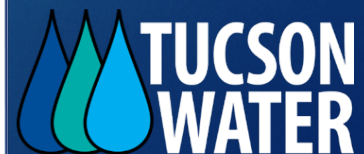
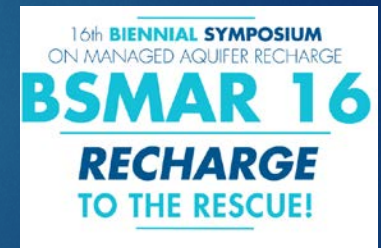


# SOUTH HOUGHTON AREA RECHARGE PROJECT [SHARP]

BETH SCULLY TUCSON WATER  
HYDROLOGIST/ RECHARGE UNIT  
MANAGED AQUIFER RECHARGE SYMPOSIUM  
MARCH 5-7 2018



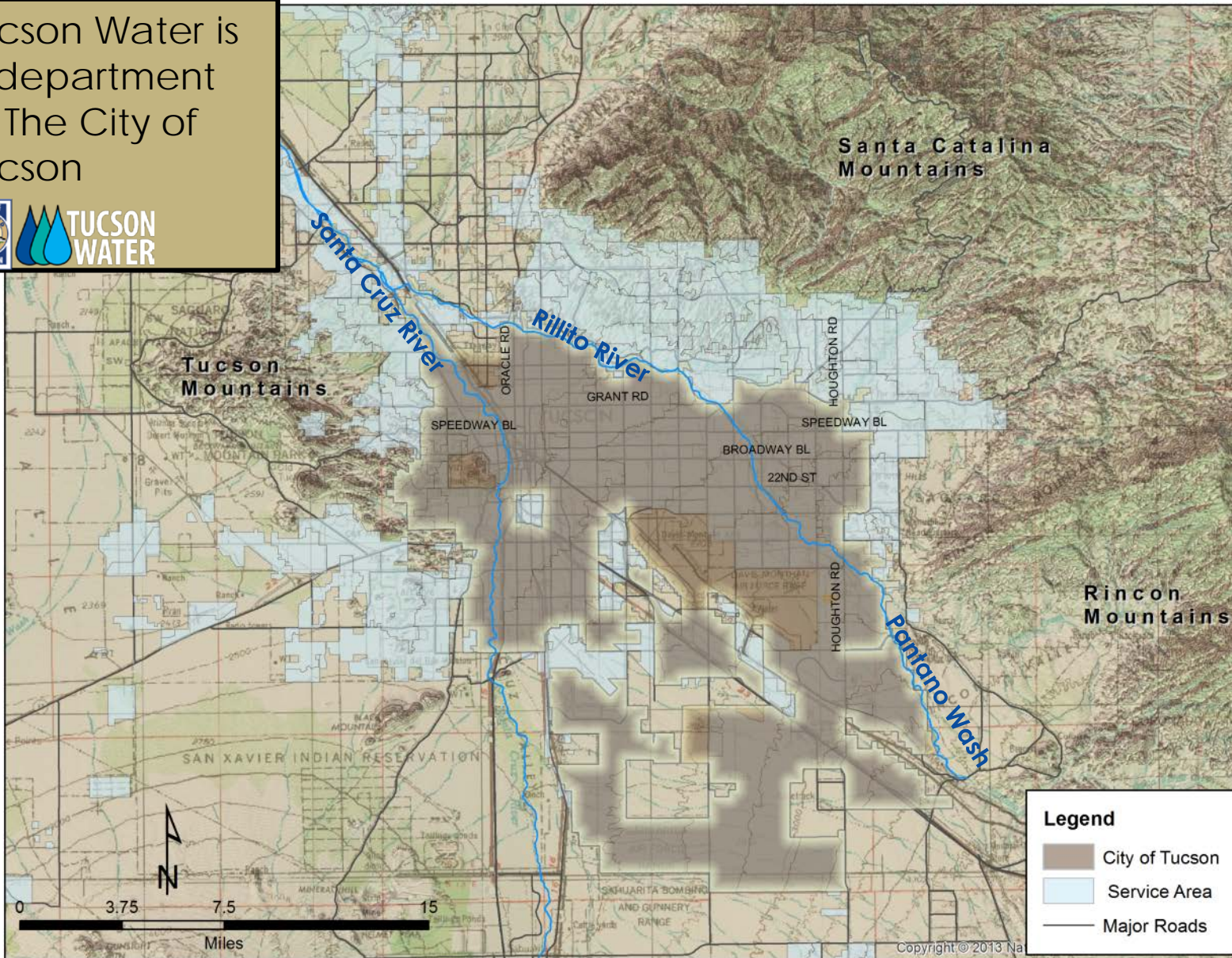


Oceanside

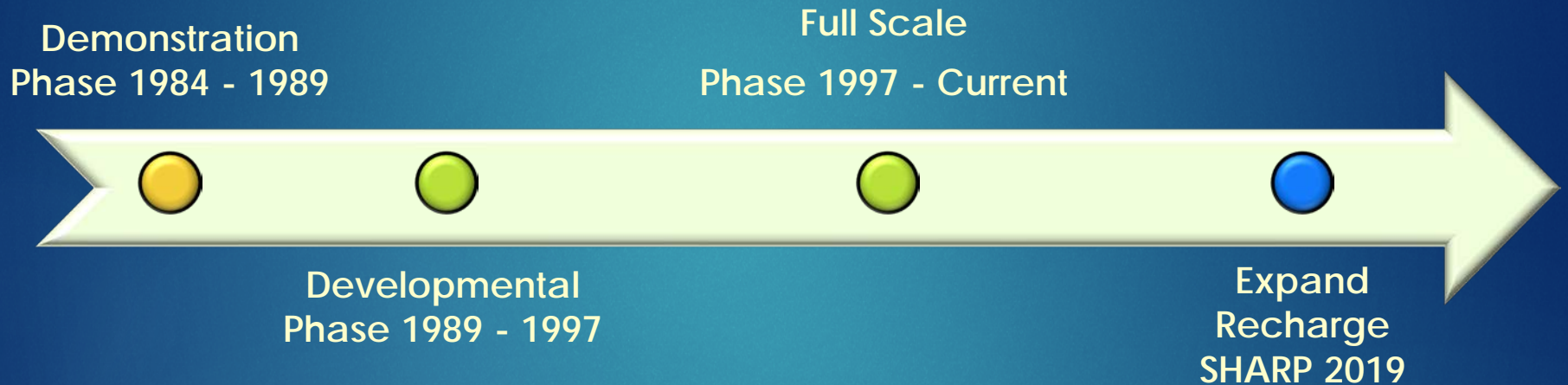
Tucson

# City of Tucson

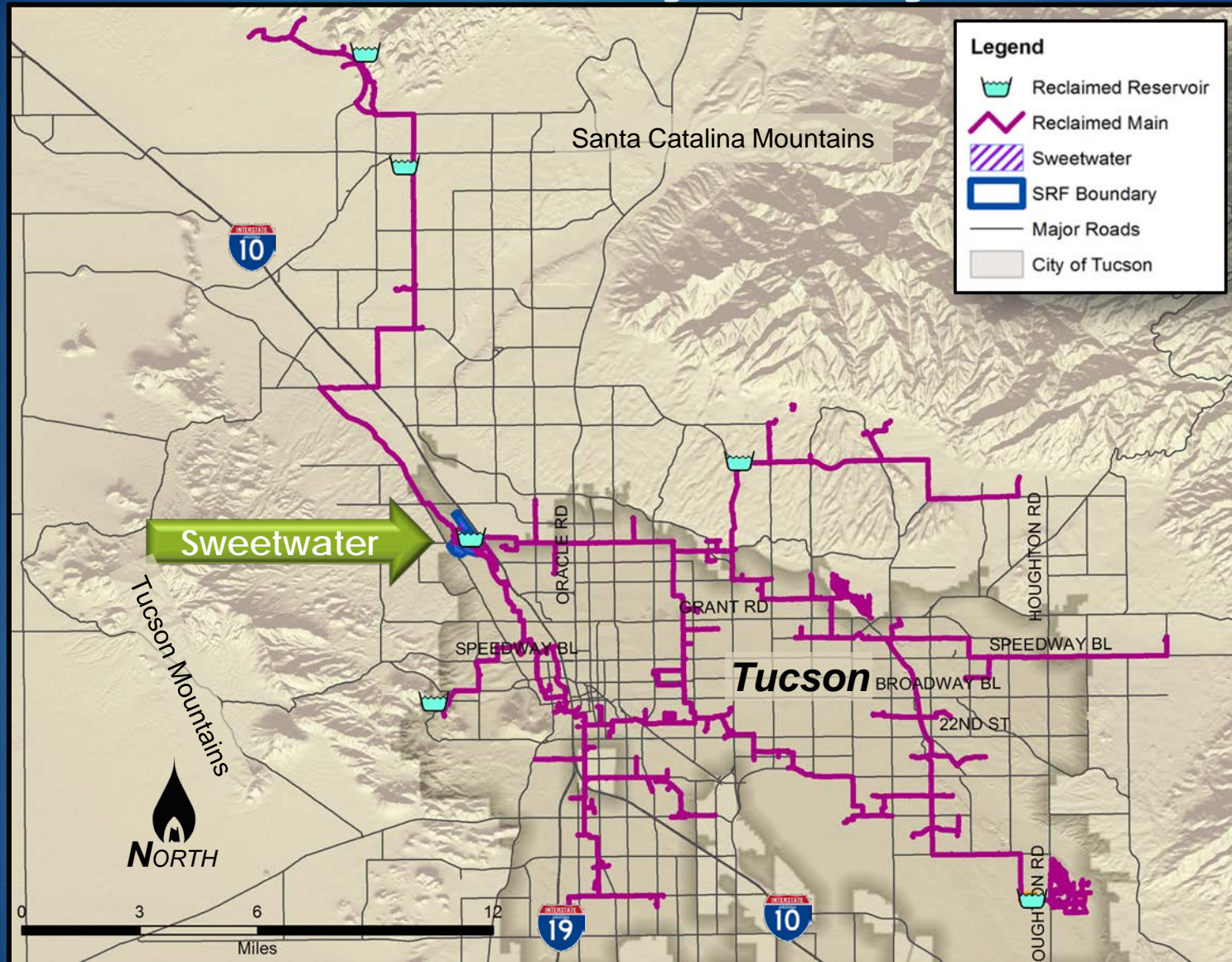
Tucson Water is a department of The City of Tucson



# Tucson Reclaimed Water History



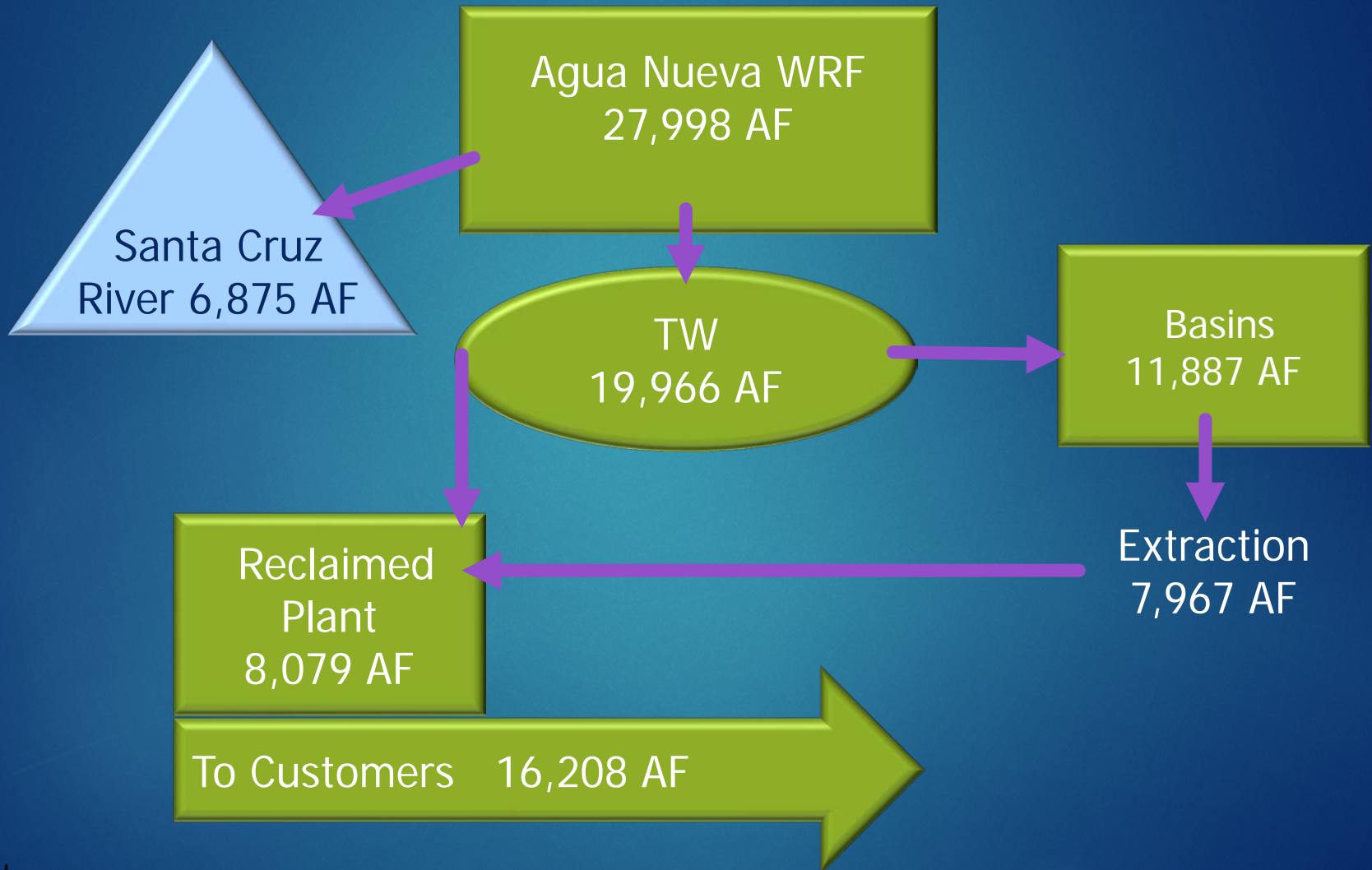
# Current Conveyance System



# Agua Nueva/Sweetwater

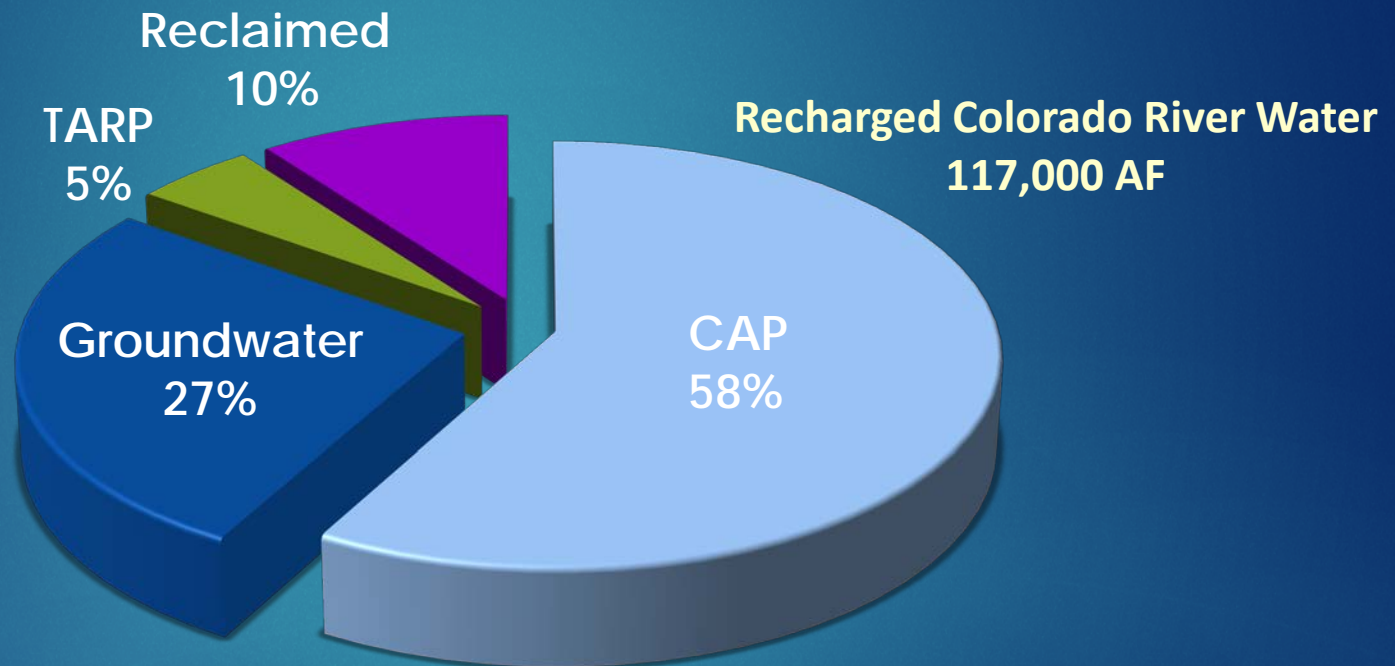


# 2017 Reclaimed Water Budget



# Water Portfolio 2017

**Total Water Production**  
**110,513 AF**



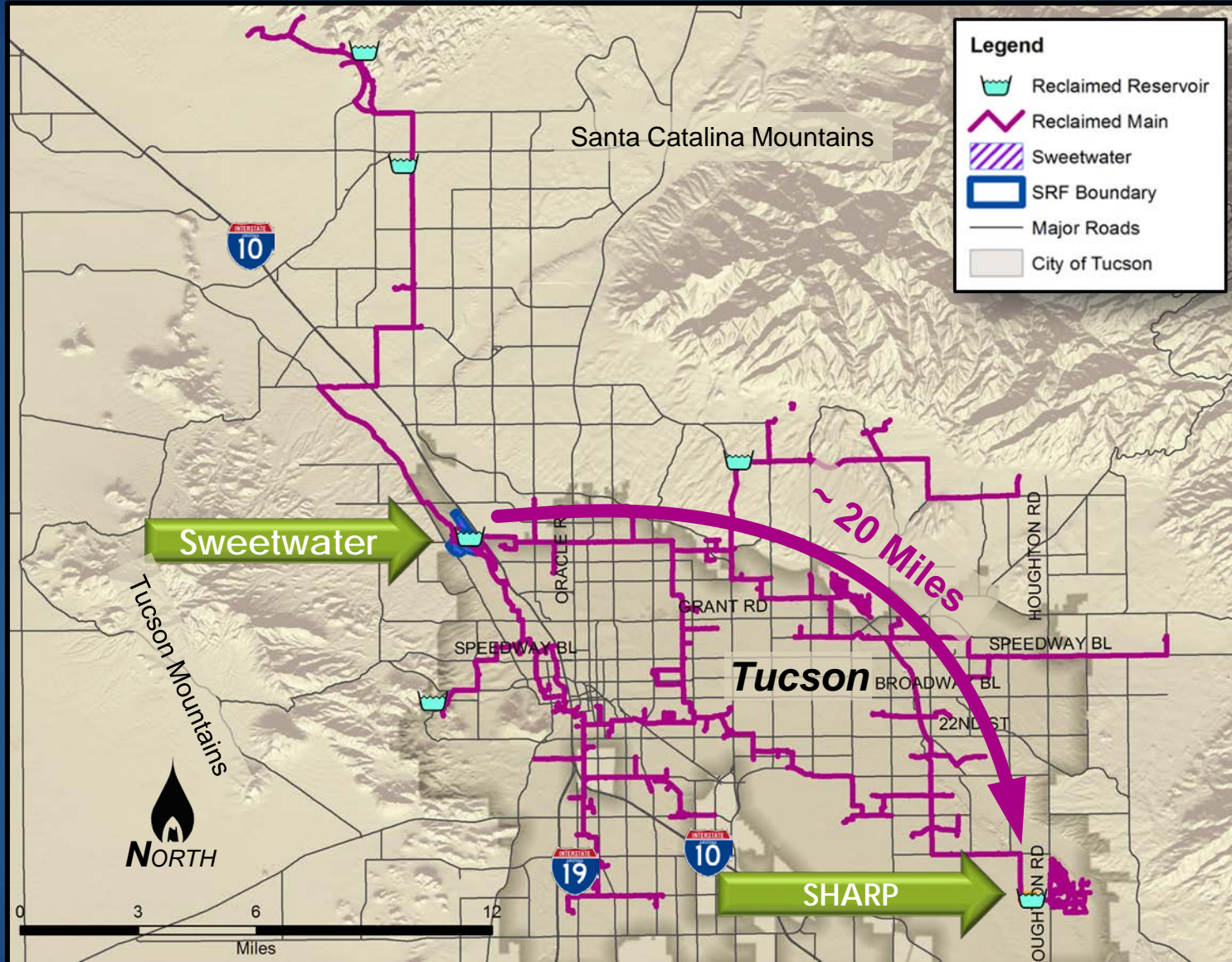
**Reclaimed Water is a  
Reliable Renewable water source**

# Expansion Drivers

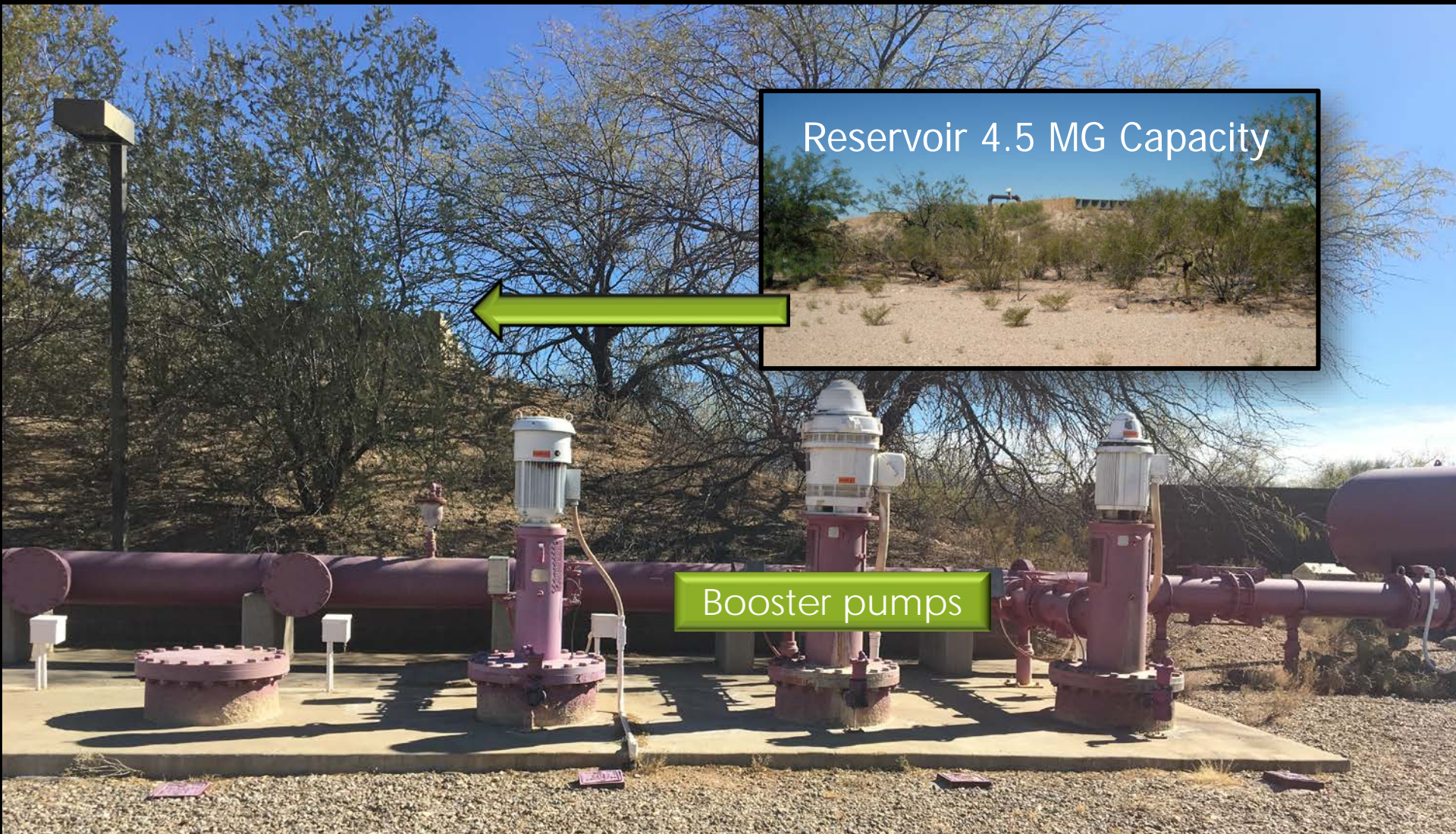
- Utilizing local renewable supply
- Additional Reclaimed Recharge Capacity
- Long-term Underground Storage
- Public Amenity
- Potential Demonstration Project



# SHARP LOCATION



# Houghton Reclaimed Water Reservoir

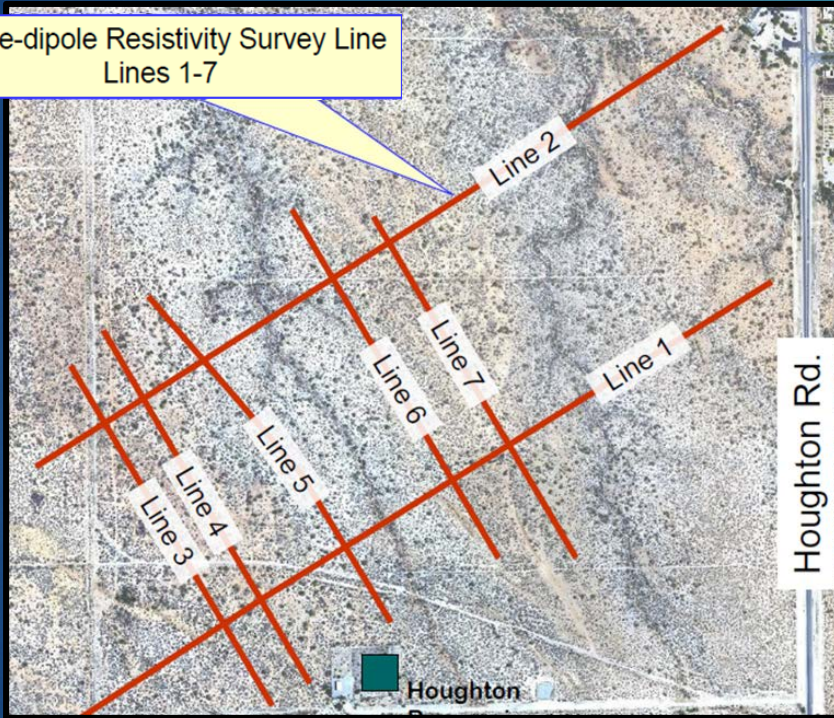


# Basin Location Selection

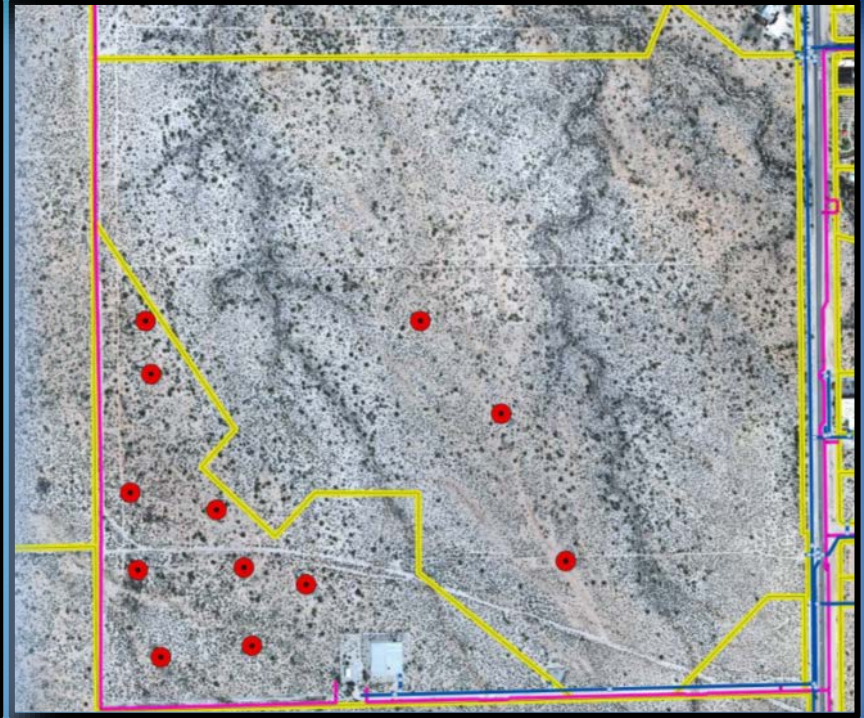
## Investigations

### Geophysical Survey

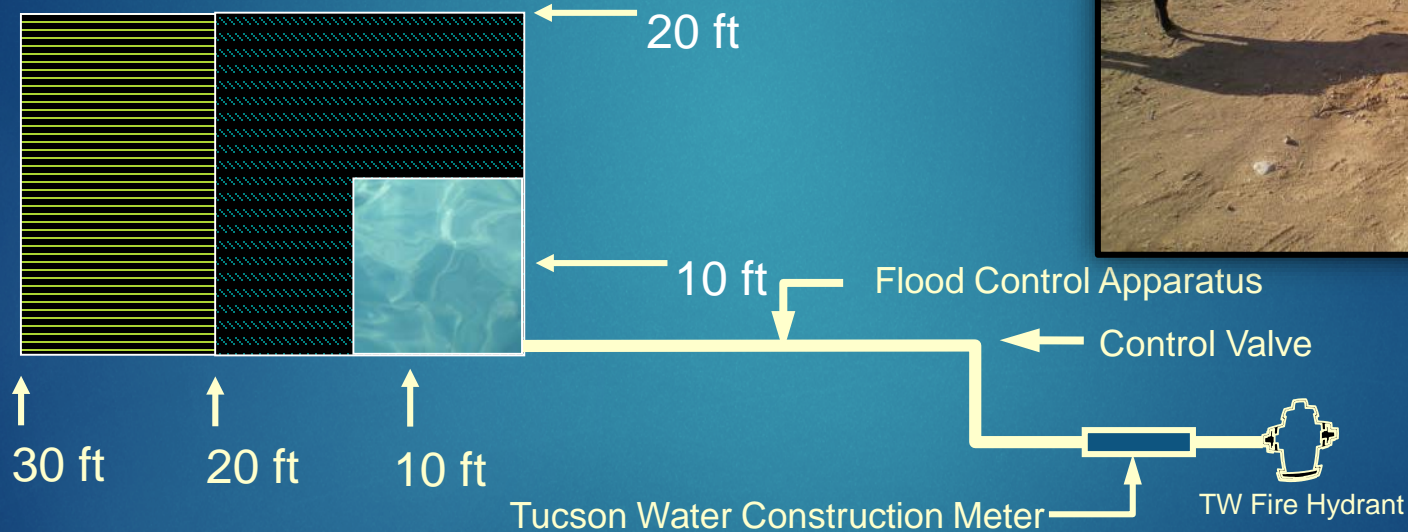
Dipole-dipole Resistivity Survey Line  
Lines 1-7



### 16 Lithologic Borings



# Test Basins

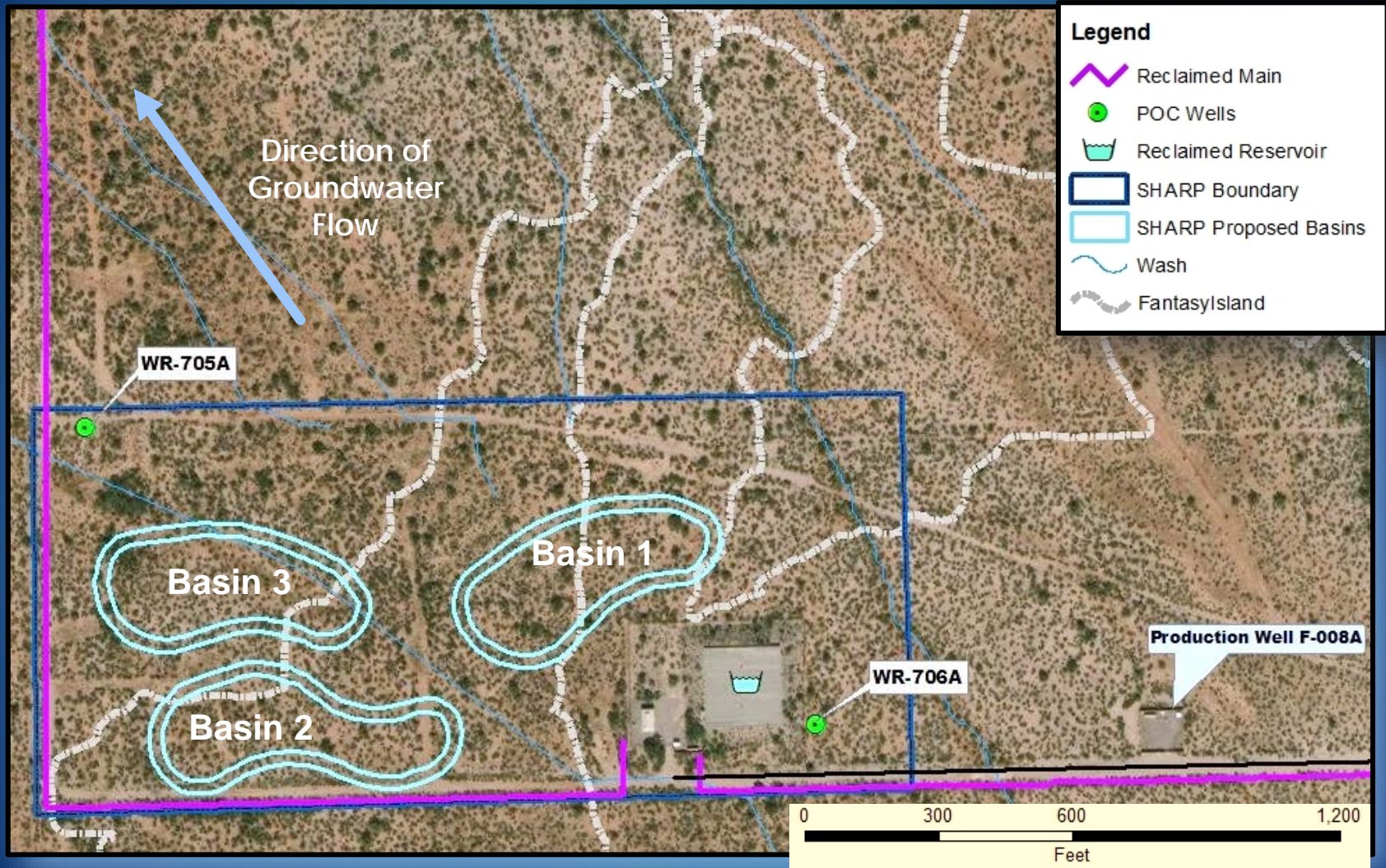


High Infiltration Rates > 7 feet/day

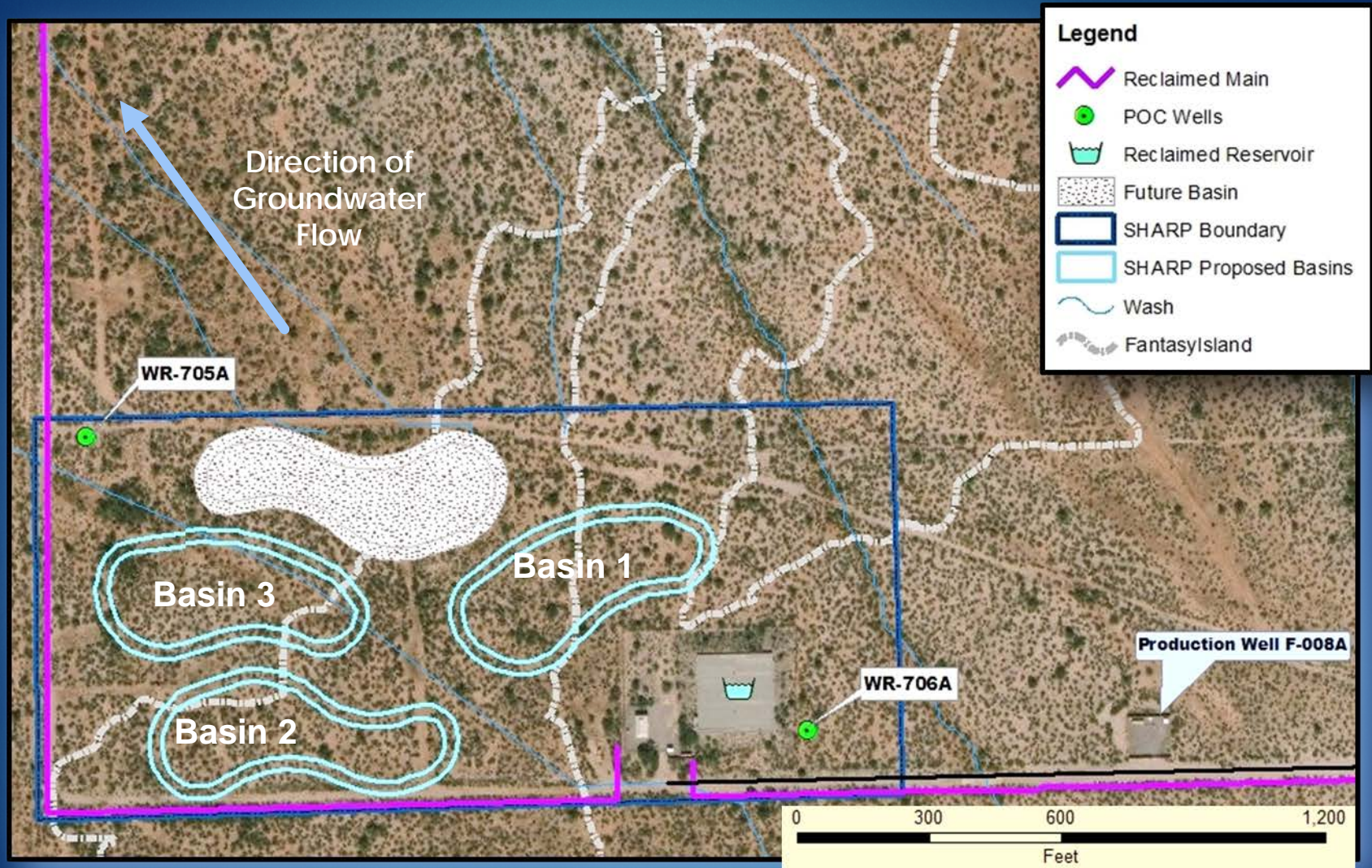
# Test Basin Soil Profile



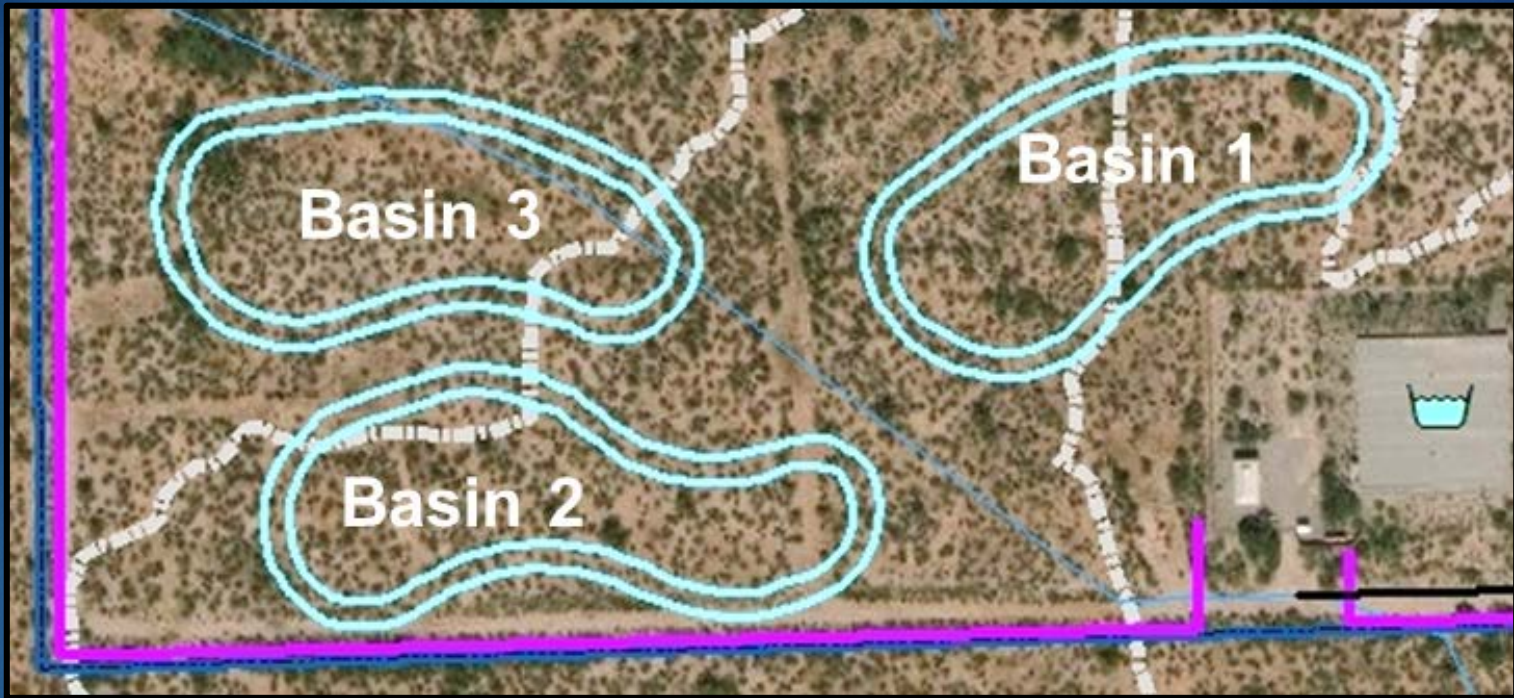
# Conceptual Design



# Potential Recharge Basin Expansion?



# SHARP Operation



Permitted Annual Recharge of 4,000 Acre-ft

6-Month Schedule

Designed Fully Automated Monitoring and Water Conveyance

# Permitting



- USF Permit
- WS Permit
- **DRAFT** Aquifer Protection Permit

Three Points of Compliance  
522, WR-705A, WR-706A  
Current- Initial Monitoring



# Multi-Beneficial Project

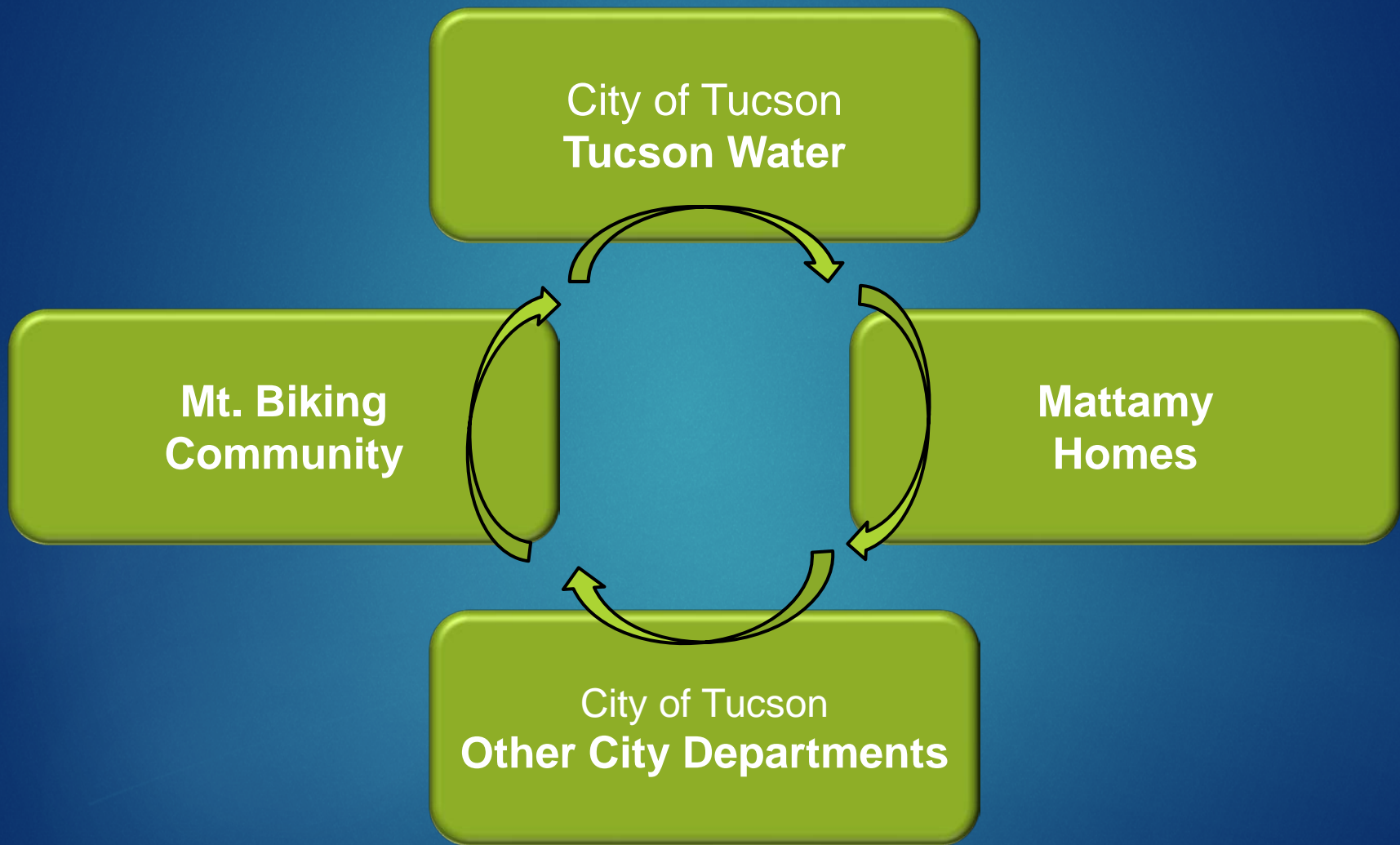
Flexibility in Reclaimed Storage

Education Component

Recreation-Public Amenity



# Community Engagement



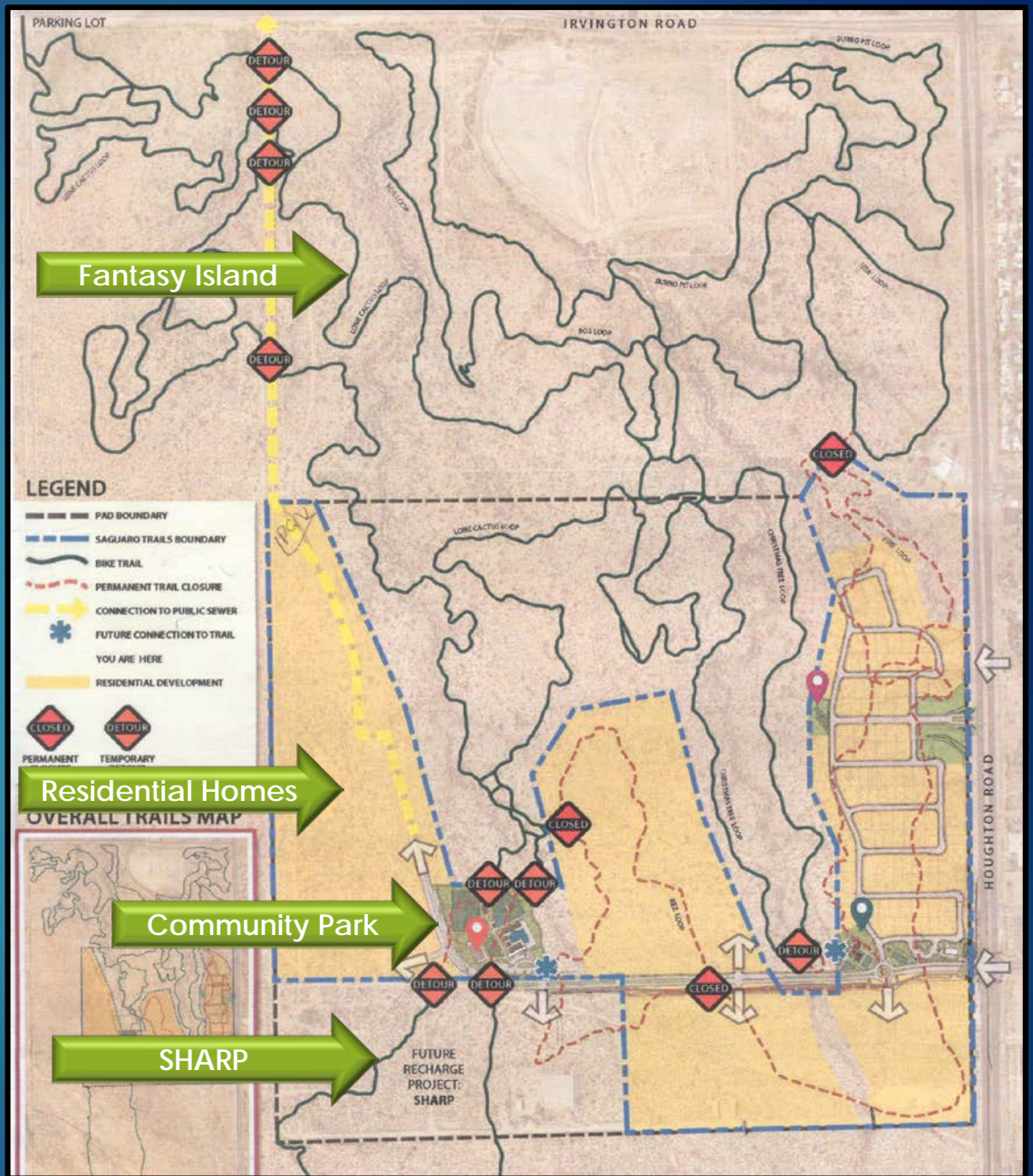
# Fantasy Island



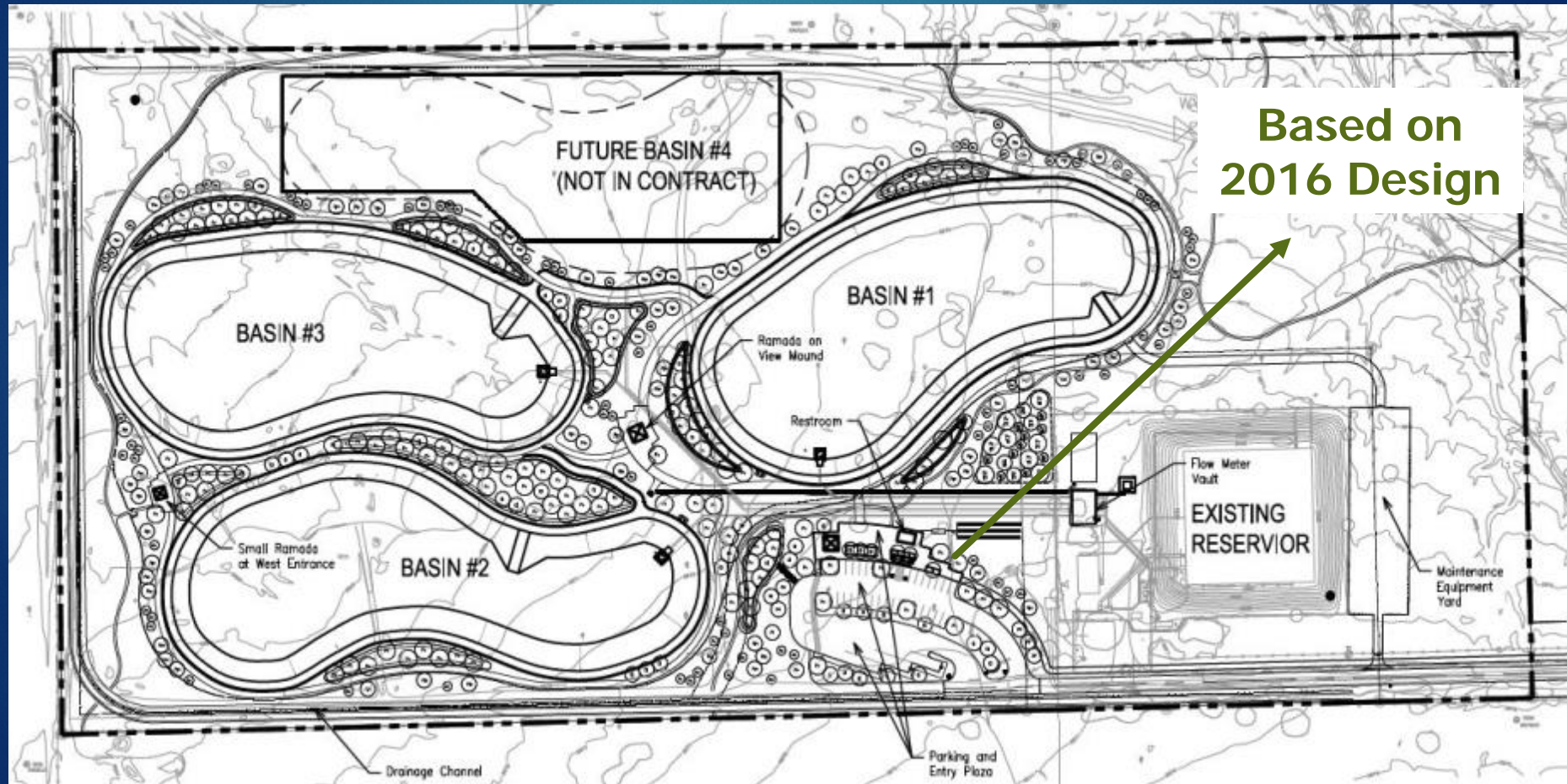
SHARP

Saguaro Trails

Fantasy Island Trails Park



# Preliminary Design & Modifications



# Public Amenities

- Public Access (ADA) to Basins
- Walking Trails
- Water Resources Educational (STEM)



# \$ Financials

**Total Project Development Budget: \$8,138,172**

Planning/Design- \$ 1,950,116

Construction - \$ 6,045,000

## Future O&M Cost

Annual Operation - \$48,061/year

Maintenance - \$26,000/year

# Schedule

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Feasibility										
Land Purchase										
Permitting										
Design										
Construction										
Operation										

# Status

- Reservoir Rehab- Spring 2018
- Permit-Establish AL and RLs- Summer 2018
- Designs- Complete-Fall 2018
- Construct Basins– Spring/Summer 2019



# Questions ?

Thank You

