

Water Security Recharge Facilities

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TPP Subcommittee
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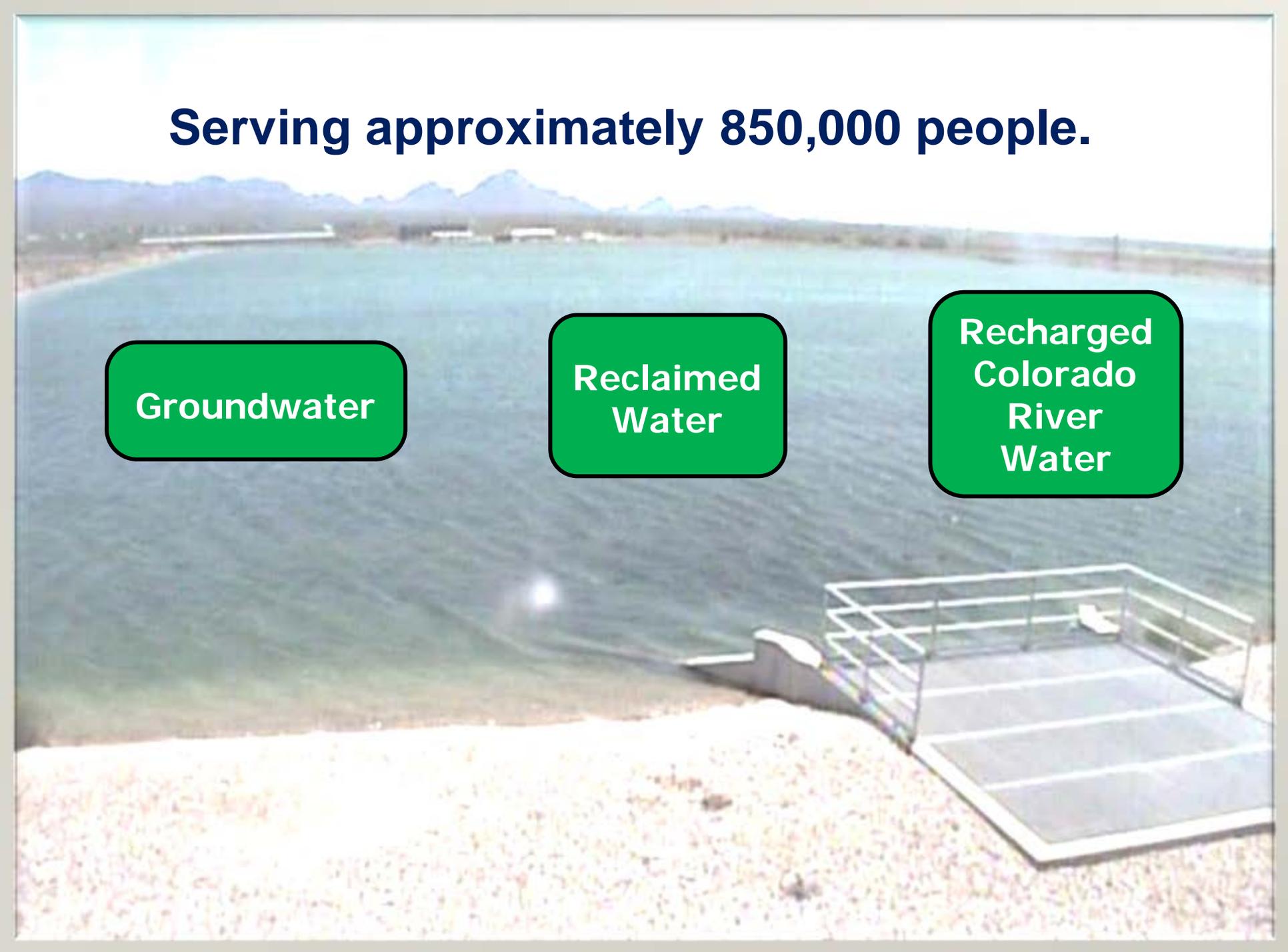


Serving approximately 850,000 people.

Groundwater

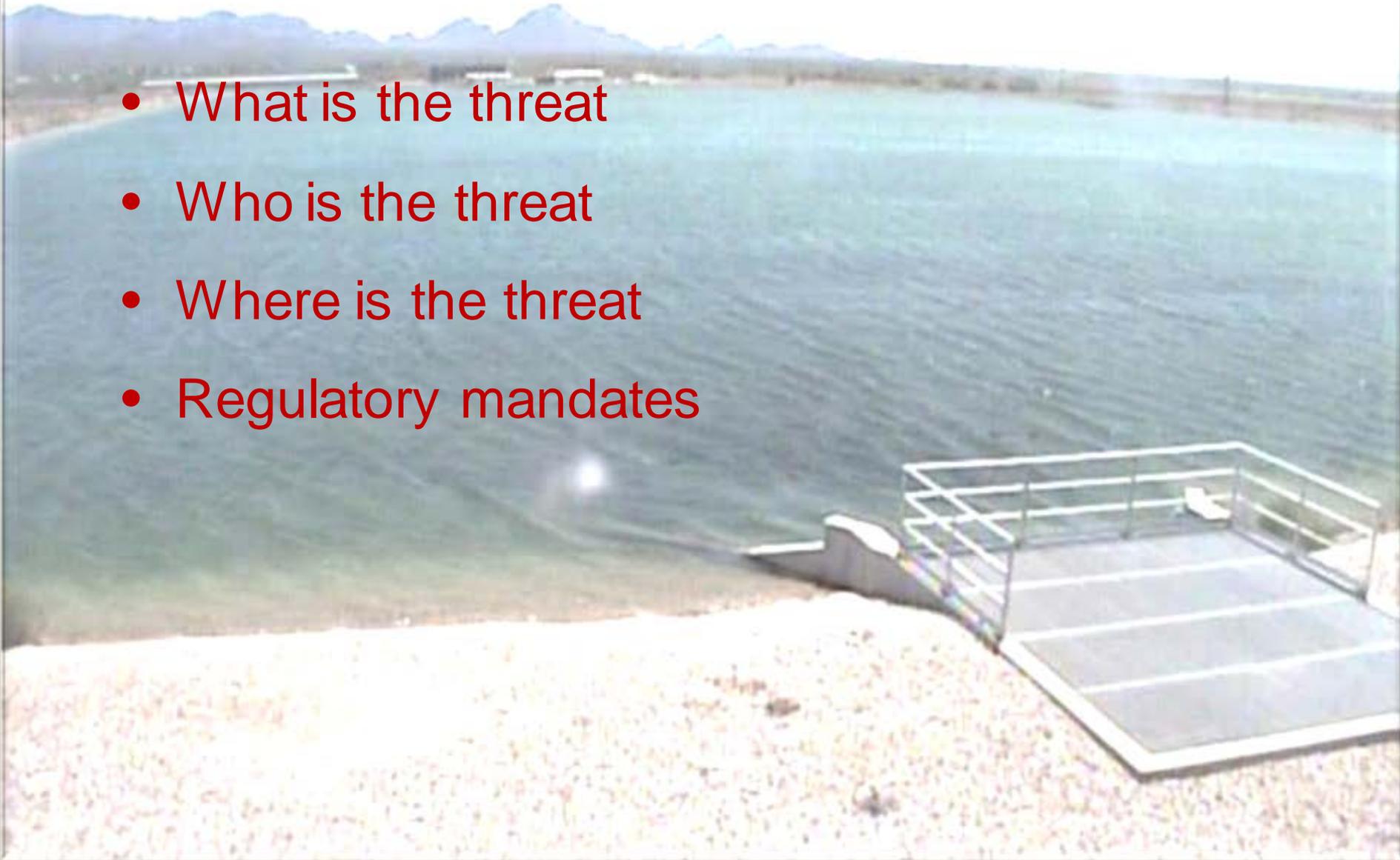
**Reclaimed
Water**

**Recharged
Colorado
River
Water**



Basic Security Considerations

- What is the threat
- Who is the threat
- Where is the threat
- Regulatory mandates



What is the Security Threat

Threats to System

- Consequences:
 - Loss of potable water supply
 - Loss of fire flow
 - Contaminated water
- Man-made/Evil-doers:
 - Vandals
 - Computer hackers
 - Terrorists
 - Disgruntled employees
 - Disgruntled customers
 - Criminals

Who Is the Security Threat

These are adversaries who intend to interrupt water treatment or delivery processes, contaminate water, or trespass on water utility property in order to commit a malevolent act:

- **Vandals-** Damage, deface, or destroy targets of opportunity
- **Criminal-** Theft of valuable assets
- **Saboteur-** Disruption, destruction, or contamination, destroy public trust in the utility/government
- **Insider-** Property damage, theft, disruption, destruction, or contamination

Where is the Security Threat

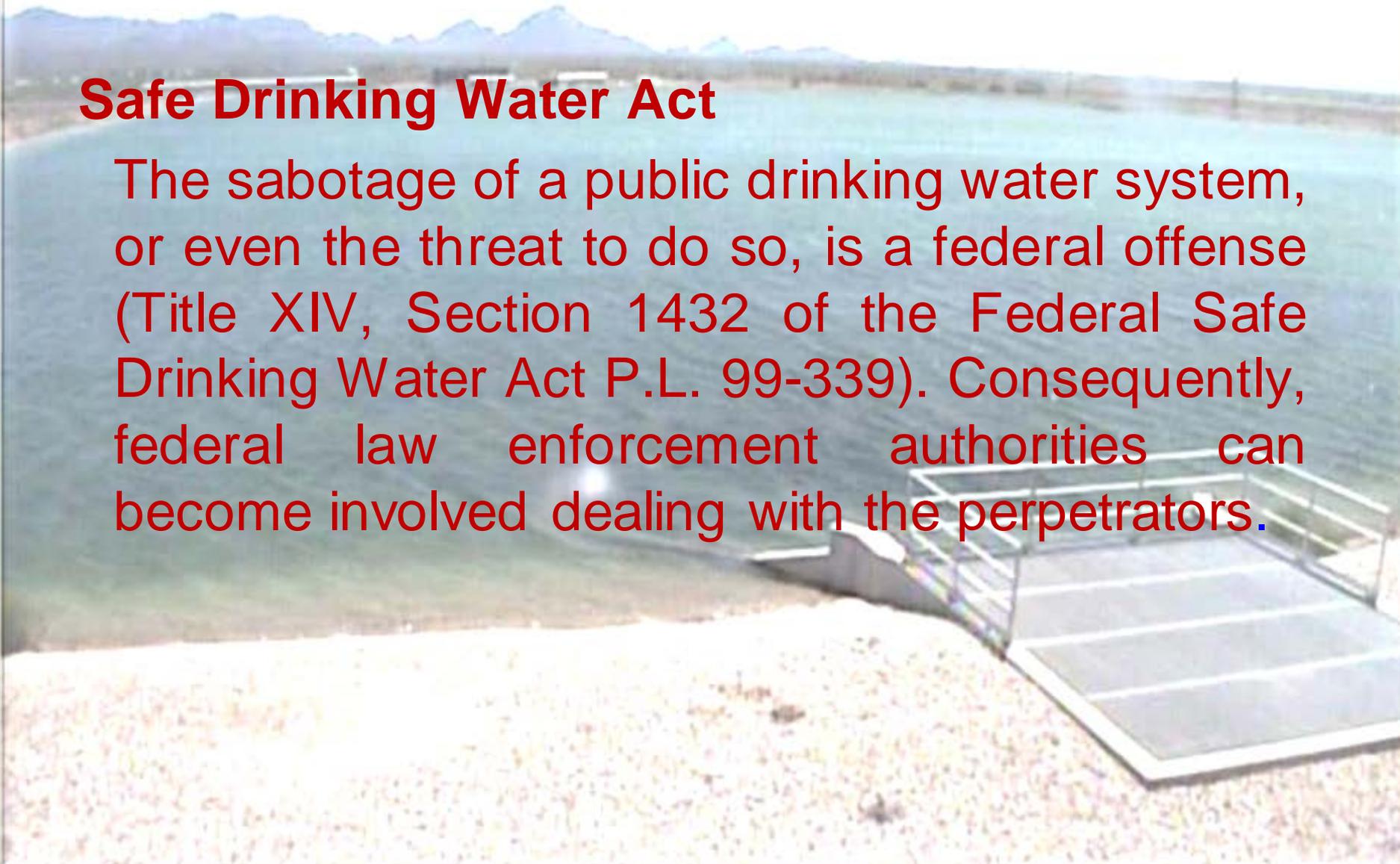
- Raw water facilities
- Recharge basins
- Wells and pumping stations
- Water treatment plants
- Finished water storage facilities
- Distribution systems
- Water system support facilities



Regulatory Support

Safe Drinking Water Act

The sabotage of a public drinking water system, or even the threat to do so, is a federal offense (Title XIV, Section 1432 of the Federal Safe Drinking Water Act P.L. 99-339). Consequently, federal law enforcement authorities can become involved dealing with the perpetrators.



Technology Advancements

From



To



**XP PC
Analog
Video
Based
System**



To



**Network IP Based
System**

Basin Physical Security

Dual Fence Protection

- Site perimeter fencing
 - Limited access
 - Card access control gates
- Basin perimeter fencing
 - Perimeter fenceline 6 foot chain link
 - Case hardened chains and locks

Video Surveillance

Security Vehicle Patrols



Basin Video Security



Video Security

- 24/7 Monitoring Station
- Analytical Video (Event Driven)
- Leading Edge Cameras (Internal Video Storage)
- Power over Ethernet
- Redundant Communication
- Hub Video Storage



Basin Perimeter Security



Basin Security Patrol

After hour, weekend and Holiday Patrols

- Rapid Dispatch
- GPS Tracking
- Electronic Reporting
- 24/7 Security Control Center Support
- Tucson Water On Call Support Staff



Response

Security during perimeter basin patrols

- Checks for fence damage
- Gate tampering
- Unusual activity

Reports observations immediately to Tucson Water security control center

- Tucson Water emergency contact notified immediately
- Emergency response evaluation begins
 - Emergency plan activated, if necessary



Response

Video Surveillance

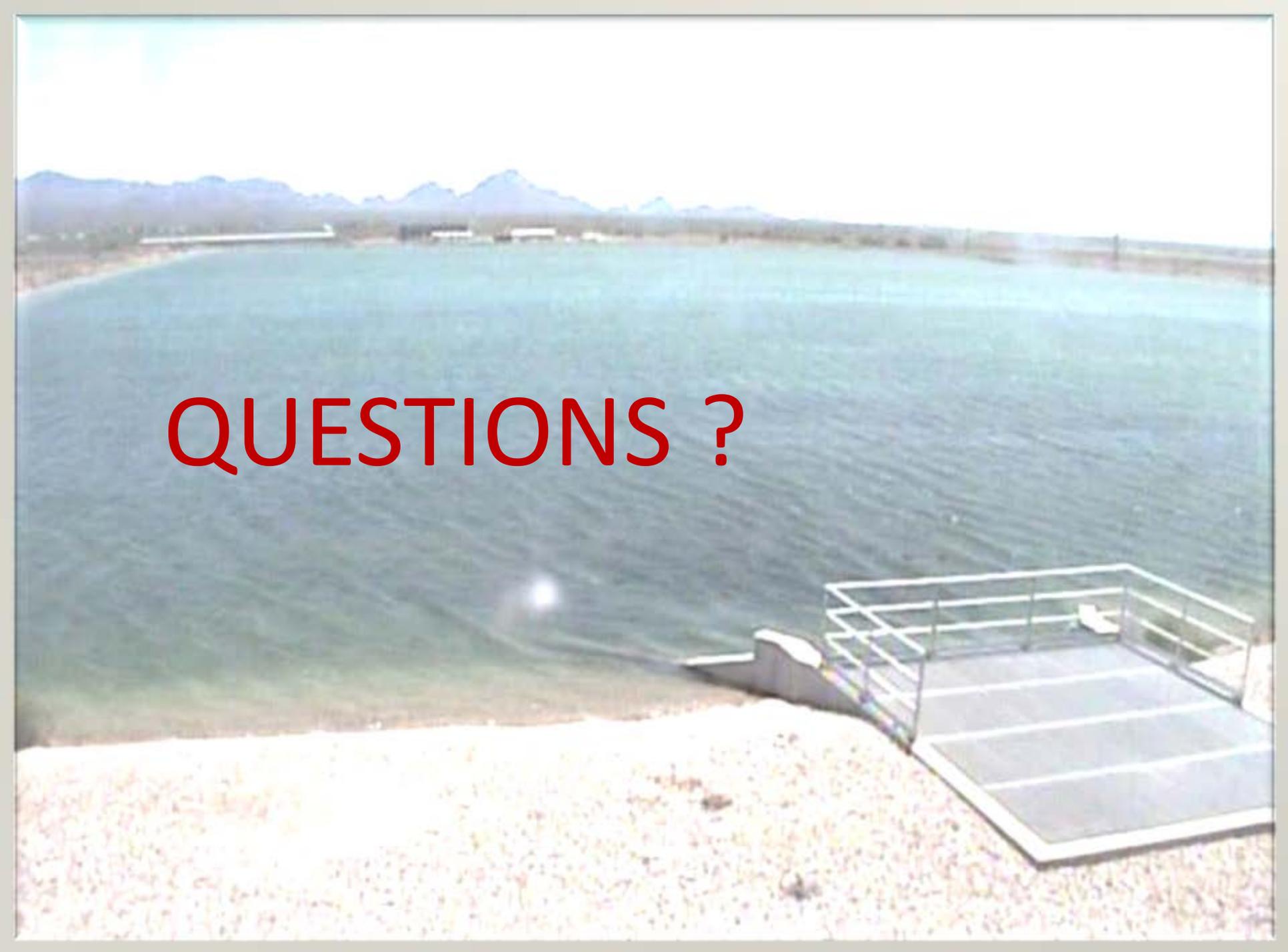
- Detection or alarm event occurs
 - Tucson Water emergency contact notified immediately
 - Emergency response evaluation begins
 - Emergency plan activated, if necessary



Future Installations

- Security is incorporated into new facility designs
- Ongoing site evaluations
- Site threat Analysis
- Continued site threat reprioritization
- Communication requirements
- Security infrastructure required
- Utilize City Security Contract for installation



A wide-angle photograph of a large, calm body of water, possibly a reservoir or lake. In the foreground, a concrete viewing platform with a metal railing sits on a gravelly shore. The water is a deep blue-green color. In the background, a range of low mountains or hills stretches across the horizon under a clear sky. The text "QUESTIONS ?" is overlaid in the center of the image.

QUESTIONS ?