



**WATER  
RESOURCES**

# 2017 Business Plan

**gwinnettcounty**  
GOVERNMENT

**Tuesday, August 30, 2016**

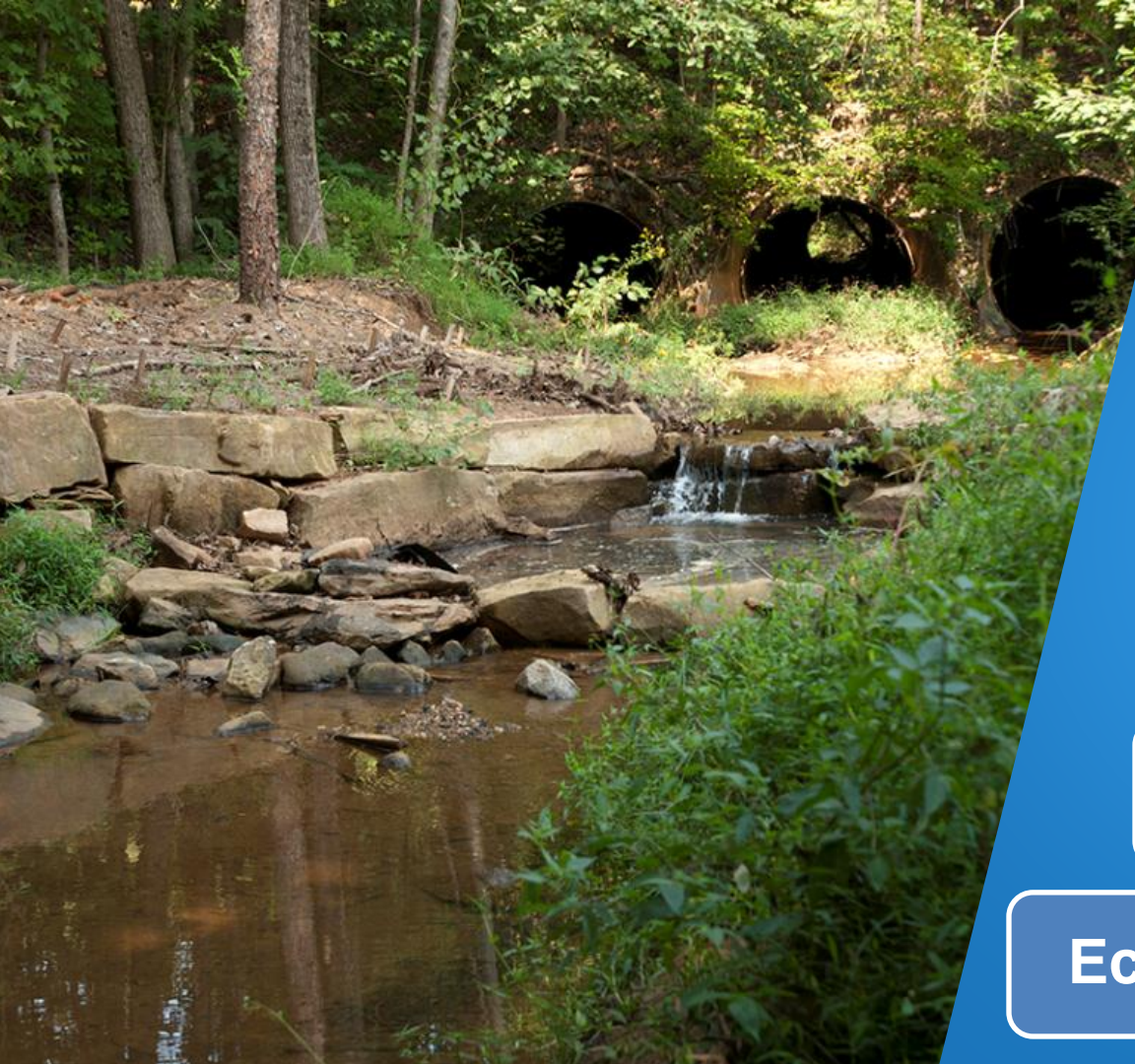


# Mission and Vision

To Provide Superior Water Service  
at an Excellent Value



To be widely recognized as a leader in the water industry



# Value of Water

**Public Health**

**Quality of Life**

**Protect the Environment**

**Economic Development**



# Moving Toward Sustainability: Water Utility Roadmap

Continuous improvement through personal commitment, innovation, efficiency, and education

**Providing  
Fundamental  
Services**

**Optimizing  
Operations  
and Services**

**Transforming  
Operations and  
Services for the  
Future**

**Utility  
of the  
Future**



# DWR Services



Water Treatment



Water Distribution



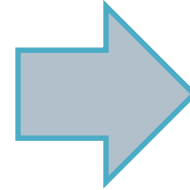
Wastewater Collection



Wastewater Treatment

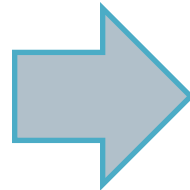


Stormwater Services



**Serving  
over  
918,132  
residents**

with a



**Staff  
of  
550**



# Agenda

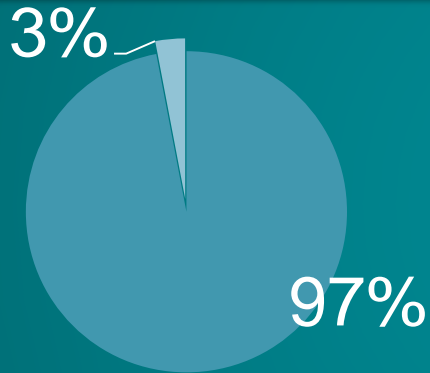
Financials

Core Services and  
Service Levels

Workforce  
Development

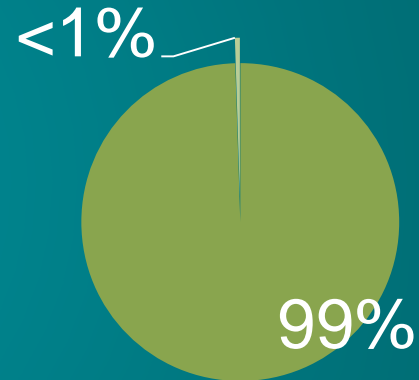
# Financials: Revenues

**W&S Revenue**  
**\$ 328.9 Million**



- W&S Service Fees
- Other

**Stormwater Revenue**  
**\$ 31.67 Million**



- Stormwater Fees
- Other

# Financials: Stormwater

Operations  
Expense  
\$8.1M

Debt  
Service  
\$361K

Stormwater  
Budget

Total Stormwater  
2017 Budget: **\$31 Million**

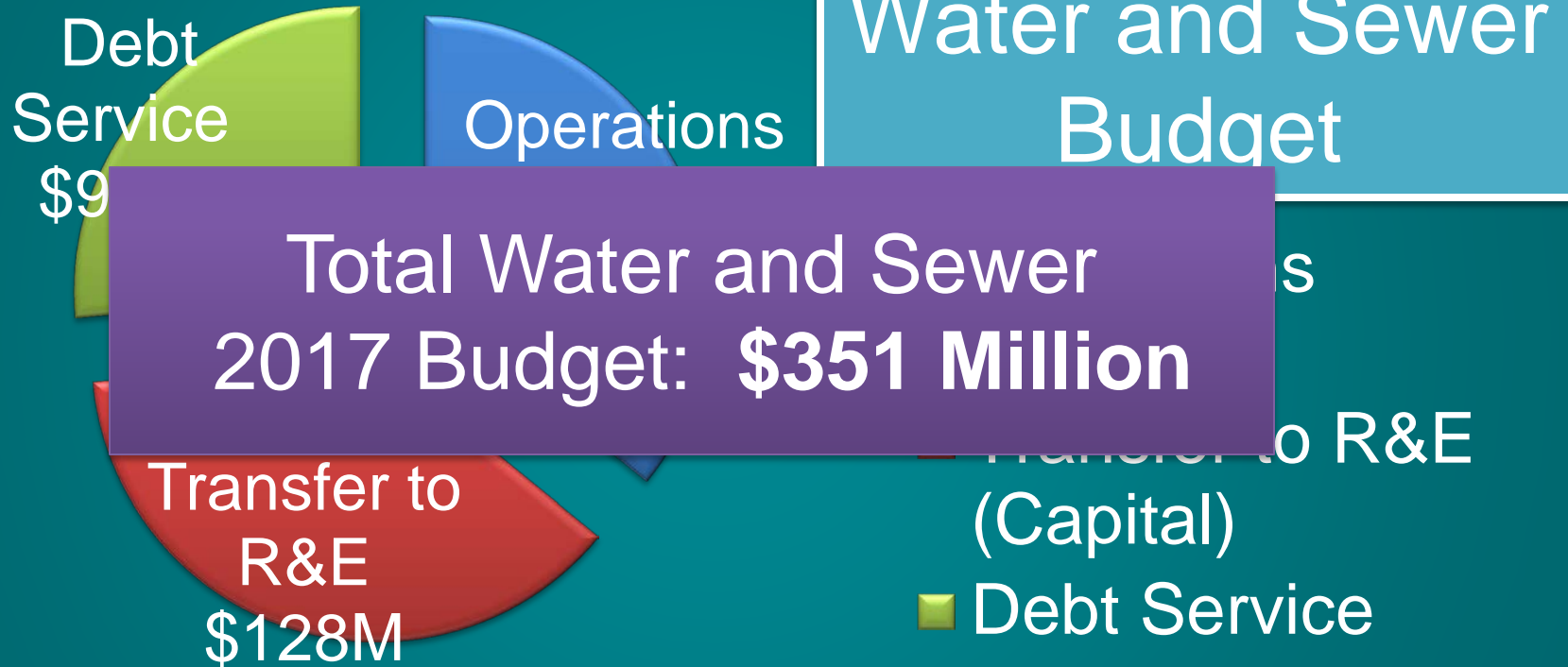
Transfer to  
R&E  
\$22.6M

Expense

■ Debt Service

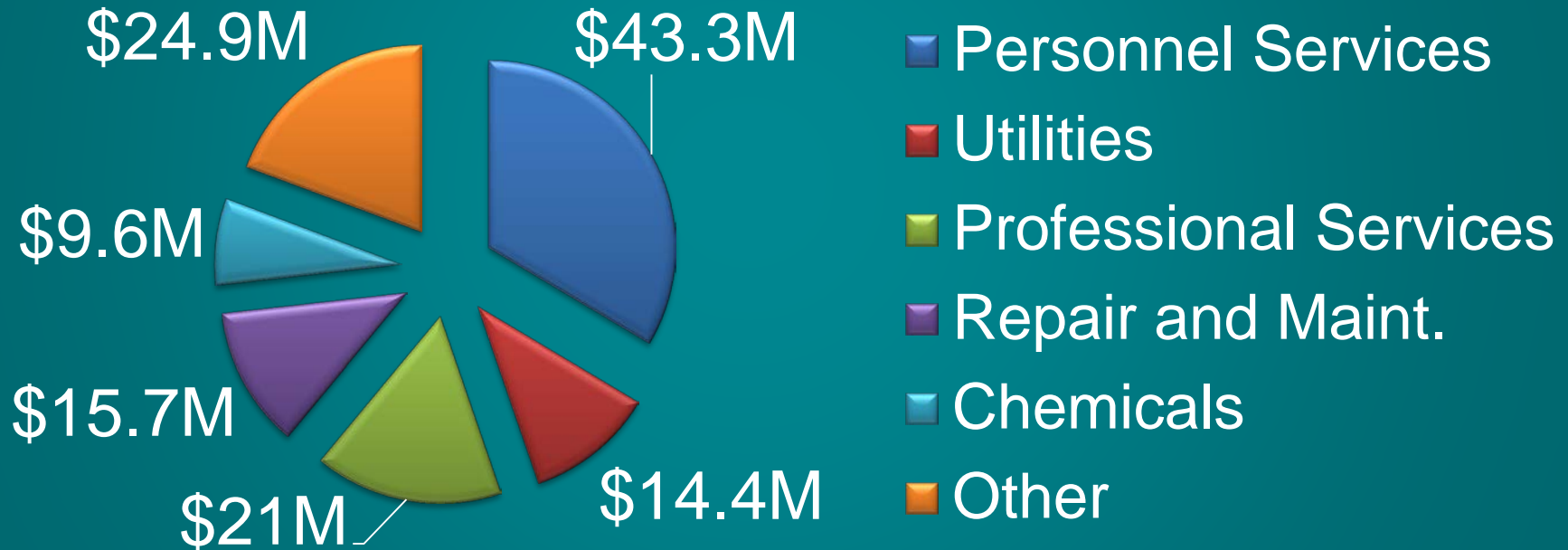


# Financials: Water and Sewer

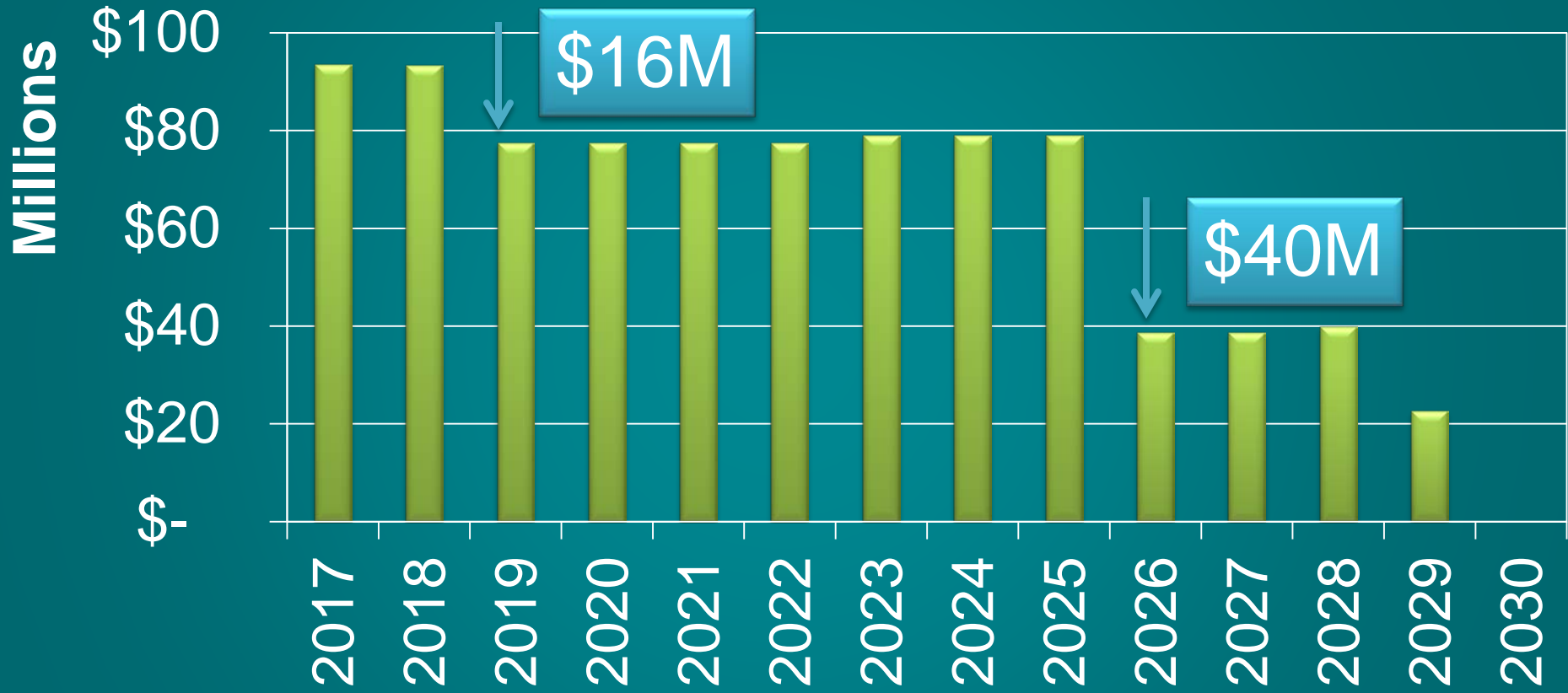


# Financials: Operations Expenses

## 2017 Water and Sewer Operations Expenses

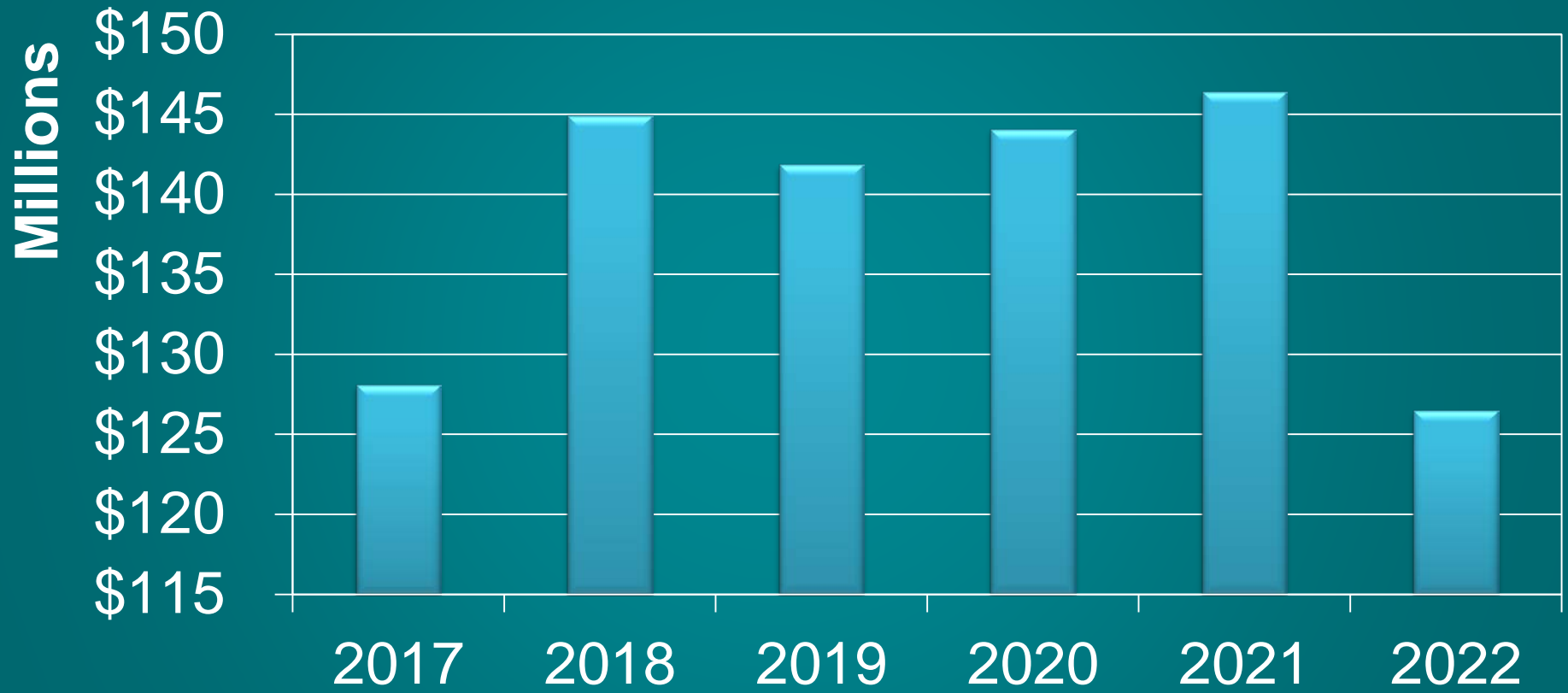


# Financials: Water and Sewer Debt Service





# Financials: Water and Sewer Capital Program



# Services: Water Production and Reclamation



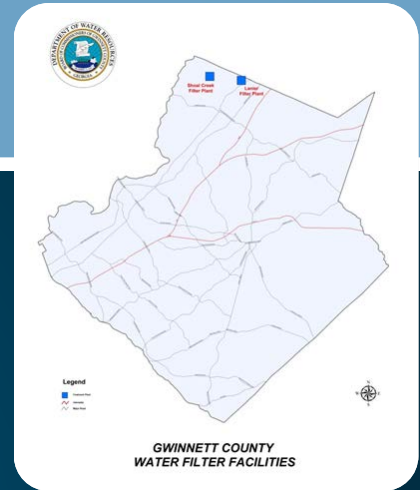


# Water Production

Produce safe drinking water

At the right pressure and quantity

In 2015, water production plants produced 25 billion gallons of safe drinking water



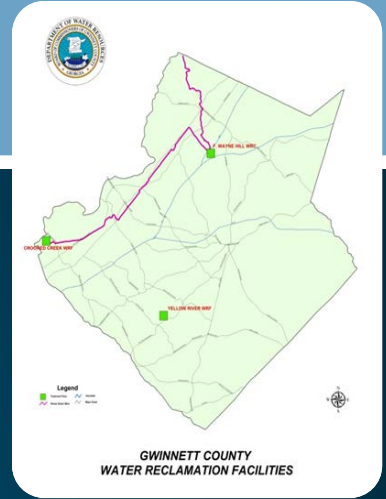


# Water Reclamation

Reclaim wastewater (and other products)

Return high-quality water back to Lake Lanier; Chattahoochee and Yellow Rivers

In 2015 19.6 billion gallons of wastewater was reclaimed





# Water Production and Reclamation

## GOAL Keep Equipment Operational

Permits require  
maintained  
facilities

STATE OF GOERGIA  
DEPARTMENT OF NATU  
ENVIRONMENTAL PRO

of 23  
No. GA0026433

Part II

A. MANAGEMENT REQU

1. FACILITY OPERA

The permitted sl or control facilities and related equipment compliance with this permit. Efficient operation maintenance include effective performance, adequate funding, adequate operating staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.





# Water Production and Reclamation

**GOAL** Keep Equipment Operational

Prevent Equipment Failure

KPI

- Number of reported failures per year

Quickly Repair Equipment

KPI

- Number of backlog work orders



# Water Production and Reclamation

**GOAL** Keep Equipment Operational

**Progress**

Prevent Equipment Failure

- Improved preventive and predictive maintenance programs
- Staff trained on predictive maintenance
- Failures reduced by 30% since 2013

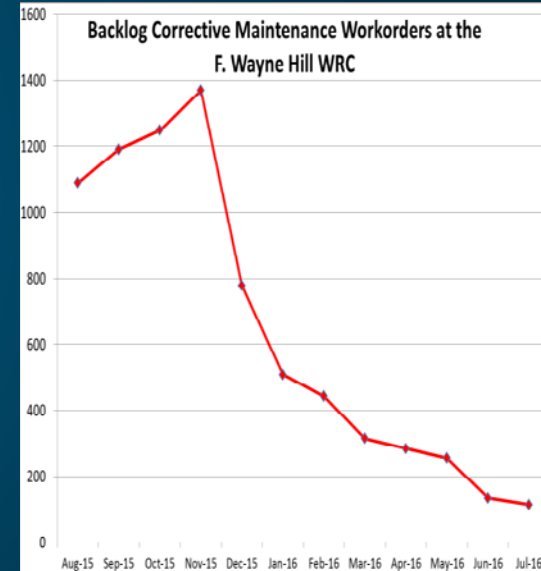


# Water Production and Reclamation

**GOAL** Keep Equipment Operational

Quickly Repair Equipment

- **1,317 backlog work orders identified at F. Wayne Hill**
- **Backlog due to procurement difficulties**
- **60 Annual contracts**
- **Backlog reduced from 1,317 to 115**
- **Consultant annual cost of \$2.58 million**





# Water Production and Reclamation



## Decision Package

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**NEED**

### New Contract Management Group

- 1 Contract Section Manager
- 1 Construction Manager II
- 2 Contract Inspector Associate II
- 1 Warehouse Tech III



# Services: Water Distribution and Collection





# Water Distribution

**Deliver safe water to our customers**



**Keep the water in the 3,770 miles of pipes**



**Ensure 43,000 fire hydrants work**



**Ensure 255,000 water meters are accurate**





# Water Distribution

Keep the water  
in the 3,770  
miles of pipes



Number of Pipe  
Leaks per  
100 miles a year



Ensure  
255,000 water  
meters are  
accurate



Number of meters  
tested or replaced





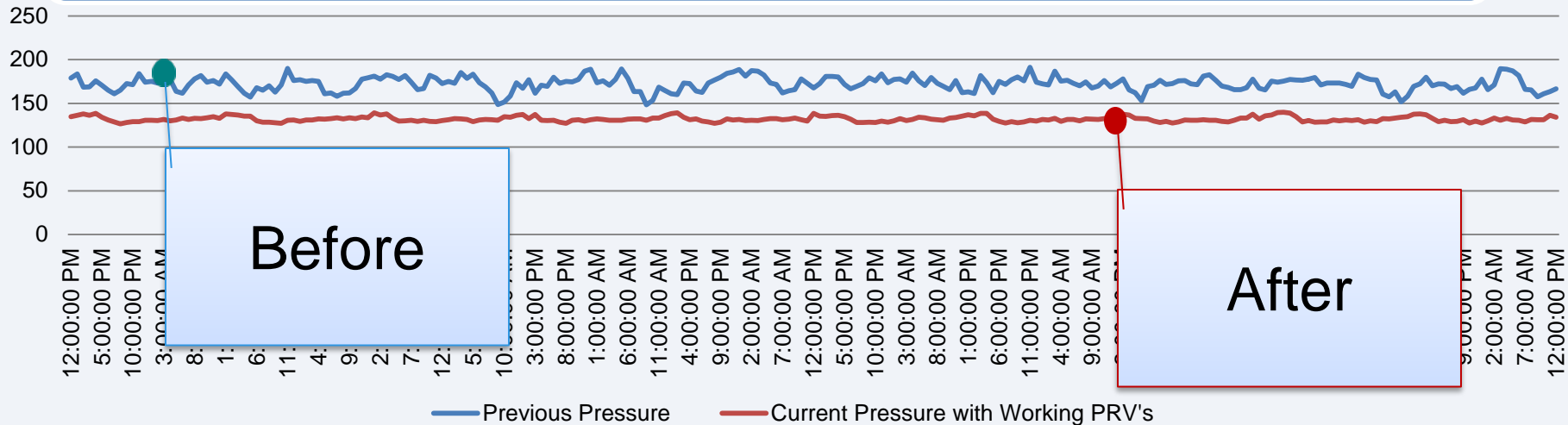
# Water Distribution



Keep water in our pipes

Progress

Began a Pressure Management Program in 2012







# Water Distribution



**Keep water in our pipes**

Progress

Partnership between Water Production, Water Distribution, and our Technical Support Group

Water pipe leaks have decreased by 44%

- From **11.7/yr** to **6.5/yr** per 100 miles in 3 years



# Water Distribution

## **GOAL** Ensure Accurate Meters

### Meter Distribution and Revenue

Size	% of System	Revenue	Replaced
¾ Inch	96.7%	63%	15yr or 1M Gallons
3+ Inch	0.3%	22%	When they fail
1-2 Inch	3.0%	15%	<b>No Program</b>



# Water Distribution



## Decision Package

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**NEED**

**Additional meter testing and replacement crew**

- **2 Trades Associate III**

For testing and replacement of 1- to 2-inch meters



# Wastewater Collection

Deliver wastewater to the treatment facilities

Keep the wastewater in the 3,000 miles of pipe and 220 pump stations



# Wastewater Collection



**Keep wastewater in our pipes**

Progress

3000 Miles  
of Pipe

220 Pump  
Stations



**Number of sanitary sewer overflows  
(SSOs) per 100 miles of pipe**



Decreased from 2008–2014

From 1.4 to 0.87 per 100 miles



# Wastewater Collection

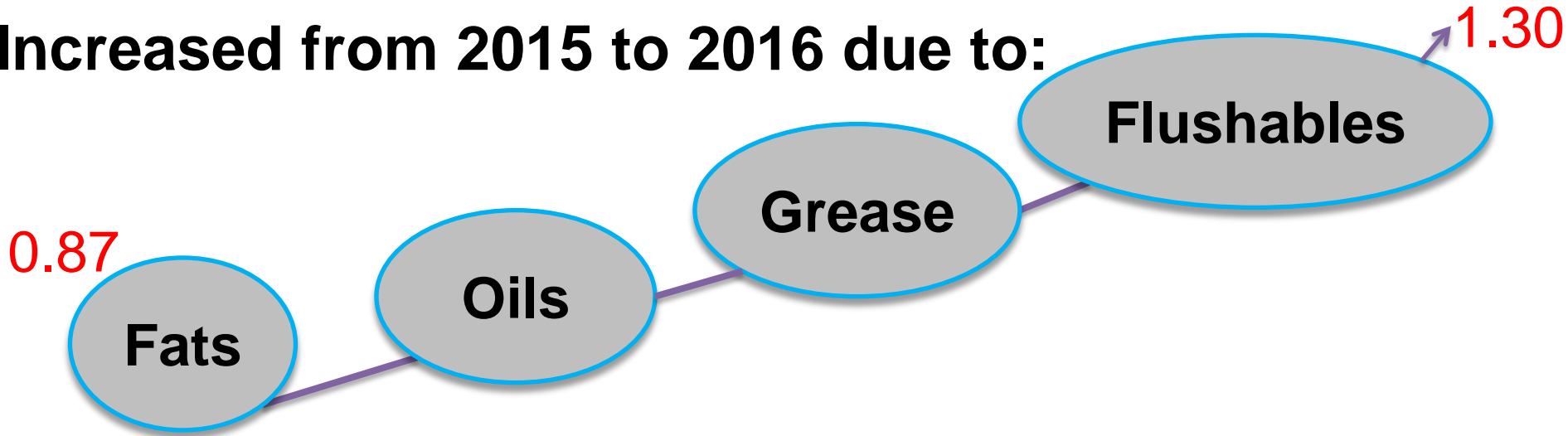


Keep wastewater in our pipes



Number of sanitary sewer overflows (SSOs) per 100 miles of pipe

Increased from 2015 to 2016 due to:





# Wastewater Collection

**GOAL** Keep wastewater in our pipes

Corrective Measure  
#1  
**Education**

- Educate residents about keeping flushables and FOG out of sewer



# Wastewater Collection



## Decision Package

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**NEED**

**To Reduce SSOs:** Educate residents about keeping flushables and FOG out of the sewer system

- **1 Resource and Marketing Specialist**





# Wastewater Collection

**GOAL** Keep wastewater in our pipes

Corrective Measure  
#2  
Spill Prevention

- Flush the sewer lines before they become blocked



# Wastewater Collection



**Keep wastewater in our pipes**

**NEED**

**Now:** 4 hydrojet crews flushing 230 miles of sewer yearly

- (less than 8% of system, 12.5 years to flush system)

**Industry Goal:** flush every 5 years

- (20% of entire system or 540 miles sewer each year)

**Solution:** SL-RAT (sewer line rapid assessment technology)



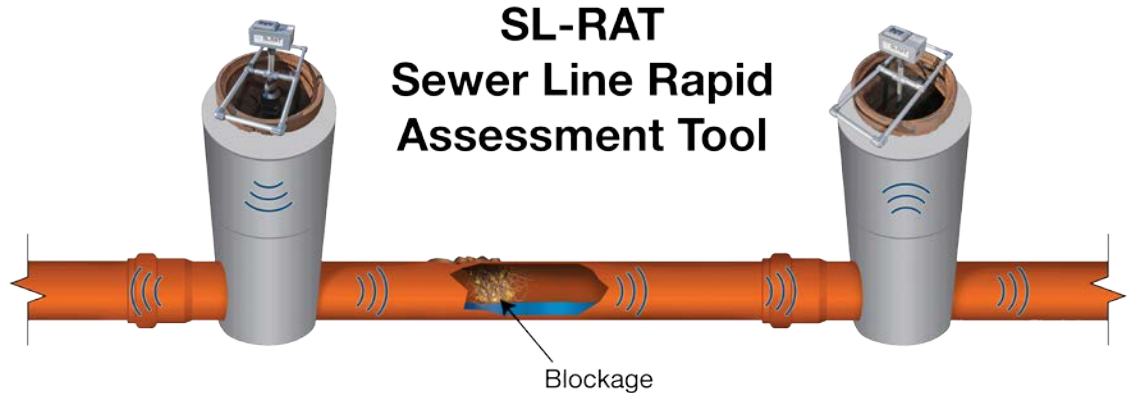
# Wastewater Collection

**GOAL**

Keep wastewater in our pipes

**NEED**

Targeting using a SL-RAT for reconnaissance





# Wastewater Collection



## Decision Package

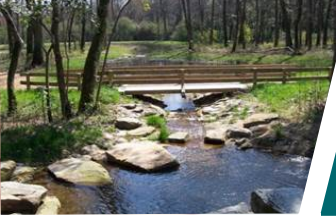
**NEED**

To Reduce SSOs through proactive inspections and line flushing

- **4 Trades Associate III**
  - **2 Trades Associate III to add fifth hydrojet crew to flush lines**
  - **2 Trades Associate III to add a second SL-RAT crew**

# Services: Stormwater





# Stormwater



Provide adequate drainage

Prevent flooding



Improve water quality of streams and lakes





# Stormwater

**GOAL** Provide adequate drainage

KPI

**Feet of Stormwater Pipe Replaced or Lined Per Year**

**1,427 miles of stormwater pipe**

50% is galvanized corrugated metal pipe with a estimated life of 25 years



# Services: Stormwater

**GOAL** Provide adequate drainage **Progress**

KPI

**Feet of Stormwater Pipe Replaced or Lined**

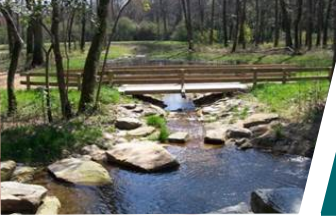
Improved CIP delivery processes

Improved communications with Land Acquisition Division

Increased funding from other sources

Proactive pipe inspection increases chance to line pipes





# Stormwater

**GOAL**

Provide adequate drainage

**Results**

KPI

**Feet of Stormwater Pipe Replaced or Lined**

2010 to 2014

**53,000**

143-year

replacement rate



2015

**90,673**

83-year

replacement rate



2016 Est.

**140,000**

53-year

replacement rate



# Stormwater

**GOAL**

**Improve water quality of lakes and streams and prevent flooding**

**KPI**

**Number of Stormwater Ponds Inspected**

Over 8,000 Stormwater Management ponds

50% of maintenance inspections require re-inspection

1.5 staff doing pond inspections (>once every 10 years)

Goal is once every 5 years



# Stormwater



## Decision Package

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**NEED**

**Increase the Number of Stormwater Management Ponds Inspected**

- **1 Construction Manager II**



# Distribution, Collection, and Stormwater

**GOAL** Excellent Customer Service

KPI

Time to complete a repair

2015 – over 1,800 W&S, and stormwater line repairs

515 repairs required landscape work to complete

Currently have one 3-person crew

Combined concrete, asphalt, and sod contracts

Currently at 20 days, goal is to be below 14 days



# Distribution, Collection, and Stormwater



## Decision Package

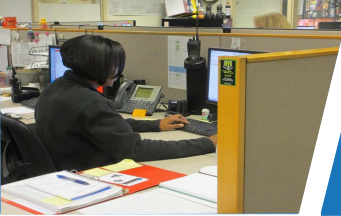
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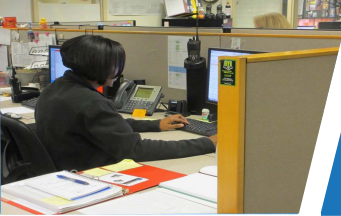
**NEED**

Reduce the amount of time to complete landscaping

- **1 Trades Associate III**

# Customer Care





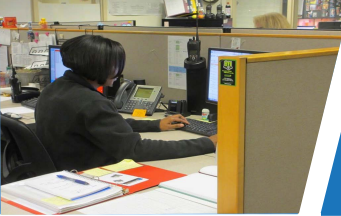
# Customer Care

**245,600 water  
meter accounts**

**50,000 customer  
contacts monthly**

**165,000 sewer  
accounts**

**236,000 bills sent  
out monthly**



# Customer Care

## **GOAL** Excellent Customer Service **Progress**

Increased training and customer skills development

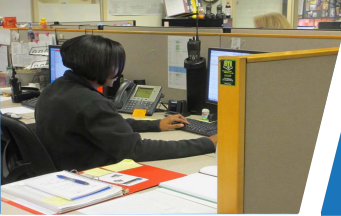
- An average of 2,300 calls per year monitored and used to coach agents

Implemented fairer, easier to understand policies

Improved the lock-off process

Option of online one-time payment added





# Customer Care



## Excellent Customer Service

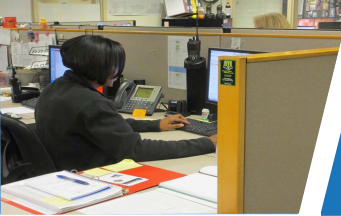
## Results

Call abandonment rate reduced from 18% to 10%

Customer wait time decreased from 5.5 min to 3.5 min

Call quality increased from 73% to 93%

1,000 customers used the one-time-pay the first month



# Field Customer Care

## **GOAL** Customer Satisfaction

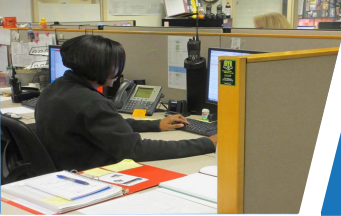
Field staff turn on meters and re-read meters if needed

Meter turn-ons have priority

Half of the needed re-reads are not done (500 a month)

Customer service agents must estimate bills

Customers may have water leak that will continue



# Customer Care



## Decision Package

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**NEED**

Increase customer satisfaction by improving bill accuracy

- **1 Trades Associate III**

# Workforce Safety





# Need to Expand Safety Program

## Potential Hazards

High-Voltage  
Electric  
Shock

Explosive  
and Toxic  
Gases

Hazardous  
Waste

Corrosive  
Chemicals

Confined  
Space  
Hazards

High-Speed  
Rotating  
Equipment



# Workforce Safety

KPI

Number of recordable incidents of injury or illness to DWR employees

- Increase safety assessments
- Analyses and reporting of findings
- Development of annual risk assessment
- Safety training and awareness
- Emergency response training



# Workforce Safety



## Decision Package

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**NEED**

**Goal: Reduce the number of recordable safety incidents**

- **1 Safety Officer**



# Decision Package Recap

16 Total Positions

**NEED**

1 Contract Section Manager

1 Construction Manager II

2 Contract Inspector Associate III

1 Warehouse Technician III

1 Safety Officer

1 Resource and Marketing Specialist





# Decision Package Recap

16 Total Positions

**NEED**

1 Trades Associate III – meter re-read position

4 Trades Associate III – sewer inspection and cleaning

1 Trades Associate III – landscape job improvement

1 Construction Manager II – stormwater pond inspection

2 Trades Associate III – meter testing group



# Decision Package Recap

16 Total Positions

**NEED**

Decision packages funding total: \$1.3 Million

0.37% Increase in total budget if  
all packages are approved

# Workforce Development





# Workforce Development

**Continuous improvement through personal commitment, innovation, efficiency, and education**

## A look at our workforce

- 550 employees (7.9% vacancy rate)
- Professional, Skilled Trades, Analysts, Administrative

24/7 requirement to meet service level

# Need for Large Diversity of Skillsets



Field Trade Associates



Pump Station Mechanics



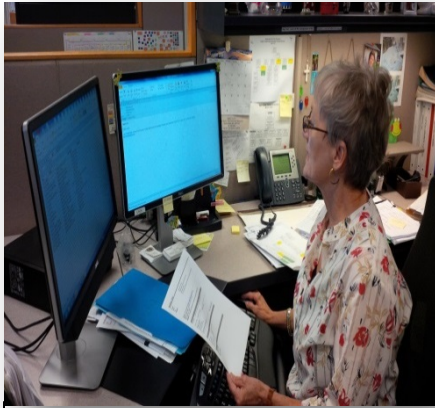
Customer Service Reps



Construction Inspectors



# Need for Large Diversity of Skillsets



**Admin Assistants**



**Electricians**



**Meter Repair Technicians**



**Engineers**

# Need for Large Diversity of Skillsets



Maintenance  
Techs



Leak  
Detectors



Lab Techs



GIS Techs



# Need for Large Diversity of Skillsets



Warehouse Technicians



Trades Technicians



Financial Analysts



Operators





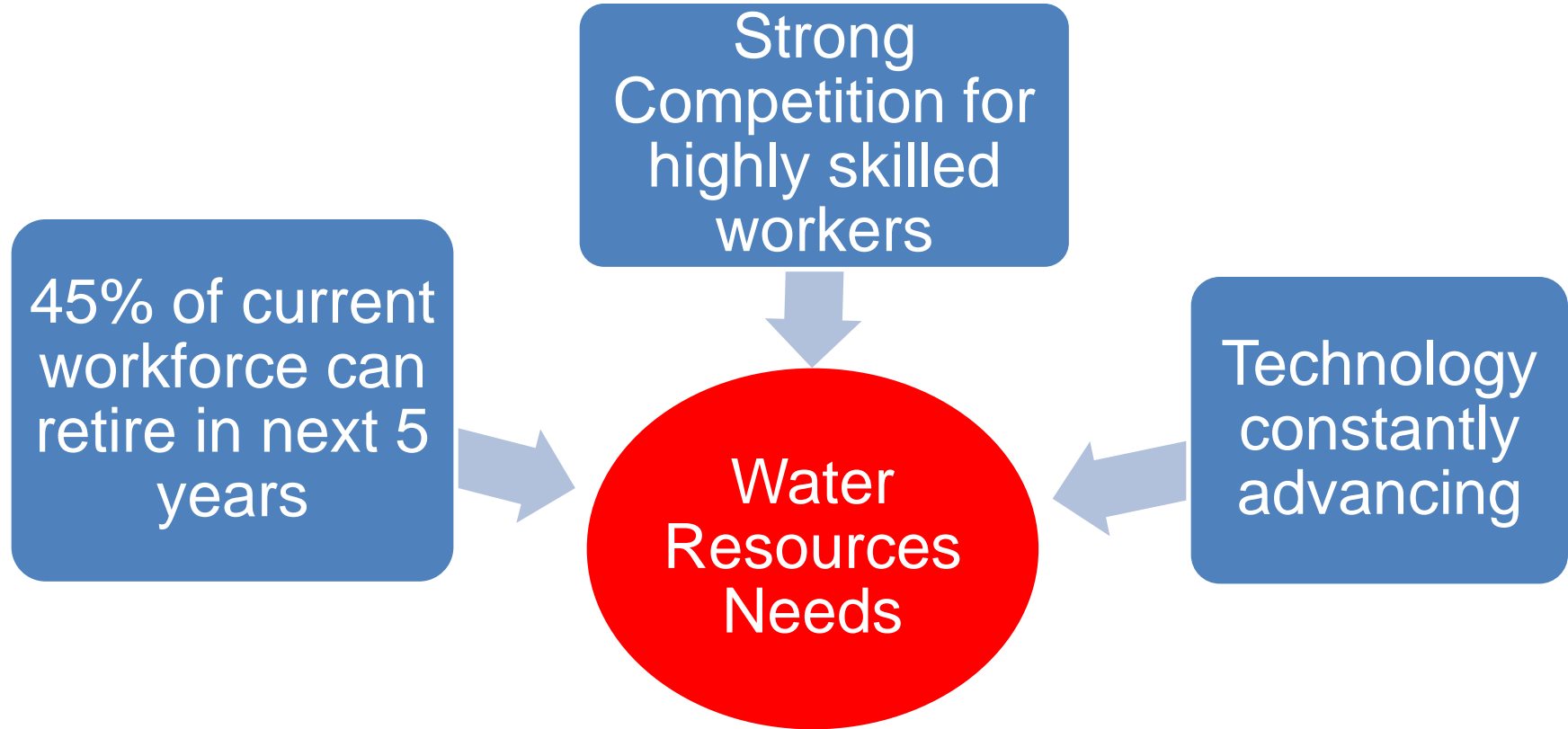
# Workforce Challenges

Strong  
Competition for  
highly skilled  
workers

45% of current  
workforce can  
retire in next 5  
years

Technology  
constantly  
advancing

Water  
Resources  
Needs





# Goals for our Workforce

## **GOAL** Highly Performing Staff

Highly qualified and skilled

Adaptable

Collaborative

Committed

Safety Focused



# Our Workforce

## **GOAL** Highly Performing Staff **Progress**

Managers engage with staff more through regular staff meetings and field visits

Staff is exposed to best practices and new technology through visits to high-performing utilities and conferences

Hired Training Manager

Hired Safety Manager



# Our Workforce



## Highly Performing Staff

## Results

Improved communication with staff – manager engagement

Increased training hours (22 hours to 40 hours per staff)

Promotions have increased from 37 to 101 (2011 to 2015)

Over 40 DWR subject matter experts identified

Quarterly safety audits of facilities and field crews

# Future Workforce

## The Future Of Water Resources Workforce





# Where is our Workforce Now?

**Continuous improvement through personal commitment, innovation, efficiency, and education**

Progressing to here

D  
V  
R

Utility  
of the  
Future

Providing  
Fundamental  
Services

Optimizing  
Operations and  
Services

Transforming  
Operations and  
Services for the  
Future



# Is our Workforce Ready to Advance?

Employee online survey performed this year

- **90% employee response rate**
- 98% are looking to gain more knowledge to increase skills
- 92% know how their job contributes to accomplishing the mission of DWR
- 81% are interested in taking on greater leadership role and duties



# Path to the Future

Paving the way forward

Hired an expert in the training field

- Creating a job specific training program
- Creating qualification cards for employees
- Partnering with local education institutions
- Expanding the co-op and intern program





# Workforce Development Program

All staff receive job-specific training

Trades Associate I

Create career paths for employees

Trades Associate II

Advancement tied to established skills and performance

Trades Associate III



# Our Future Workforce

This is DWR's major focus for 2016 and 2017

Workforce of the Future

Providing Fundamental Services

Optimizing Operations and Services

Transforming Operations and Services for the Future



**Questions?**