



Engineering, Operations, and Technology Committee

Information Technology Roadmap and Spending 2020 - 2026

Item 6b

March 11, 2024

Item 6b

IT Roadmap and Spending 2020 - 2026

Subject

Information Technology Roadmap and
Spending 2020 - 2026

Purpose

This item provides an overview of past
technology spending and proposed future
spending to ensure MWD's reliability, resiliency
and modernization

Agenda

- Background
- Information Technology Scope
- Information Technology Investment Drivers
- Information Technology Guiding Principles
- Information Technology Capital Investment FY2020-FY2023
- Information Technology Capital Investment FY2024-FY2026

Background

- Sep 2017 – Developed an IT Strategic Plan and presented to MWD's General Manager and Execs
 - Organization
 - Cybersecurity
 - Resiliency
 - Modernization
 - Data Analytics
- May 2022 – Presentation to Organization, Personnel & Technology Committee on IT Strategic Plan accomplishments
- Today's focus is on IT Capital Investment from FY2020 – FY2026

Information Technology Scope



- **Three data center** locations with over 500 servers (physical & virtual) providing processing and backup for all MWD applications
- **Network infrastructure** supporting the enterprise (Business and SCADA) comprised of 29 primary sites, 74 microwave sites, and 2 internet paths enabling communication of 25,000 devices and 50 terabytes of daily traffic
- **Communications**
 - **VoIP** 10K calls per year
 - **Teams** 12K (one on one) monthly calls



Information Technology Scope



- **Cybersecurity** providing monitoring, detection, alerting, and prevention of unauthorized system access across Metropolitan's service area
- **Enterprise Business and Water Operations**
112 applications supporting day-to-day operations
- **IT Service Desk** servicing over 2,400 computers and resolution of 600 tickets monthly. **iHub** provides concierge services to Board members, executives, employees and technical support to Board & committee meetings as well as external agency meetings



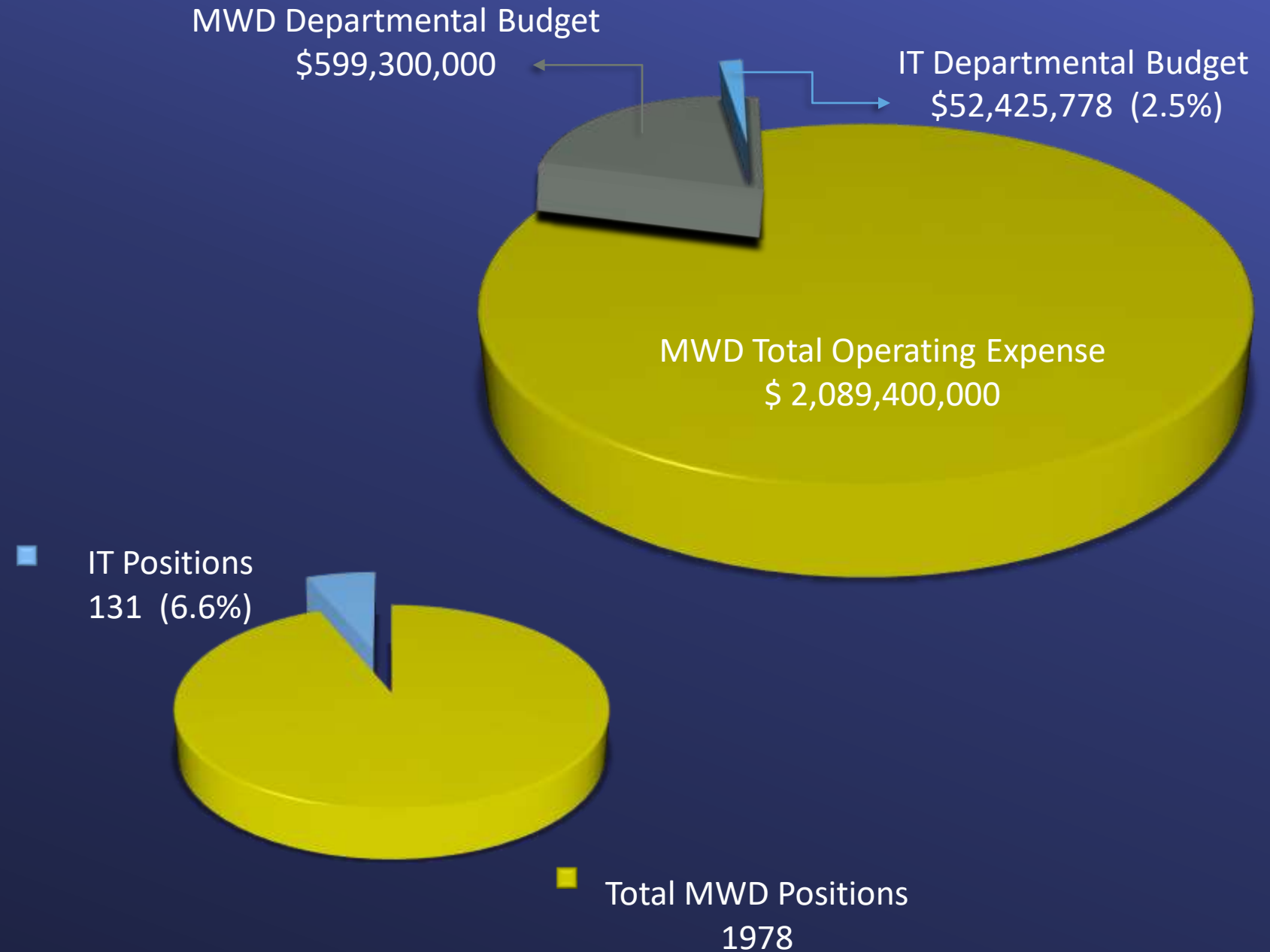
Information Technology Scope -

Applications by Business Area

Business Area	Applications
Administrative Services	5
Board Support	5
Chief Financial Office	13
Equal Employment Opportunity	1
Engineering Services Group	12
External Affairs	12
Human Resources	9
Information Technology	8
Water Resource Management	2
Water System Operations	34
Sustainability, Resilience, and Innovation.	7
Audit	1
Physical Security	3
Total	112

Information Technology Scope –

Operating Budget and Positions



Information Technology Investment Drivers

Service Reliability – *Non-Discretionary*

- Focused on system availability, software version upgrades, and end-of-life hardware and software

Resiliency – *Non-Discretionary*

- Focused on the ability to recover quickly and successfully from an event like a power outage, fire, earthquake, etc.
- Some examples of the latest instances include data center migration, fiber installation, backup of systems, disaster recovery and moving to the Cloud

Modernization and Efficiency - *Discretionary*

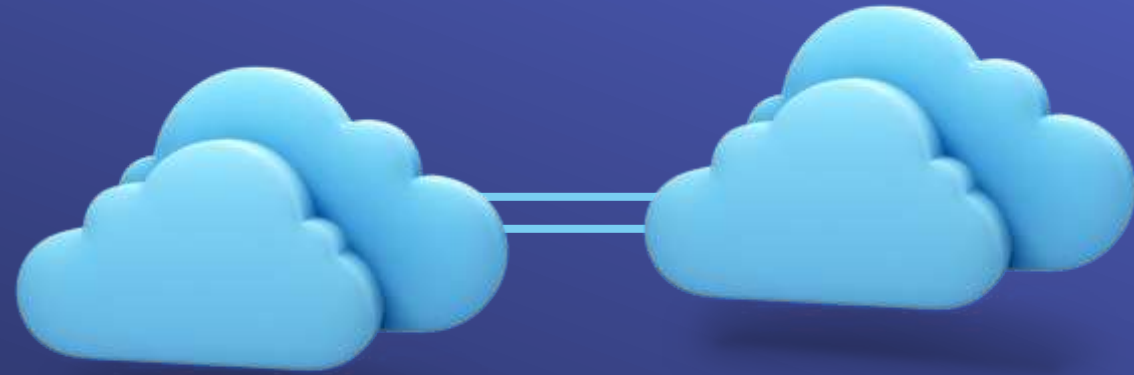
- Focused on new enhancements and systems
- Examples include application development enhancements, workflow enhancements, new data analytics, etc.

Information Technology Investment Drivers

- Non-Discretionary projects must be executed to avoid system failure and operational issues
- Technology changes rapidly; *IT must be nimble*
- Software/hardware vendors are unpredictable as to when they will stop supporting systems or older versions
- IT is reliant on the Business stakeholders to provide requests for enhanced functionality to meet business needs
- Prioritization is key with constrained resources

Information Technology Guiding Principles

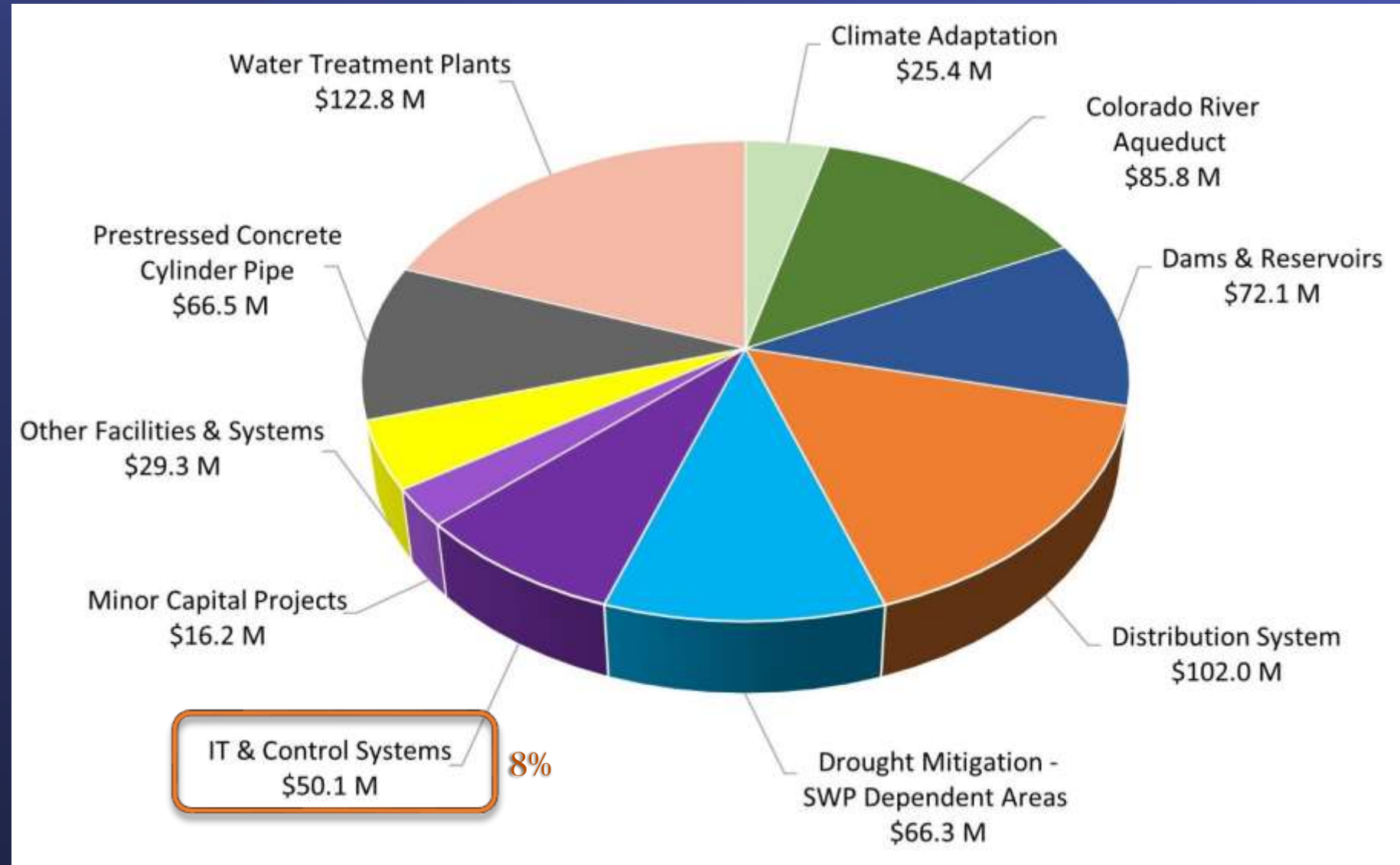
- Cloud First
- Mobility
- Data and Decision Analytics
- Friction Free Self Service



Information Technology Capital Investment Plan (CIP)

MWD Board of Director Workshop #2

FY 2024 – 2026 Capital Investment

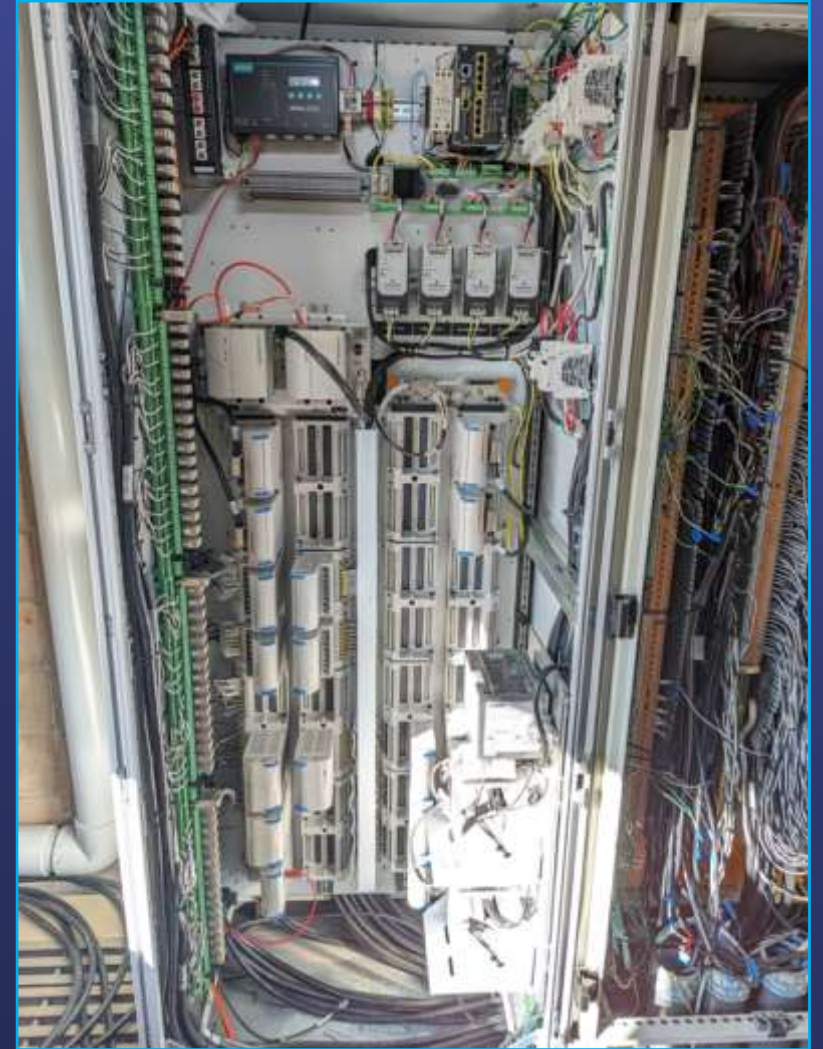


IT and Control Systems Investments

FY 2024 - 2026

- 55 Projects
 - In Progress – 40
 - New – 15
- Planned Expenditures:
 - \$50.1 M

Enterprise Systems & IT Infrastructure	\$ 22,807,976	46%
Control Systems (SCADA)	\$ 19,701,677	39%
Other	\$ 7,575,712	15%



Mills Control System Upgrades

IT CIP Projects by Expenditure Category FY 2020/21 - FY2023/24

Expenditure Category	Completed	In Progress	New
Service Reliability	3	15	
	\$ 11.7M	\$ 17.1	
Resiliency	2	6	
	\$ 4.7M	\$ 9.3M	
Modernization and Workplace Efficiency	3	9	1
	\$ 1.9M	\$ 4.0M	\$ 3.2M
Total	8	30	1
	\$ 18.3M	\$ 30.4M	\$ 3.2M

IT CIP Projects by Expenditure Category

FY 2024 - 2026

Expenditure Category	FY 2024/25 – 2025/26
	24
Service Reliability	\$ 35.95M (17 in progress)
	13
Resiliency	\$ 10.13M (6 in progress)
	18
Modernization and Workplace Efficiency	\$ 4.01M (17 in progress)
	55
Total	\$ 50.1M (40 in progress)

New Service Reliability Projects

FY2024/25 – 2025/26

Projects New Biennium FY 2024/25 – 2025/26		Year	CIP Budget
1	Enterprise Software Management	FY2024/25	\$ 550,000
2	Clear Orbit Bar Coding System Replacement	FY2024/25	\$ 1,583,000
3	Storage Infrastructure Refresh	FY2024/25	\$ 895,000
4	Pasadena Microwave Project Phase II	FY2024/25	\$ 830,000
5	Maintenance Management System (Maximo) Preparation for Version 8	FY2025/26	\$ 875,000
6	Board Letter System (BDMS) Upgrade	FY2025/26	\$ 700,000
7	Emergency Generators for Mountaintop Communication sites	FY2025/26	\$ 3,570,000
Sub-Total			\$ 9,003,000

New Resiliency and Modernization Projects

FY2024/25 – 2025/26

Resiliency Projects New Biennium FY 2024/25 – 2025/26		Year	CIP Budget
1	Data Loss Prevention	FY2024/25	\$ 910,000
2	Network Visibility and Situational Awareness Upgrades	FY2024/25	\$ 1,215,200
3	Security Service Edge Implementation	FY2024/25	\$ 1,428,400
4	Network Access Control	FY2024/25	\$ 1,000,000
5	Weymouth Communication Room Relocation	FY2025/26	\$ 745,000
6	Cyber and IT Governance Risk and Compliance Implementation	FY2025/26	\$ 2,490,000
7	Smartbadge Implementation	FY2025/26	\$ 1,500,000
Sub-Total			\$ 9,288,600

Modernization Projects New Biennium FY 2024 – 2026		Year	CIP Budget
1	WINS Billing System Phase 2	FY2025/26	\$ 1,398,000
Sub-Total			\$ 1,398,000

Information Technology Group
Operational Metric: System Availability

Bench Mark: 99% (Excludes scheduled downtime for planned maintenance)

What do we
get for
investment
in
information
technology?

