future treatments improvements, we anticipate even better water quality to reach more customers.

Regulatory requirements have changed significantly in both complexity and sensitivity since 1999. The proposed new NPDES permit has nearly quadrupled the required laboratory testing and has limits and requirements in the parts per trillion (that is equivalent to measuring 1 second in 32,000 years!).

Meridian’s Wastewater and Engineering Divisions are working to proactively plan and prepare for this new permit. We have completed our laboratory expansion, added additional laboratory staff, and worked through an extensive permit training program with all Division employees.

### ***Meridian Heights Water and Sewer District Annexed into the City***

In January of 2015, the Meridian Heights Water Sewer District (MHWS) was absorbed into the City. This transfer of property and infrastructure included the decommissioning of on-site sewer lagoons and connection to the City’s sewer system as well as the installation of meters at 300 homes. It also included the transfer in operation of two potable drinking water wells. This was a complicated project requiring careful planning and execution to minimize the inconvenience to MHWS customers, stay within budget and uphold timelines. Overall, the District was successfully transferred over on-time and without issue.

### ***Ground Water Reservoir Completed***

This past year, new ground water reservoir #2 was completed on the southern end of town. This water storage project nearly doubled our storage capacity and was needed to fulfill the growing system demands as well as provide needed emergency water reserves and fire flows for the southern portion of town.

### ***Water Treatment***

This year marked a huge advance in a proactive attempt to improve the City of Meridian’s water quality through the implementation of water treatment technologies. The substantial rate of growth over the past two decades placed water capacity at a higher priority with the need to keep up with demand. However, with growth now at a more modest rate and capacity needs fulfilled, attention has turned to improving water quality. This past year we installed and are operating our first iron and manganese treatment facility and, by year end, will have two more facilities on-line around the center of town. These sites will improve water quality by reducing these minerals before

The Well 21 Water Treatment Facility was the City’s first iron and manganese “filter” project. The facility improves taste, odor, and color of water by removing iron, manganese, ammonia, and hydrogen sulfide from water supplied by the well. The facility can treat over 2 million gallons per day.

The Well 19 Water Treatment Facility project brought a second iron and manganese filter on-line to bring the total treatment capacity to over 4 million gallons per day.





# Operations (Continued)

Improvements included the installation of two main line isolation valves, 12" and 24", to improve system control as well as filter assemblies to improve water quality for our customers. Additionally, WalMart was added as our newest recycled water customer.

water sample locations; it also readied our 31,000 water service accounts for transfer and incorporation into the new utility billing software coming in 2016. Phase IV is currently underway and incorporates the completed work in the first three phases, building operational features into the program for staff

## Upgraded Disinfection Pumps at All Well Sites

New automated chlorine injection pumps were installed this past year to replace existing static pumps. These pumps are state of the art in the industry, are more reliable, have a lower life-cycle cost, and, most importantly, inject chlorine more accurately and consistently into source water as it enters the distribution system. This treatment improvement has provided better control of chlorine dosages and residuals which has a direct influence on water quality delivered to customers and reduces brown water complaints.

## Recycled Water

This past year, our recycled water program successfully provided 65 million gallons of water to our customers. That is the equivalent of filling 105 Olympic-sized pools!

Further education was provided to staff, enabling them to make system improvements.



Heroes Park Uses Recycled Water

## City Street Lights

Five new LED street lights were installed on Linder Road north of Cherry Lane. The new lights will improve illumination along this important school walking route and vehicular corridor.



Linder Road North of Cherry Lane

Starting in 2016, all new street lights installed in the City will use LED fixtures. These LED fixtures use 65% less energy than traditional high pressure sodium fixtures and have an expected lifespan of over 20 years. The expected electric and maintenance cost savings is over \$400 per fixture over the life of the product.

## Water Asset Plan

This past year, in an ongoing effort to implement and integrate an asset management program into the City's Public Works utility operations, Phase III was completed and Phase IV was begun. Phase III completed the audit and collection of permanent water blow off assemblies, and

utilization and water reservoirs. To date, almost 40,000 water assets have been collected and are being tracked in the asset management program.

## Transportation and Utility Coordination

The Transportation and Utility section of the Engineering Division collaborates with Ada

County Highway District (ACHD) and the Idaho Transportation Department (ITD) to allow City utility work to take place in conjunction with road projects, lowering costs to Meridian citizens and minimizing construction time.

Working with ITD, a new 180-foot long 18-inch diameter sanitary sewer crossing was installed under Meridian Road as part of the Meridian Interchange Project. This pipe was installed in a 36-inch steel casing which will allow the pipe to be repaired or replaced in the future without having to excavate a trench across the Meridian Road Interchange. This replaced the old crossing which was not installed inside a casing.

## *Public Works Fiber Optics Implementation*

Recently completed, a two year effort installed fiber optic lines at the Wastewater Resource Recovery Facility (WRRF), and from the WRRF to the Water Division and City Hall. A dedicated fiber optic line between these locations has improved the speed, reliability and security of communications within the Supervisory Control and Data Acquisition (SCADA) System. It has resulted in better troubleshooting and communication between Engineering staff and Water Operations staff, improving operational efficiency and security.



Fiber Optics Installation

## *SCADA Upgrade Project*

This past year our SCADA upgrade project continued with the replacement of Process Logic Control (PLC) panels and radio telemetry equipment at our remaining eight water well sites. These upgrades improve the reliability, function and control of our wells and reservoirs. Additionally, Wastewater upgraded PLCs, installed probes and valves to better automate and control air flow in the basins, and installed additional process probes (ammonia and nitrate) to better assist

with process control. This reduced the number of blower starts per day. These energy efficiency improvements earned the City recognition through the Idaho Power Energy Efficiency Cohort.



SCADA Upgrade Project

## *Inventory Control*

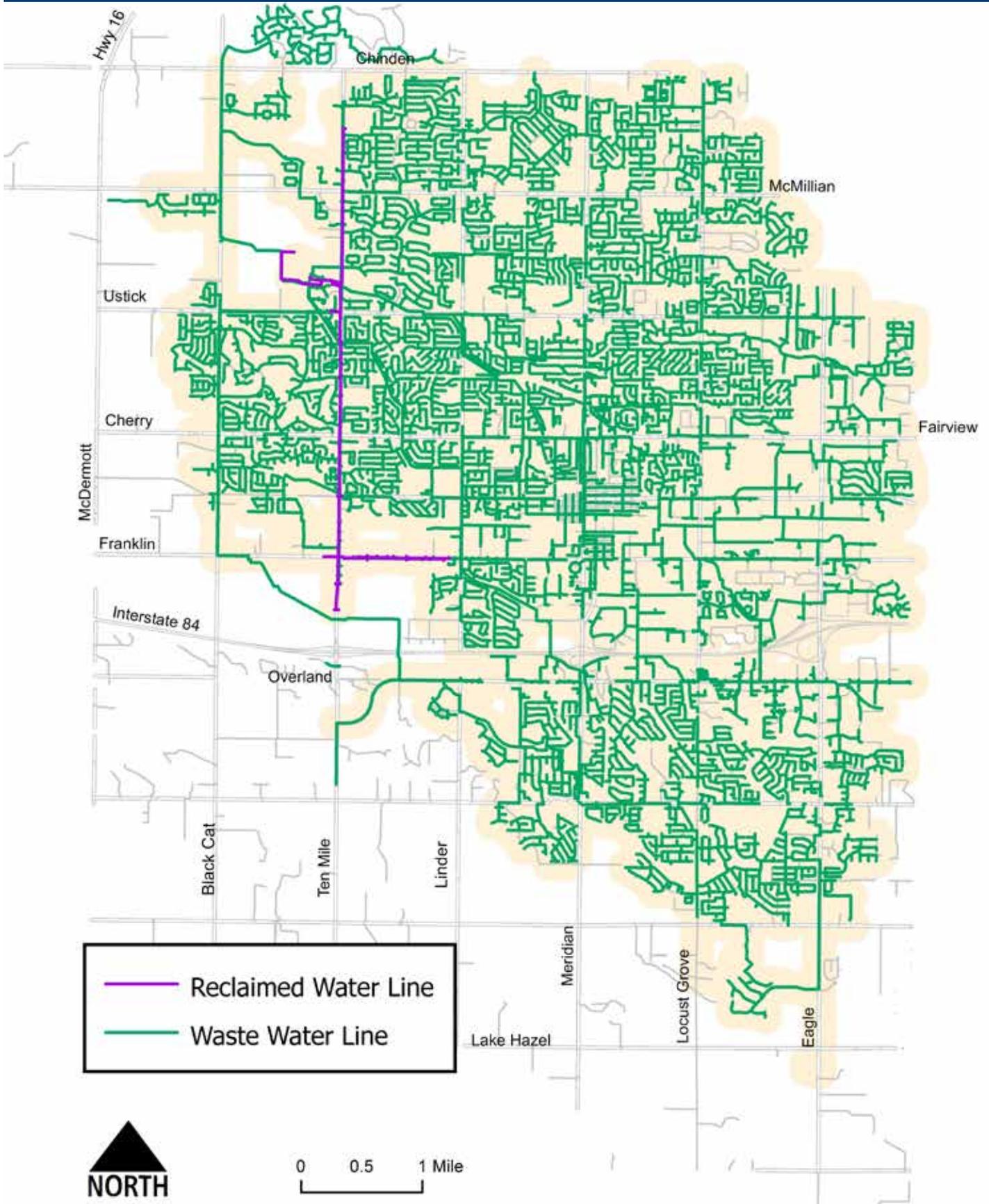
With the successful implementation of a strong inventory control program at Water and Wastewater, our Inventory Control Specialist continues to improve operational efficiency for the Public Works Department. Through continuous process improvement and updated standard operating procedures for material acquisition, our inventory management process provides exceptional resource availability to our utility personnel. Having on-hand parts inventory aids in making quicker repairs and lowers maintenance down-time.



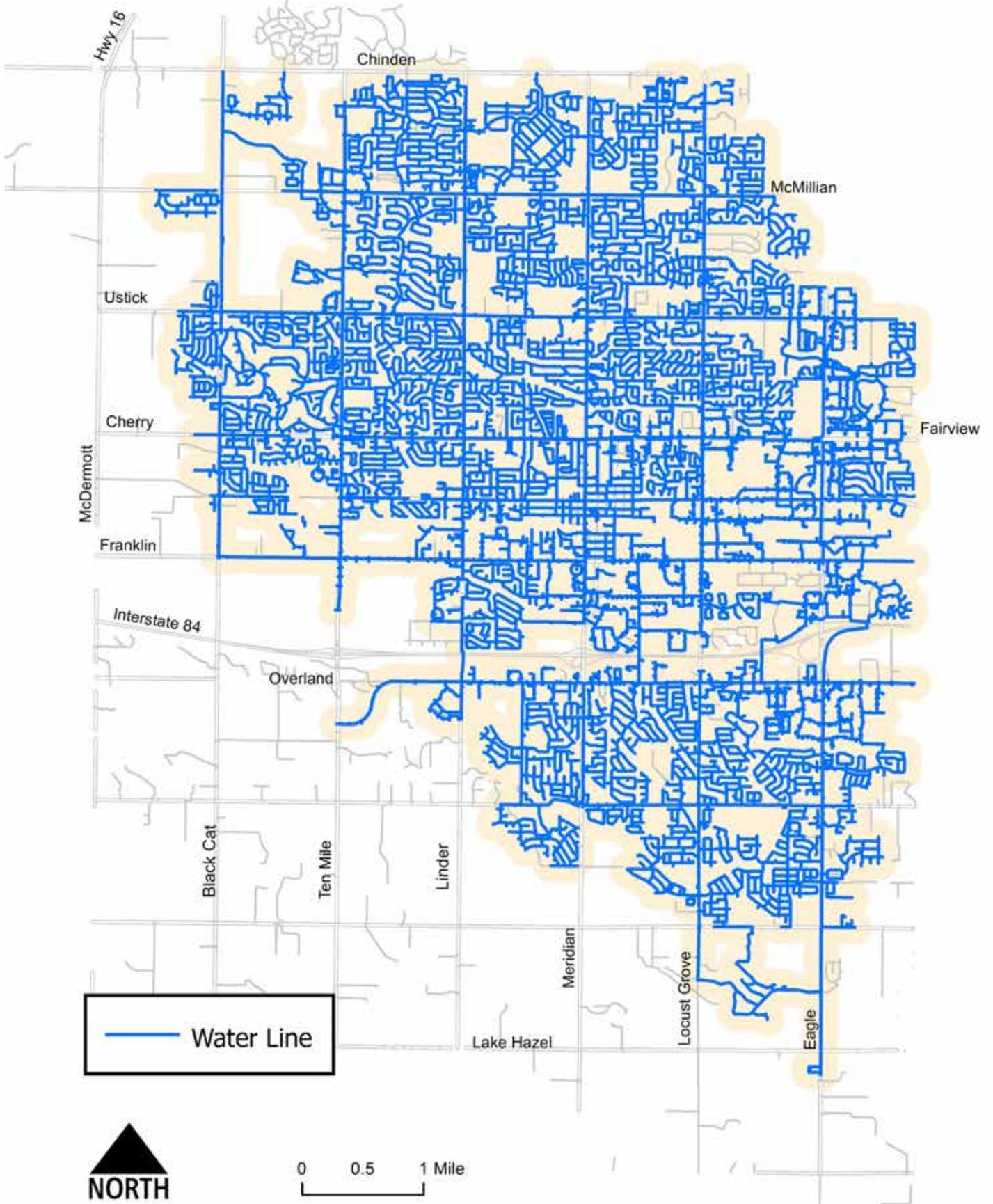
**2,000+**  
*Stocked Parts*



**\$1.2 M**  
*Value of stocked parts*



# City of Meridian Utilities



# *Public Works Facts*

**200%**

*Increase in inspections of permitted facilities conducted by Pretreatment Inspectors from 2014*

**5,000+**

*Street lights*

**46%**

*Approximate amount of City's Total Budget*

**53%**

*Increase in total inspections by Construction Inspectors from 2014*

**20%**

*of PW workforce promoted over the last three years*

The **Capital Projects and Facilities Division** manages construction projects for City capital projects and provides facility maintenance for 12 City-owned buildings. Some of the recent construction projects include the Parks and Recreation Maintenance Facility, the Police Department Public Safety Training facility and Admin Building addition/remodel, and the City Hall west side parking lot. They supervise tenant improvements at existing facilities as well as oversee Arts Commission public art projects.

The benefits of utilizing the Capital Projects and Facilities team to perform facility maintenance, in addition to project management, has been recognized and services are increasingly requested. The staff are skilled and have established vendor relations needed to perform maintenance and project management, promoting consistencies in service levels, vendor agreements, and cost of work. By providing the City with one point of contact to address any facility issues and coordinating resources to complete work, performance level expectations are maintained and reliable assets are ensured.



**12**  
*Buildings*



**222,000**  
*SQ. FT.*

# Your City Services

## Water

| <i>Water Lines</i> | <i>Pressure Reducing Valves</i> | <i>Booster Stations</i> | <i>Water Storage</i>       | <i>Active Water Wells</i> | <i>Domestic Pumping Capacity</i>    | <i>Active Fire Hydrants</i> |
|--------------------|---------------------------------|-------------------------|----------------------------|---------------------------|-------------------------------------|-----------------------------|
| <i>516 miles</i>   | <i>24</i>                       | <i>3</i>                | <i>4.5 million gallons</i> | <i>23</i>                 | <i>69.6 million gallons per day</i> | <i>4,826</i>                |

## Wastewater

| <i>Sewer Lines</i> | <i>Sewer Lift Stations</i> | <i>Sewer Manholes</i> | <i>Treatment Capacity</i>           | <i>NPDES Permit Limit</i>        | <i>Average Daily Flow</i>          |
|--------------------|----------------------------|-----------------------|-------------------------------------|----------------------------------|------------------------------------|
| <i>439 miles</i>   | <i>8</i>                   | <i>10,979</i>         | <i>10.2 million gallons per day</i> | <i>7 million gallons per day</i> | <i>6.5 million gallons per day</i> |

## Recycled Water

| <i>Recycled Water Lines</i> | <i>Recycled Water Booster Stations</i> | <i>Recycled Water Delivered</i> |
|-----------------------------|--|---------------------------------|
| <i>6 miles</i>              | <i>1</i>                               | <i>65 million gallons</i>       |

The **Asset Management Program** welcomed the Geographic Information Services (GIS) group to its team. GIS is an information system to integrate, store, edit, analyze, share and display geographic information relevant to the City and the Public Works Department such as the location of water and sewer infrastructure. Items like valves, hydrants, collection and distribution piping, manholes, meters, streetlights and other assets are captured in GIS. With more assets being tracked every year, Public Works can more effectively manage the life cycle of critical infrastructure.

With an improved data capturing process and expanded functionality, the program can increasingly focus on providing accurate data needed to drive infrastructure service, maintenance, and replacement forecasting. Asset Management has accelerated the use of asset data in generating work orders vital to documenting an asset's attributes, condition, and anticipated replacement. This data assists the Public Works Department make fiscally responsible decisions for future replacements necessary to meet Meridian's growing population. The Asset Management Program and GIS continue to improve our water and wastewater infrastructure decision-making capabilities. All of this effort results in lower operating and replacement costs by extending the life of Public Works' infrastructure.



**23,500**  
*Assets  
 Added to  
 database  
 in 2015*



**31,058**  
*Work Orders  
 Completed in  
 2015*



# City of Meridian

## Public Works Department

33 East Broadway Ave., Ste. 200

Meridian, ID 83642

**(208) 898-5500**

**(208 898-9551 Fax**

[www.meridiancity.org/PublicWorks](http://www.meridiancity.org/PublicWorks)

### **Elected Officials:** **Tammy de Weerd, Mayor**

#### **City Council:**

Keith Bird, Council Member  
Joe Borton, Council Member  
Luke Cavener, Council Member  
Genesis Milam, Council Member  
Ty Palmer, Council Member  
Anne Little Roberts, Council Member

#### **Mayor's Office:**

(208) 888-4433  
Fax: (208) 884-8119