



SUSTAINABILITY



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An aerial photograph of a water treatment facility. In the center-left, there is a large, white, cylindrical storage tank. To its right is a single-story building with a blue metal roof and grey walls. The facility is surrounded by green grass and paved parking areas. In the background, there are dense green trees under a blue sky with light clouds.

# City of Oldsmar Alternative Water Supply Projects

Brackish Groundwater  
&  
Reclaimed Water



## Agenda

- **Water Supply Project  
- Brackish  
Groundwater &  
Reverse Osmosis**
- **Reclaimed Water -  
Aquifer Storage and  
Recovery (ASR)  
Project**

# Water Supply Project

GOAL - Develop an independent, alternate source, municipal water supply, using Brackish Water and Reverse Osmosis (RO) Water Treatment

This innovative initiative will provide a long term solution to the Oldsmar's Potable Water Supply requirements in addition to having a significant positive environmental impact on Regional Supplies

# The Oldsmar Project

- Develop a highly desirable, unused, available, and treatable new brackish ground water source
- Provide advanced treatment using modern Reverse Osmosis technology
- Provide 2.0 mgd finished water
- Dispose of 0.7 mgd of low-level undesirable water by-product through Deep Well Injection



# Critical Evaluation

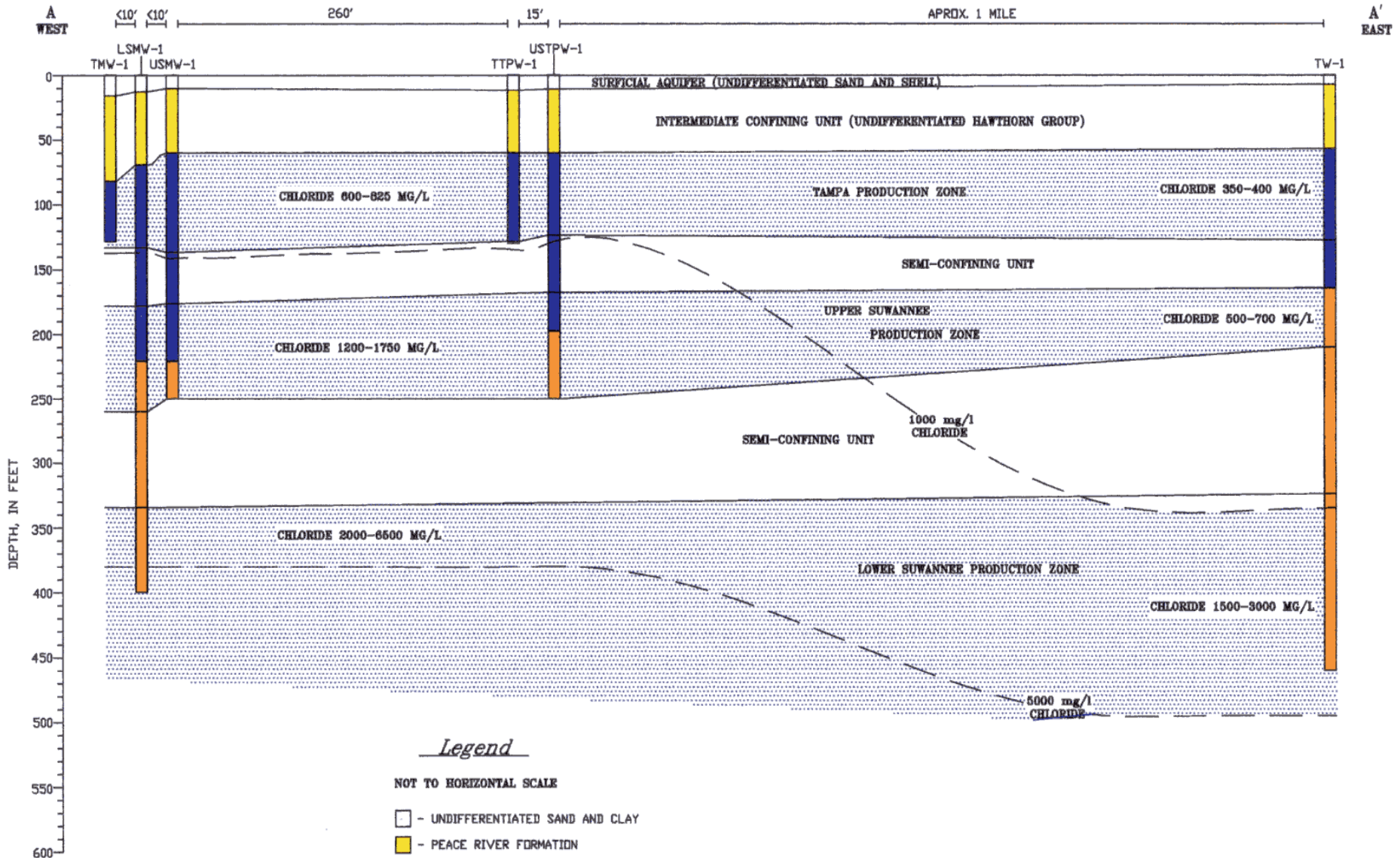
- Finish Water will meet high quality standards
- Treatment process uses the latest technology
- Economic feasibility is documented
- No impact on existing ground water supplies
- Existing wetlands and surface water bodies will not be impacted
- Project complies with all Environmental and Regulatory Requirements

# Environmental Impacts

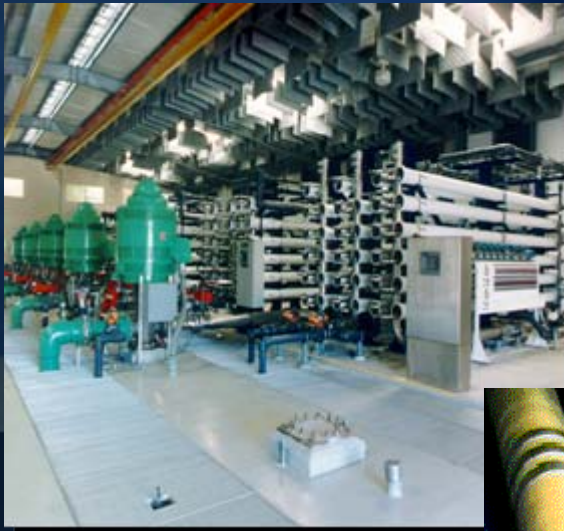
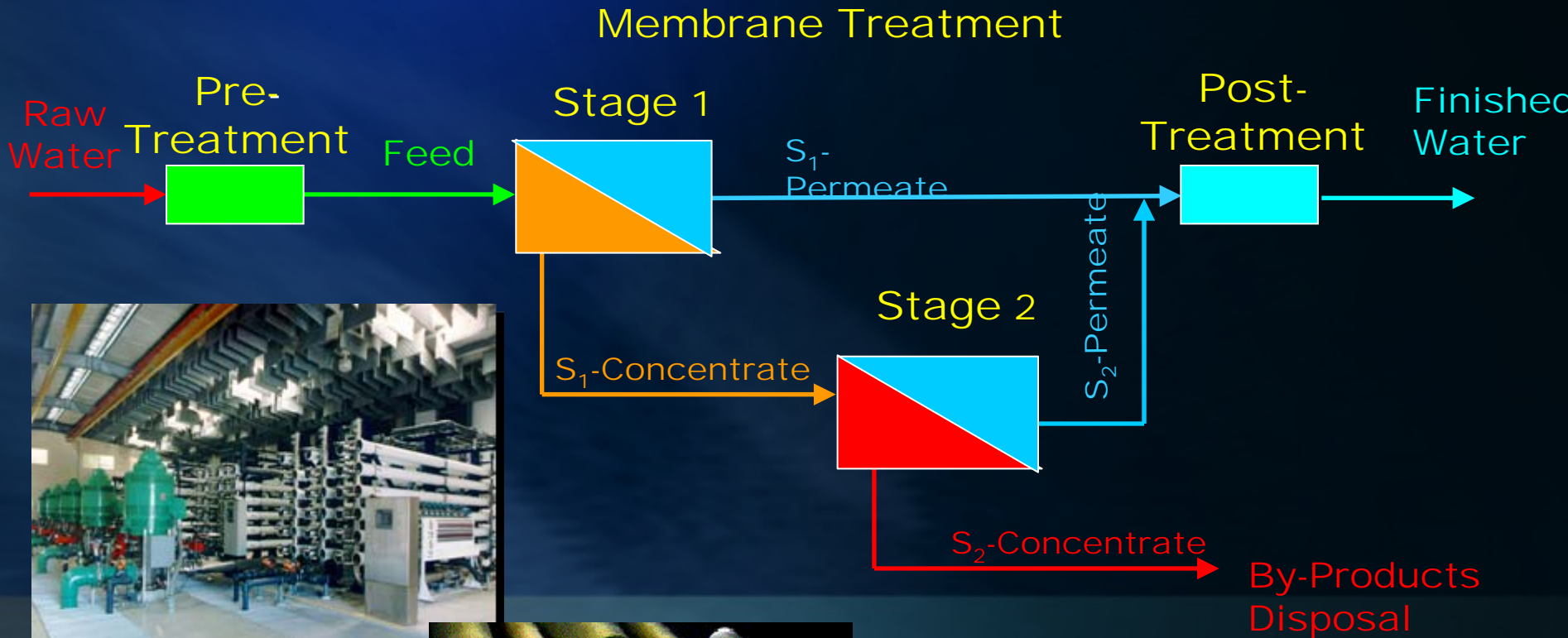
- Complete compliance with State Water Policy FS 373.1961(2)(h)
- Provides a long term drinking water source to the City while eliminating its demand on the regional utility
- Accommodates future growth and adds capacity from an unused source to the declining regional supply
- Provides the ability in emergencies to share resources with Tampa Bay utilities



# Hydro-geologic Findings



# Two-Stage ROWTP



# Project Cost Analysis



- **Capital Costs**
  - \$1.4 million (Production Wells)
  - \$15.3 million (ROWTP)
  - \$3.4 million (Byproduct Discharge)
  - **TOTAL = \$20.1 million**
- **Estimated Cost per 1,000 gallons**
  - **\$2.95 \$/kgal**

# Project Schedule



Contract 1: Production Wells - **Aug 2009 – Mar 2010**



Contract 2: Reverse Osmosis System Supplier - **Oct 2009 – Oct 2011**

Contract 3A: Raw Water and Byproduct Pipelines – **Apr 2010 – Sep 2010**



Contract 3B: General Construction – **Jun 2010 – Oct 2011**

Contract 4: Injection Well – **Oct 2009 – Apr 2010**

# Reclaimed Water

**CITY OF OLDSMAR**

**Charles "Bud" Lister  
Water Reclamation Facility**

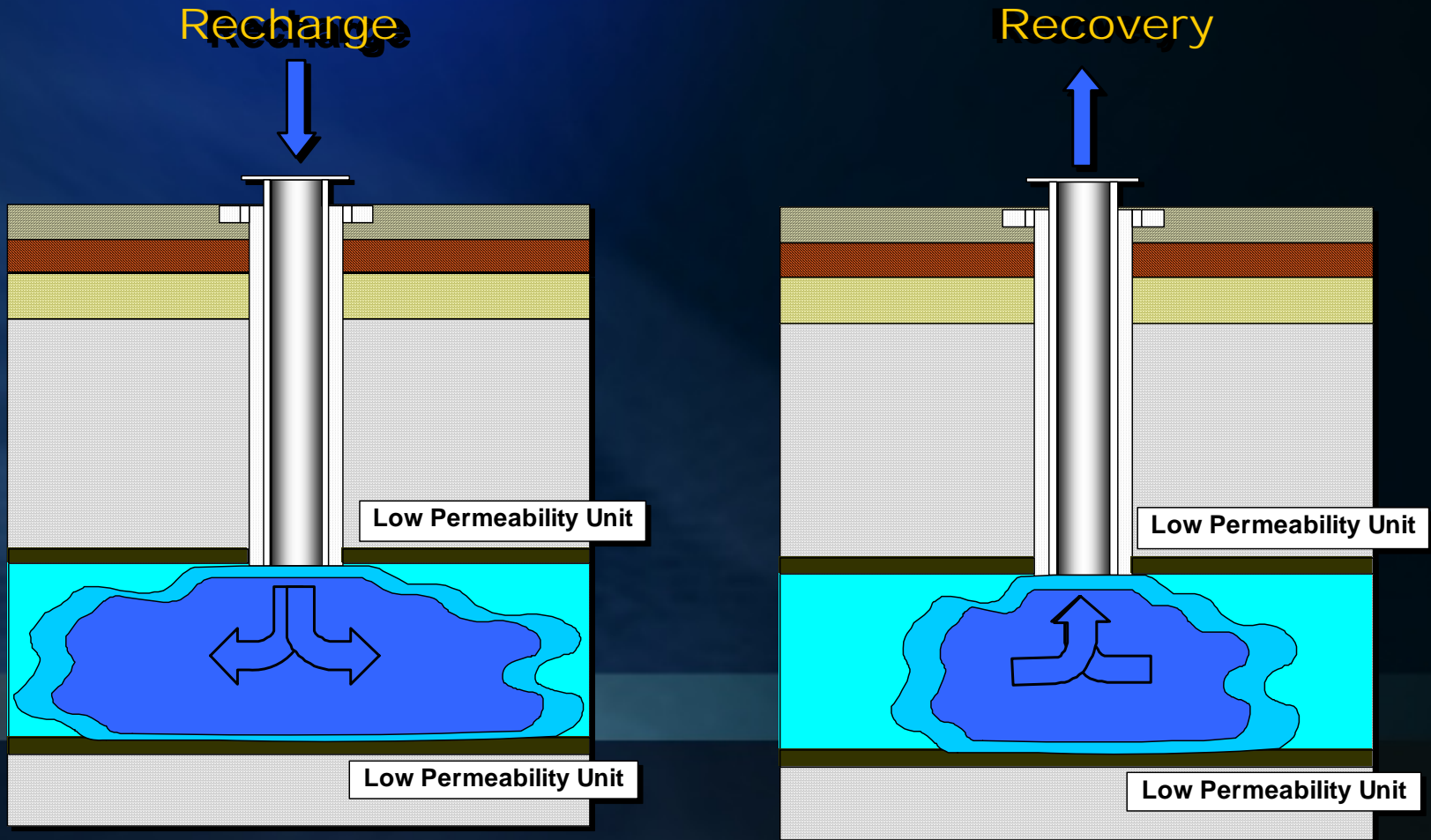
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**Aquifer Storage and  
Recovery (ASR)**

# Aquifer Storage and Recovery (ASR)

The storage of water in an aquifer through a well during times of surplus water supply and recovery of that stored water during times of increased water demand through the same well.

# The Underground Reservoir



# Project Objectives

- Reduce or Eliminate Surface Water Discharge to Mobbly Bay
- Reduce Dependence on Potable Water for Irrigation and Allowed Industrial Uses
- Provide Additional Reclaimed Water Storage Capacity for Expansion of Reuse Distribution System
- Provide Seasonal Storage and Recovery of Reclaimed Water during Dry Season at Relatively Low Cost

# Seasonal Supply Shortfall

- Dry Season Demand Continues to Increase
- Reclaimed Water Supply and Demand Variability
- Further Expansion Dependent on Additional Storage



# Supply Requirements

<b>Existing Contractual Allocation</b>	<b>1.509 MGD</b>
<b>Current Expansion</b>	<b>0.440 MGD</b>
<b>Future Expansion with Additional Storage</b>	<b><u>1.630 MGD</u></b>
<b>Total Proposed Allocation</b>	<b>3.579 MGD</b>
<b>Available Dry Season Reuse Flow (<i>historical reuse and outfall flows</i>)</b>	<b>1.1 MGD</b>
<b>Projected Reuse Deficit (approx.)</b>	<b>2.5 MGD</b>

# ASR Project Status

- Feasibility Study Complete
- FDEP Exploratory Well Permit Issued
- SWFWMD Cooperative Funding Agreement Approved
- Engineering Consultant Agreement Awarded for Final Design and Construction Management
- Construction Contract Available for Bid – March 2010
- Construction Contract – June 2010 – December 2010

# City of Oldsmar

## A Great Place to Live, Work and Play

# Thank You





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