



# Building Water System Resiliency

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ISLAND WATER ASSOCIATION, INC.

MAY 6, 2025

## IWA by the Numbers

5222 – Total Service Connections on Sanibel & Captiva

4.72 MGD – Average Production, April 2025

60% - Estimated Water Used for Irrigation

\$8.16 M - 2025 Operating Budget

\$3.75 M - 2025 Capital Budget

31 - Employees

## Resilient Workforce – New Employees & Advanced Licensure

### **NEW EMPLOYEES**

Post-Ian, IWA has welcomed nine new employees, nearly one-third of our workforce.

### **NEW LICENSES**

Four newly licensed production and distribution operators.

### **ADVANCED LICENSURE**

Four employees achieving advanced licensure, including two 'A' and two 'B' Treatment Licenses.

# Awards & Recognition

- IWA received the 2024 Excellence in Operations award from the State of Florida DEP.
- Received in 2019, and 2022.
- Proclamation of Appreciation from the City of Sanibel, November 2023.
- Southeast Desalting Association's 2021 'Outstanding Membrane Plant Award'.



## Resiliency – Infrastructure Hardening

Booster Station Flood Dams

Well Cabinet Waterproofing

Solar Powered Data Stations

Critical Structure Hardening

Emergency Inventory & Power Gen

# Completed Hardening Actions



## Resiliency & Redundancy – Water Supply

New Well S-10

Designed with Elevated Controls &  
Generator Connections

Wellfield Fiber Upgrades

# Elevated & Hardened Well Cabinet



## Future Resiliency Projects:

### Addressing Identified Operational Vulnerabilities

Availability of Treatment  
Chemicals

Decreasing Source Water  
Quality

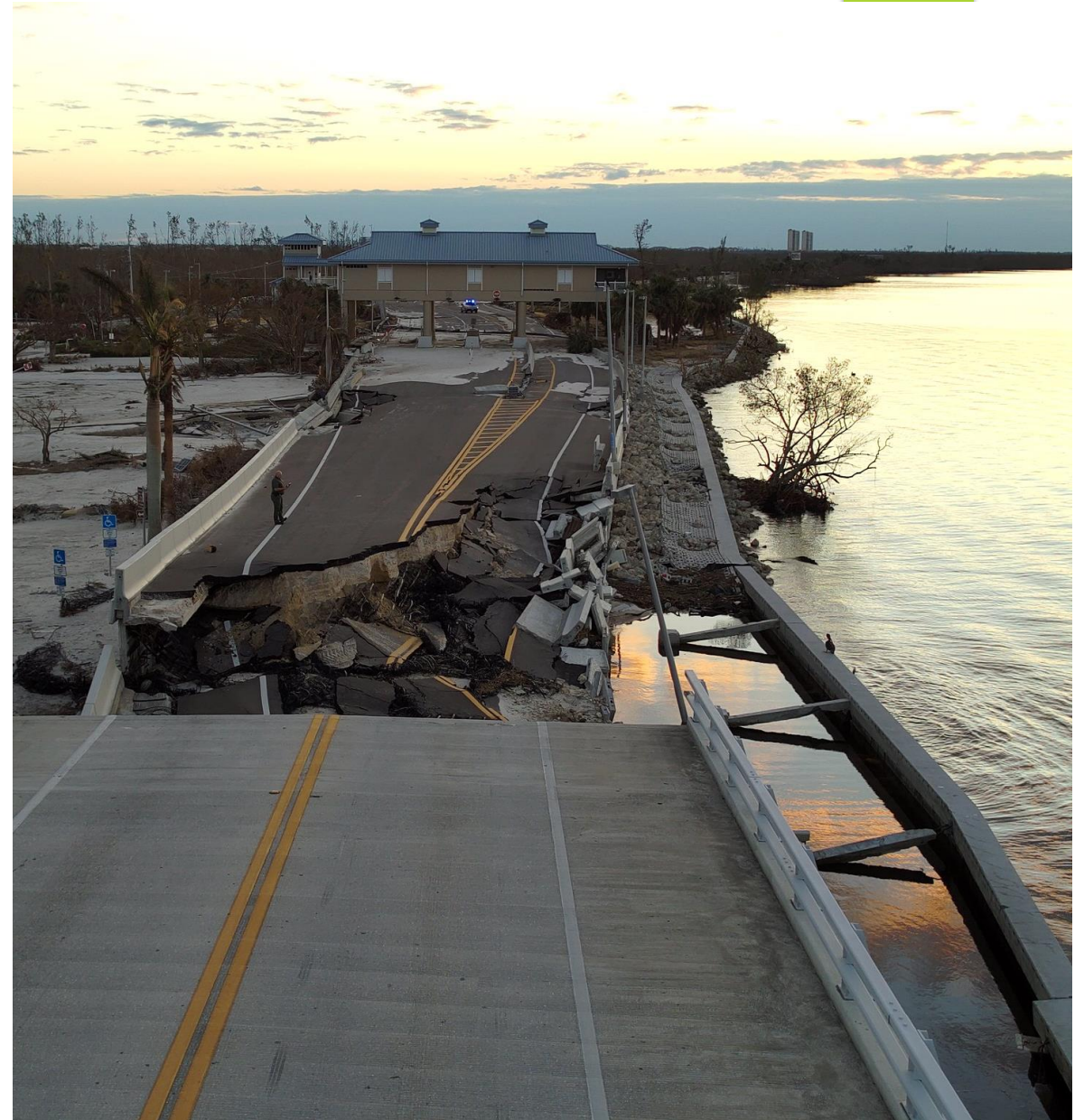
Uncertainty of Redevelopment  
& Extreme Irrigation Usage

Electrical System Upgrades

O&M Cost Increases; Major  
Planned Capital Expenses

# Water Treatment Method Change

Chlorination System Upgrade



## Resiliency Improvements-

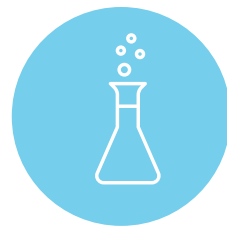
## Chlorination System Upgrades



Causeway failure after Hurricane Ian highlighted vulnerability of chemical deliveries.



30-day chemical storage maintained onsite.



Treatment method selected uses easier to transport chemicals.



Additional safety & cost benefits.

## Chlorination System Upgrade Project

Transition to industry standard treatment for hydrogen sulfide removal.

Primary chemicals used - carbon dioxide and sodium hypochlorite.

Increased size clearwell with dual contact basins for redundancy & CT.

All project components constructed above 500-year flood elevation.

Increased safety and chemical cost benefits.

## Water Treatment Method Change: Cost & Timeline

### Project Costs & Funding

Total Estimated Project Cost - \$11.6 million

\$8.5 million in forgivable loan through FLDEP SRF SAHFI

### Project Timeline

Design: 2025-2026

Construction: 2026-2027

Project in Service: EOY 2027

# RO Plant Capacity Upgrades & Electrical Improvements



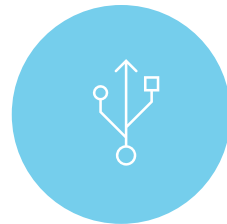
## RO Plant and Electrical System Resiliency



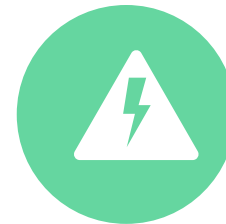
Increasing salinity of source water supplies.



Uncertainty in size and timing of redevelopment; extreme increase in irrigation demands.



Address single points of failure identified in RO Plant electrical system.



Upgrade electrical system for larger pumps, tighter membranes, and increase treatment capacity.

## RO Plant and Electrical System Resiliency

Increased # of RO membranes and vessels.

Larger pumps/motors to handle increasing salinity & demands.

Upgraded electrical equipment, construct Cat 5 rated electrical building.

Redundant transformers above flood elevation.

Separate arc flash rated, Class 1 reliable switchgear to maintain 50% capacity after catastrophic event.

## RO Plant and Electrical Upgrades: Cost & Timeline

### Project Costs

Total Estimated Project Cost - \$23.8 million

### Project Timeline

Design: 2027-2028

Construction: 2028-2030

Project in Service: 2030

## Cost of Service & Rate Study

Dramatic increase in O&M costs

Large planned capital projects

16 years of unchanged water rates

Raftelis Financial engaged to conduct Cost of Service and Rate Study

Results & recommendations expected summer 2025



Questions?