



Wastewater  
Treatment



TRANSFORMING  
WASTEWATER  
TO RESOURCES



Recycled  
Water



Energy  
Production



Biosolids  
Reuse

# Information Technology Roadmap Update

Board of Directors Meeting  
March 13, 2024

# District Strategic Plan (August 2021) Organizational Change Goal



**Goal:** Embrace innovation, engagement, and change to enhance service delivery, work processes, and **use of technology to drive sustained improvement in organizational effectiveness and efficiency**

**Strategy No. 2** Expand value-added use of IT services and applications

## Key Objectives

- Apply a **strategic, prioritized, and value-added focus in implementing IT initiatives** to ensure effective utilization of IT resources
- Conduct **periodic IT planning assessments** to update work completed, identify current business needs and priorities, **evaluate and prioritize new IT initiatives**, and identify **change management** and training needs
- Implement **new IT services and applications** with minimal interruption to internal and external customers

## Goal 4 Organizational Change

**Embrace innovation, engagement, and change to enhance service delivery, work processes, and use of technology to drive sustained improvement in organizational effectiveness and efficiency**

**STRATEGY NO. 1** Promote and value a high-performing organizational culture that is open to new ideas, innovative approaches, and sharing of diverse employee perspectives and experiences

### Key Objectives

- Empower employees to share ideas and opportunities to improve the organization's service delivery, work processes, and use of technology
- Encourage new and existing employees to share alternative approaches and ideas based on previous work experience to support identifying potential organizational improvements
- Actively engage employees in developing annual Strategic Initiatives to support implementation of the District's Strategic Plan
- Form cross-divisional teams to identify and recommend improvements to critical organizational and business functions, including a summary of key benefits, impacts, transition planning, and training needs
- Recognize employees and teams acting as "change agents" to drive innovation and improvement



**STRATEGY NO. 2** Expand value-added use of information technology (IT) services and applications

### Key Objectives

- Apply a strategic, prioritized, and value-added focus in implementing IT initiatives to ensure effective utilization of IT resources
- Conduct periodic IT planning assessments to update work completed, identify current business needs and priorities, evaluate and prioritize new IT initiatives, and identify change management and training needs
- Implement new IT services and applications with minimal interruption to internal and external customers

**STRATEGY NO. 3** Effectively manage implementation of organizational changes

### Key Objectives

- Actively engage with key cross-divisional stakeholders to understand and manage potential impacts associated with implementation of the proposed change(s)
- Identify and implement training needs and prepare necessary documentation or updated documentation to support successful change implementation
- Evaluate change implementation at key schedule milestones and seek opportunities to receive feedback

### Key Success Indicators: Goal 4 Organizational Change

Indicator	Target
Number of Annual Strategic Initiatives Identified	> 8
Increased Organizational Effectiveness and Efficiency	varies
Critical IT Application Uptime	100%
IT Customer Satisfaction Results	>95%

# Development, Implementation, Governance IT Roadmap Overview

- IT Manager collaborates with IT Steering Committee (subset of Executive Team) to identify, prioritize, and implement key initiatives, and address critical IT issues
- Key IT Program Focus Areas



# IT Roadmap Overview

## Key Achievements (2023-2024 to date)




- 1 Reduced vulnerability to **cybersecurity threats** via internal staff training program, elimination of VPN access, and multi-factor authentication
- 2 Replaced firewall with two **high-availability firewalls**
- 3 Increased **SharePoint storage** space to improve functionality
- 4 Expanded use of key Munis Enterprise Resource Planning functions to support **business processes** and workflow



### IT Roadmap Overview

#### Incident Reporting Sample



- **Root Cause Statement:** VMware license does not support "Storage vMotion"
- **Risk Statement:** Cannot migrate storage disks while Virtual Machines are online.
- **Status Summary:** Received a temporary license from VMware to perform storage migration.
- **Outstanding Risks:** None.
- **Next Steps:** Re-evaluation of the license tier.

IT Issue Type

Hardware Performance Cyber Security Network Performance Server Performance Cloud Storage

IT Issue Impacts

Regulatory Compliance Financial Resiliency Business Continuity

IT Issue Status/Resolution

TRANSFORMING WASTEWATER TO RESOURCES

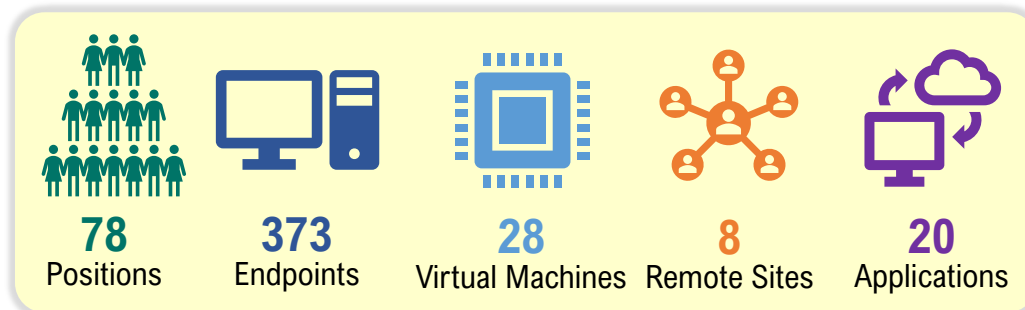
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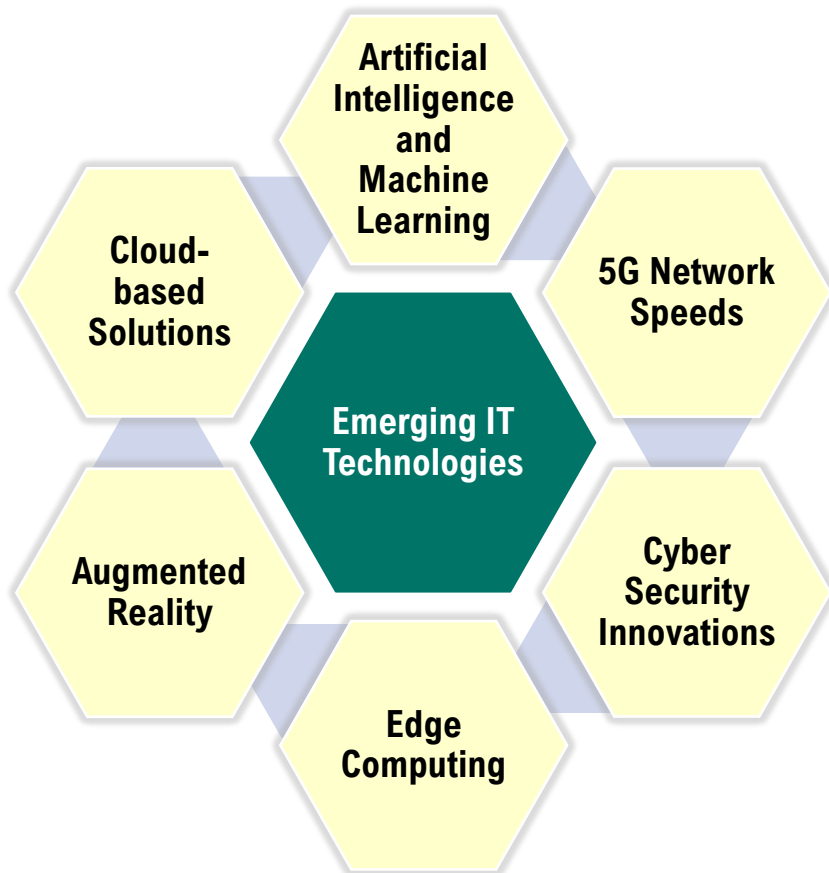
# IT Roadmap Overview (cont'd)

## Key Achievements (2023-2024 to date)

- 5 Deployed Lansweeper to **enhance computer inventory tracking, monitoring, and management** functions
- 6 Deployed Mapistry (cloud-based solution) to report, track, and respond to **safety issues** via mobile devices
- 7 Implemented revised **IT Acceptable Use Policy**
- 8 Provided critical staff with **remote access** to monitor and **control functions** at District's Wastewater Treatment Plant



# Scan of Emerging IT Technologies



Potential for limited application of “hot topic” IT technologies at District

- Improving cybersecurity
- Using AI/ML to improve business processes, automation of WWTP process control
- Continuing migration to cloud-based solutions
- Expanding 5G processing speed and network storage capacity
- Harnessing augmented reality to support future training programs

# IT Roadmap Overview

## Planned Upcoming Initiatives/Activities



- 1 Develop a **modernization upgrade plan**, including cloud migration, virtualizations, and network improvements
- 2 Conduct an **IT security assessment** and implement necessary measures to address key vulnerabilities
- 3 Evaluate the **existing IT application portfolio** to eliminate redundancies, retire outdated applications, and implement more effective and efficient solutions
- 4 Develop **training programs** to educate users and provide ongoing support to manage IT changes and innovations
- 5 Upgrade and replace **existing datacenter hardware**

# IT Roadmap Overview (cont'd)

## Planned Upcoming Initiatives/Activities



- ⑥ Deploy the current version of **Computerized Maintenance Management System (CMMS)** software (Mainsaver) and integrate with other District enterprise applications
- ⑦ Upgrade **CCTV system** at remote facilities to improve site security and employee safety
- ⑧ Implement **network connectivity improvements** at remote facilities to reduce dependence on radio transmission technology
- ⑨ Implement **Human Resources IT Portal** to support processing of new and departing employees
- ⑩ Update all workstations to **Windows 11**



# Next Steps

- Continue developing and implementing IT Roadmap as “living document” that adapts to changing business needs
  - Priorities set by IT Steering Committee
- Seek Board approval for a third position within IT Division to support key IT functions, value-added initiatives
  - Current: IT Manager, Systems Administrator (created in FY23/24)
  - Proposed: Add Software Developer position in FY24/25
- Ensure sufficient funding is included in proposed FY24/25 Budget to support continued implementation of IT enhancements