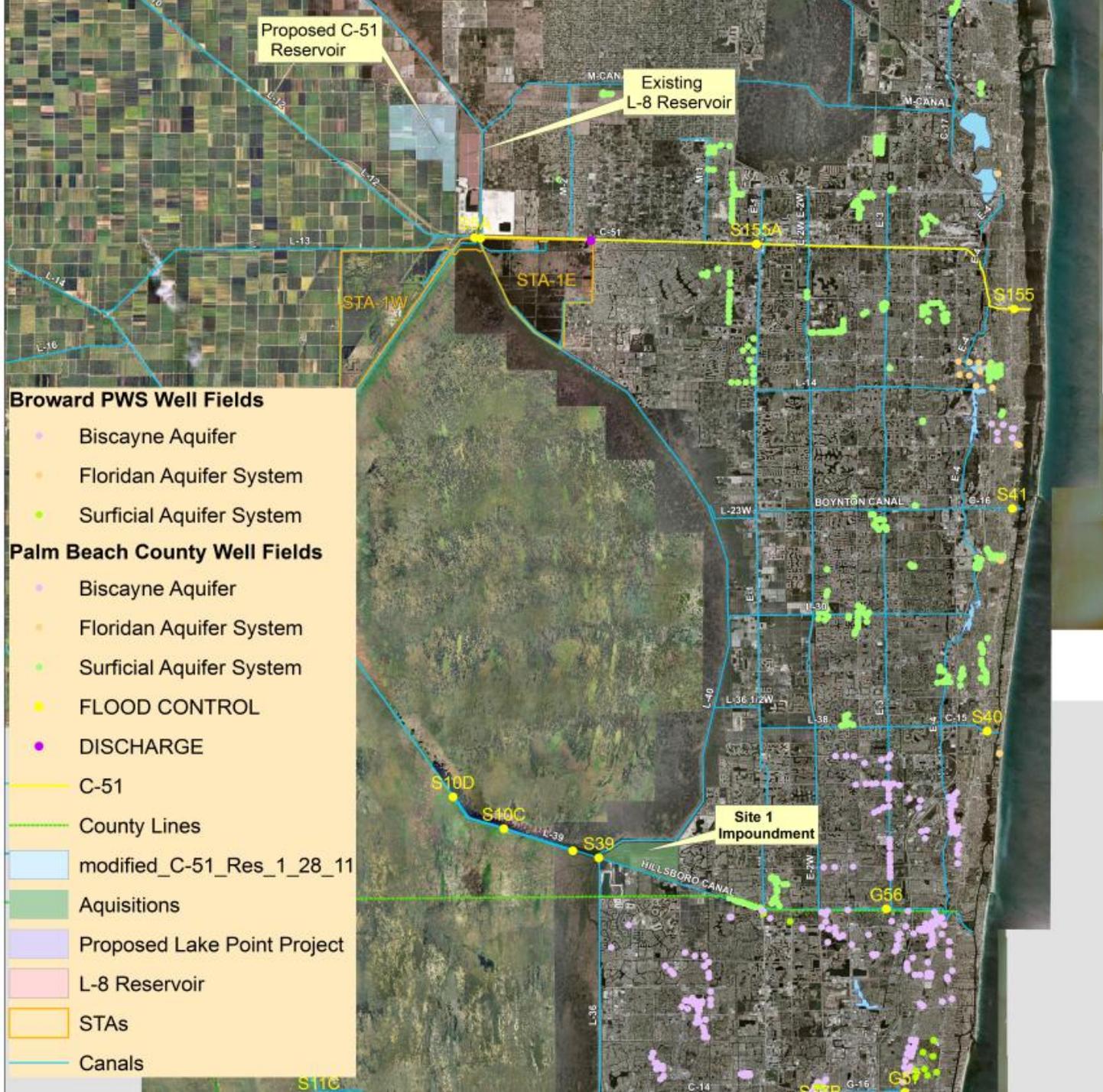


C-51 Reservoir Partnership Study

***SFWMD Project and Lands Committee Meeting
Presented by Dean Powell, SFWMD
December 14, 2011***



sfwmd.gov



Broward PWS Well Fields

- Biscayne Aquifer
- Floridan Aquifer System
- Surficial Aquifer System

Palm Beach County Well Fields

- Biscayne Aquifer
- Floridan Aquifer System
- Surficial Aquifer System

● FLOOD CONTROL

● DISCHARGE

— C-51

— County Lines

— modified_C-51_Res_1_28_11

— Aquisitions

— Proposed Lake Point Project

— L-8 Reservoir

— STAs

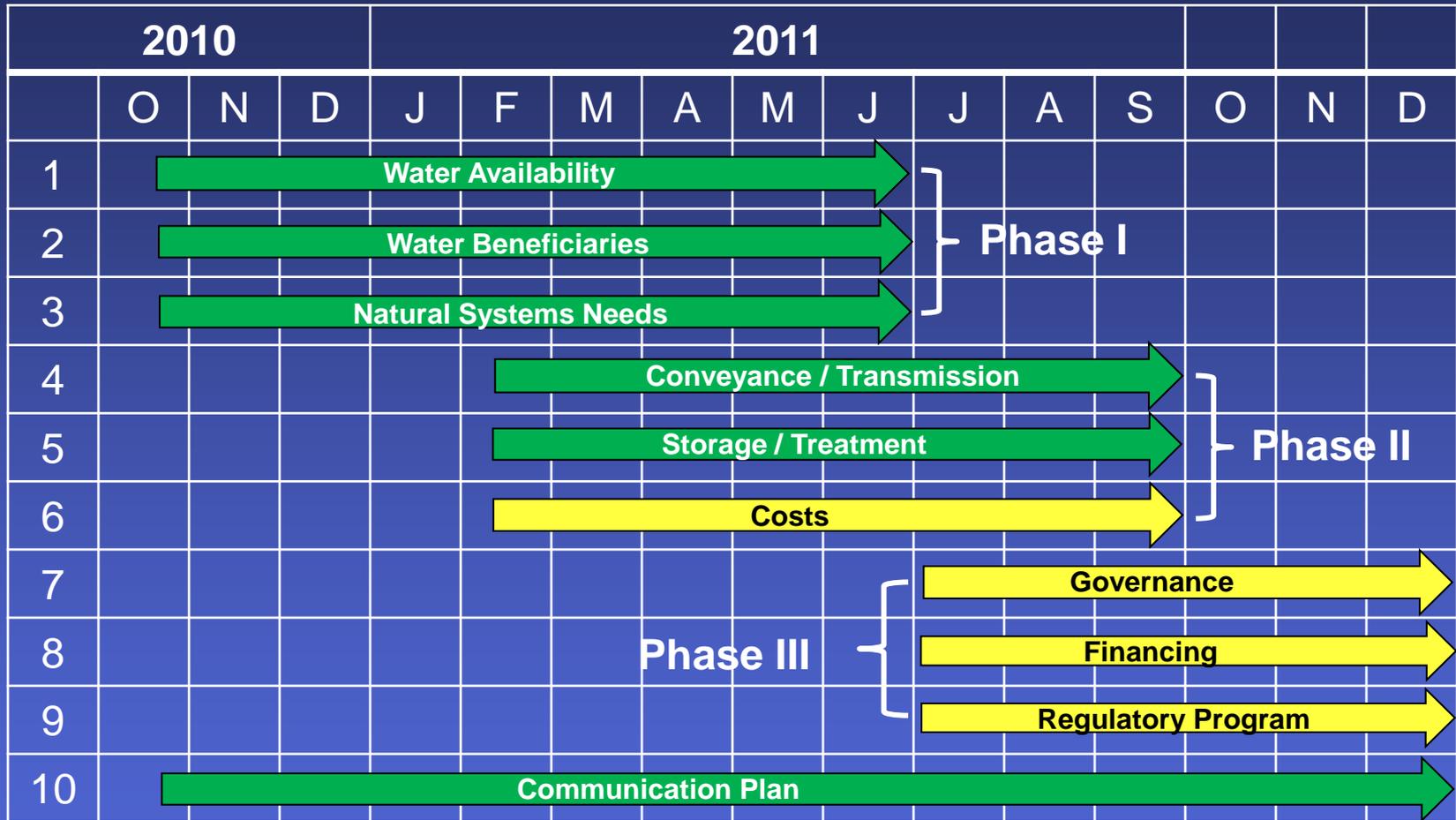
— Canals



Memorandum of Understanding

- Executed 11/29/11:
 - Lake Worth Drainage District
 - Palm Beach County Utilities
 - Fort Lauderdale Utilities
 - SFWMD
- Joinder – Pompano Beach, Plantation, Dania Beach, Boynton Beach
- Non-binding
- Schedule, tasks, and responsible parties

C-51 Reservoir Partnership Study



Modeling Tools

- **Water Availability**
 - **South Florida Water Management Model (2x2)**
- **Conveyance Analysis**
 - **Hydraulic model for the C-51 canal system (HEC-RAS)**
- **Groundwater simulation model for Palm Beach/Broward (MODFLOW)**
 - **Useful beyond planning: Design & Other**

Reservoir Water Supply Scenarios

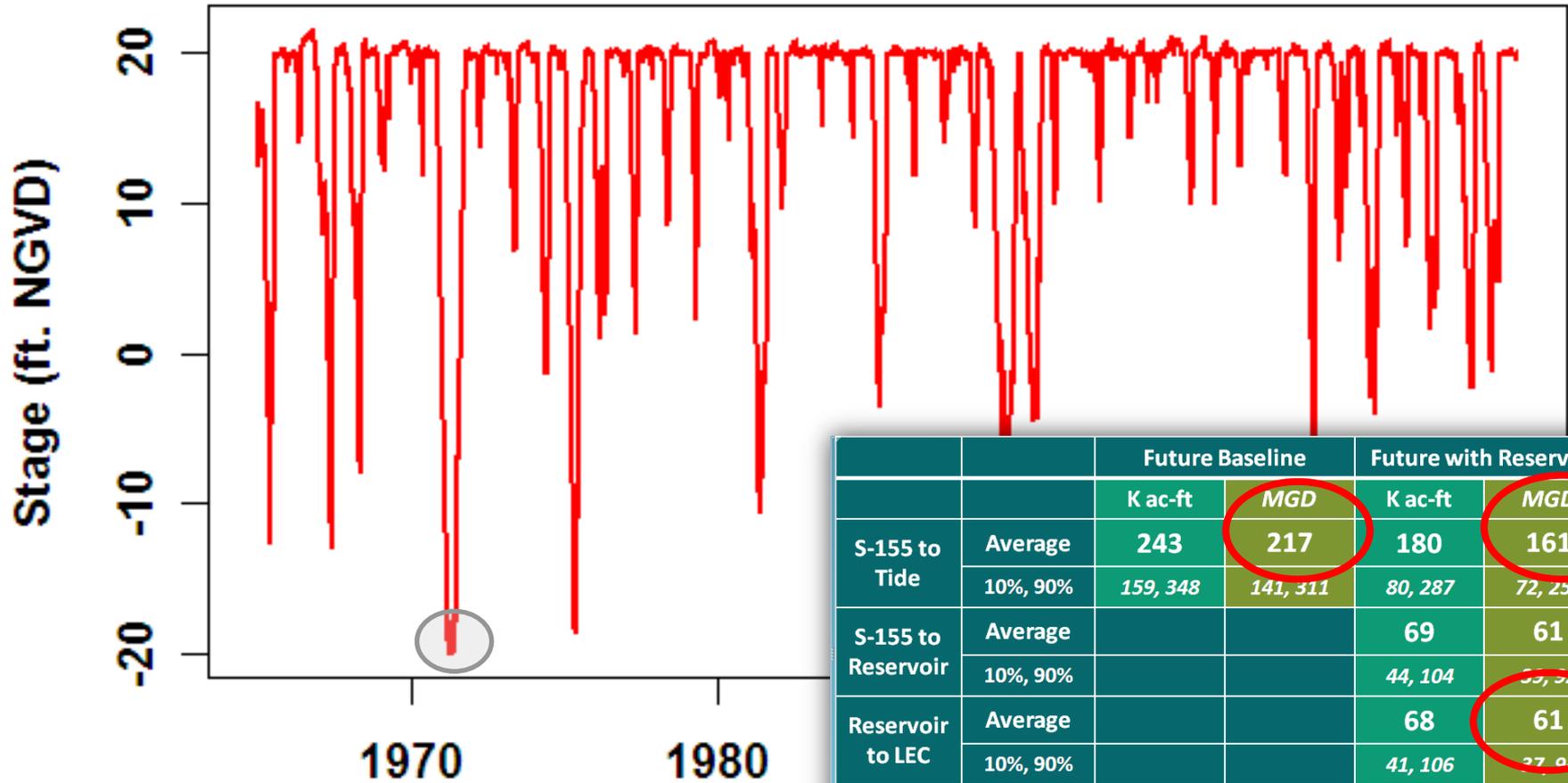
■ Scenario 1:

- Target: 120 mgd from the reservoir during major dry years
- Serve: Palm Beach and Broward Counties

■ Scenario 2:

- Target: 185 mgd from the reservoir during major dry years
- Serve: Palm Beach, Broward, and Miami-Dade Counties

Scenario 1 Results

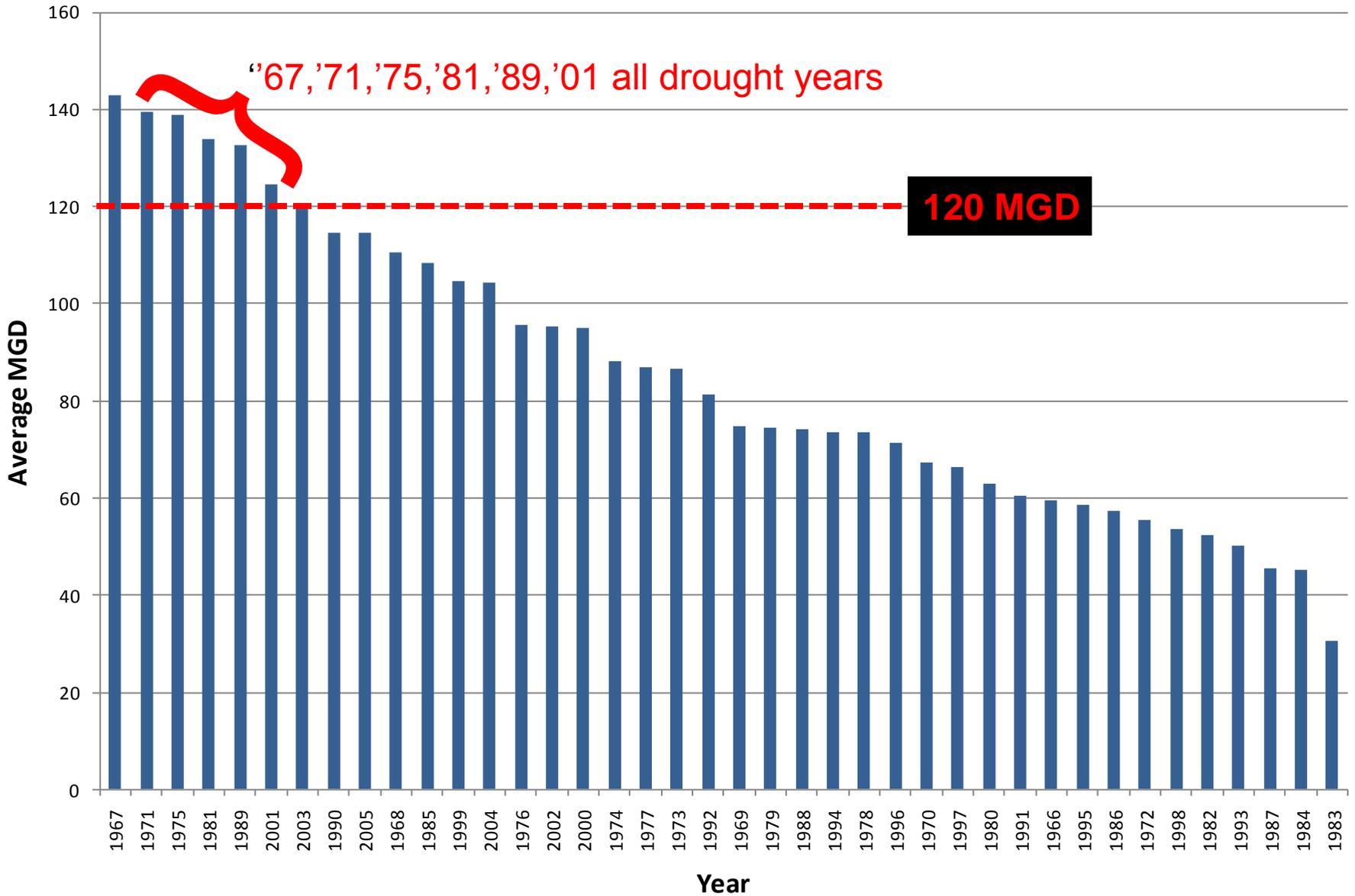


		Future Baseline		Future with Reservoir	
		K ac-ft	MGD	K ac-ft	MGD
S-155 to Tide	Average	243	217	180	161
	10%, 90%	159, 348	141, 311	80, 287	72, 256
S-155 to Reservoir	Average			69	61
	10%, 90%			44, 104	39, 92
Reservoir to LEC	Average			68	61
	10%, 90%			41, 106	37, 94

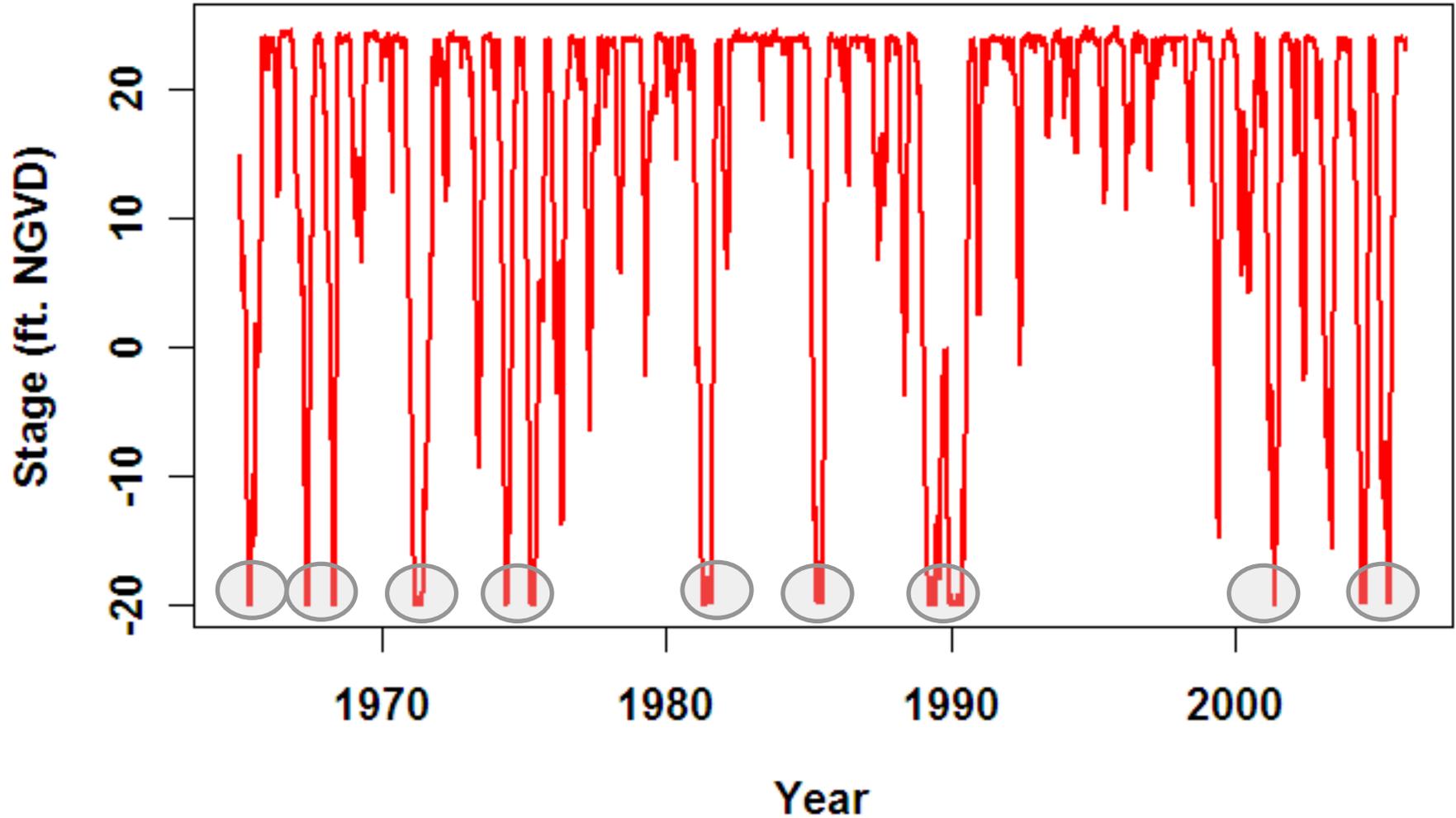
Note 1: Flows from S-155 to tide are assumed to represent available water for the reservoir from both C-51 East and West.

Scenario 1

Dry Season (November - May) Average Daily Deliveries



Scenario 2 Results

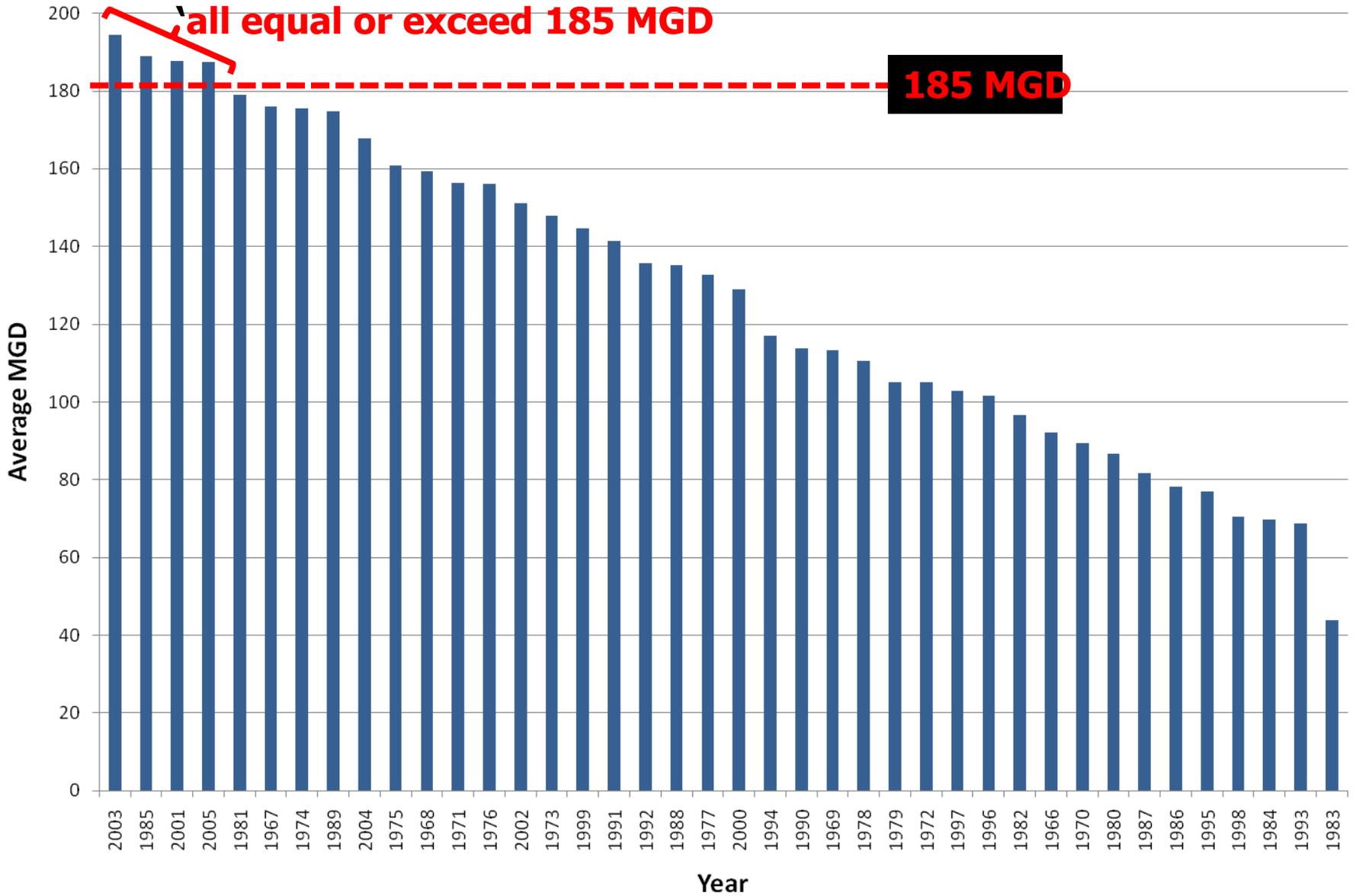


Scenario 2 Results

		Future Baseline		Future with Reservoir	
		K ac-ft	<i>MGD</i>	K ac-ft	<i>MGD</i>
S-155 to Tide	Average	242	216	144	128
	10%, 90%	156, 343	140, 306	23, 270	21, 241
S-155 to Reservoir	Average			107	95
	10%, 90%			66,143	59,128
Reservoir to LEC	Average			106	95
	10%, 90%			65,146	58,131

Note 1: Flows from S-155 to tide are assumed to represent available water for the reservoir from both C-51 East and West.

Dry Season (November - May) Average Daily Deliveries



Next steps

- Finalize cost information
- Complete documentation of work done to date (Preliminary Design and Cost Report)
- Utilities and Lake Worth Drainage District take lead on Governance and Financing
- District focus shifting to Regulatory

Questions?