

# WATER UTILITY VIDEO SURVEILLANCE SYSTEM

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PRESIDENT'S WORK GROUP TO DEVELOP CITY-WIDE SURVEILLANCE

EQUIPMENT & DATA MANAGEMENT POLICIES

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# WATER UTILITY MISSION

The Madison Water Utility is entrusted by the people of Madison to supply high quality water for consumption and fire protection, at a reasonable cost, while conserving and protecting our ground water resources for present and future generations.



Supply high quality  
water



For consumption and  
fire protection



At a reasonable cost

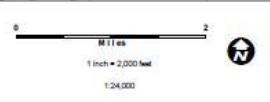
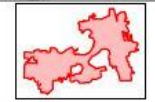
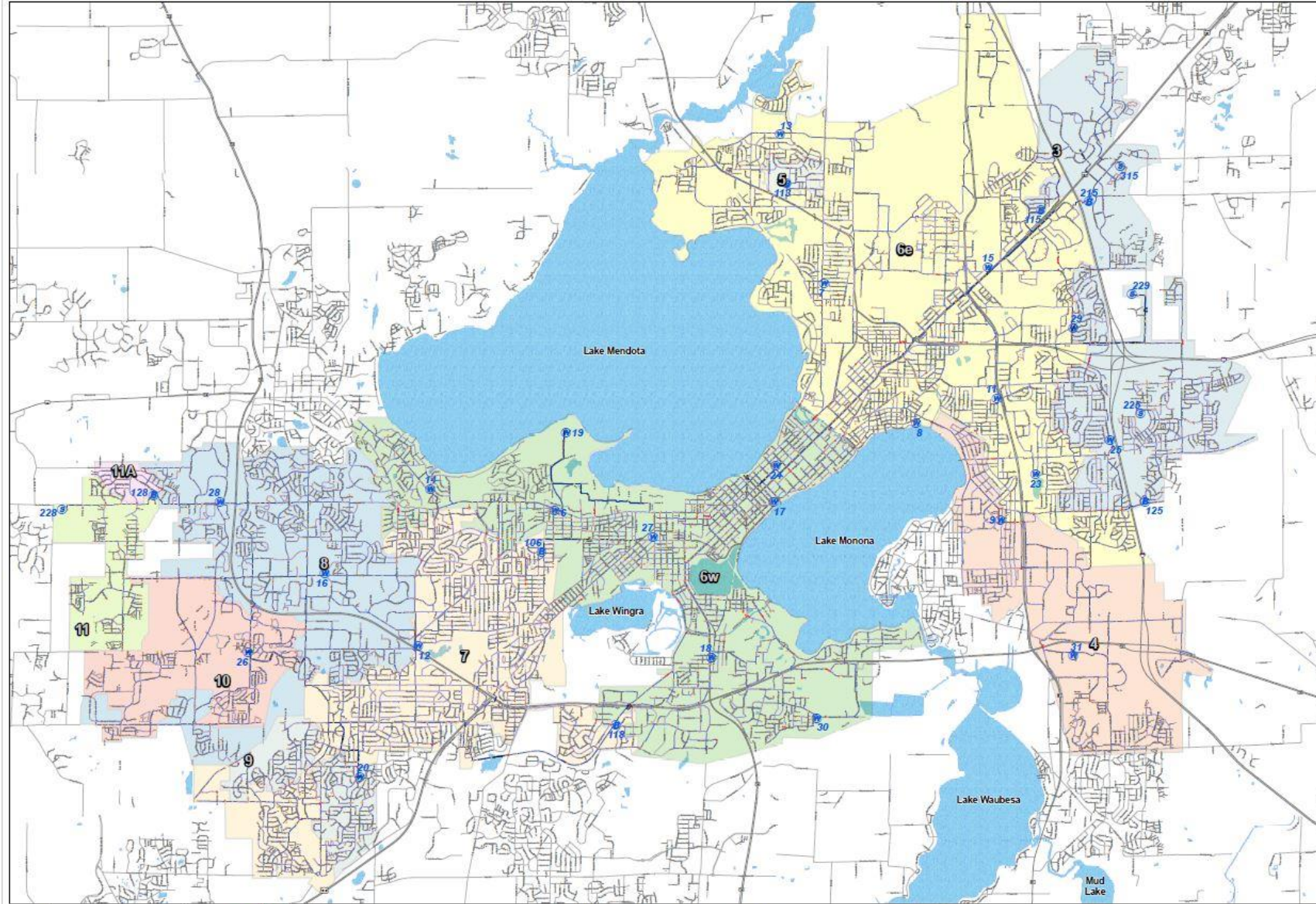


While conserving and  
protecting resources



# WATER UTILITY OVERVIEW

■ Population Served:	250,000
■ Customer Accounts:	67,000
■ Pressure Zones:	10
■ Production Wells:	23
■ Booster Stations:	31
■ Ground Reservoirs/Tanks:	32
■ Storage Capacity:	36 million gallons
■ Miles of Water Main:	895
■ Employees:	125
■ Annual Budget:	\$66 million
■ Average Daily Pumpage:	25 million gallons/day
■ Gallons Pumped in 2018:	9.2 billion



**MADISON WATER UTILITY**  
System Overview

1/4/2019

**Legend**

B	WOODS	F	1" FIBERGLASS	1	2	3	4	5	6
S	STORM	F	2" FIBERGLASS	1	2	3	4	5	6
W	WELL	W	NEW (EARTH)	1	2	3	4	5	6
			4"	1	2	3	4	5	6
			6"	1	2	3	4	5	6
			8"	1	2	3	4	5	6
			12"	1	2	3	4	5	6
			18"	1	2	3	4	5	6
			24"	1	2	3	4	5	6

# CAMERA SYSTEM OVERVIEW

- 171 total cameras
  - 13 cameras at main office (Olin Avenue)
  - 34 cameras at field office (Paterson Street)
  - 124 cameras spread across the 35 remote water sites (Unit Wells, Booster Stations, Spheres, Tanks)
- 2 styles of Axis Cameras are used – Bullet and Dome
  - Audio feature disabled
- Cameras viewed using ExacqVision Software
- Water Utility has 2 ExacqVision Servers (ExacqWU, Exacq7)
  - Virtualized servers are maintained by IT and located at the City County Building (CCB)
  - Video is stored for 2 weeks

# HOW AND WHY ARE THE CAMERAS USED?

- **Protect Infrastructure and Water Supply**
  - Monitor the building entrance (inside & outside), chemical room entrance, parking areas, and water reservoir hatches (roof entrance)
- **Security**
  - Prevent unauthorized entry into water sites – public does not have access to the remote water sites
- **Safety**
  - Monitor areas where employees have interaction with the public (main and field offices)
- **Operations**
  - Check the water reservoir/tank/sphere overflow pipe
  - Used to investigate Keyscan Card Access and SCADA building/hatch entry alarms
- **Incident Review**



# HOW IS THE PUBLIC MADE AWARE OF THE CAMERAS?

Cameras are easily visible – no “hidden” cameras



Signage posted at each facility



# REMOTE SITES – WHAT ARE THE CAMERAS MONITORING?

**Building Entrance (Exterior)/Parking** – monitor the building/chemical room and prevent unauthorized entry, investigate Keyscan and SCADA building entry alarms, monitor Water Utility Personnel safety, crime prevention





# REMOTE SITES – WHAT ARE THE CAMERAS MONITORING?

**Reservoir Hatches** – prevent entry into the water supply reservoir, investigate SCADA hatch entry alarms



**Building Entrance (Interior)** – prevent unauthorized entry, investigate Keyscan and SCADA building entry alarms, monitor Water Utility Personnel safety





**Main Office (Olin) – monitor the building and prevent unauthorized entry, investigate Keyscan entry alarms, monitor Water Utility Personnel and public safety, crime prevention**





**Field Office (Paterson)** – monitor the building and prevent unauthorized entry, verify Keyscan entry alarms, monitor Water Utility Personnel and public safety, crime prevention





# WHO HAS ACCESS AND WHAT RIGHTS DO THEY HAVE?

- **IT Staff**

- Full Admin Rights – responsible for maintaining the ExacqVision Servers and camera VLANs

- **Water Supply Manager**

- Responsible for overseeing and managing the video surveillance system
- Limited Admin Rights – Ability to view live camera feeds, view recorded video, extract and store video

- **Control Systems Programmer and Electronics Maintenance Technician**

- Responsible for maintaining video surveillance system – maintain existing camera hardware and live camera views, mount new cameras and add them to ExacqVision, configure ExacqVision camera views, handle video inquiries
- Limited Admin Rights – Ability to view live camera feeds, view recorded video, extract and store video, add and configure cameras within ExacqVision, configure site views

- **Water Utility Managers and 24 Hour Pump Operator**

- View Only Rights – Ability to view live camera feeds

- **Madison Police/Forensics Department**

- Ability to view recorded video and extract video as needed – usually request Water Utility permission prior to investigation





QUESTIONS?