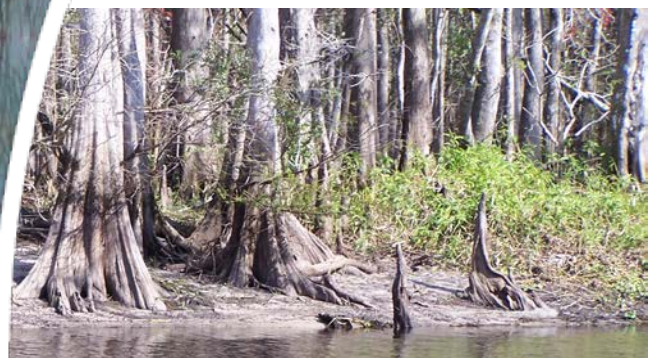
LAKE OKEECHOBEE WATERSHED PROJECT

INTEGRATED PROJECT IMPLEMENTATION REPORT & ENVIRONMENTAL IMPACT STATEMENT

Project Delivery Team Meeting

October 5, 2016



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ALTERNATIVES MILESTONE Overview

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Alternatives Milestone- November 3rd, 2016

- Vertical team (SAJ, SAD, HQ) concurrence on existing and Future Without Project Conditions and the initial array of alternatives the PDT will carry forward for evaluation and comparison to identify the Tentatively Selected Plan
- PDT has completed inventory and forecast of critical resources relative to problems and opportunities
- PDT has completed an initial screening and preliminary evaluation to present a focused array of alternatives

PLAN FORMULATION STRATEGY
Determination of Storage Targets

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- The Reservoir Sizing and Operations Screening (RESOPS) model was used test the performance of various storage configurations north of the lake to determine a feasible range of storage options.

RESOPS Summary

- Showed improvement in estuary discharges and Lake Okeechobee stage performance within range of 150,000 – 350,000 ac-ft reservoir storage
- Reservoir storage target: increments of storage between 150,000 – 350,000 ac-ft reservoir storage until more detailed regional models could be used to focus the target futher

PLAN FORMULATION STRATEGY
Reservoir Formulation

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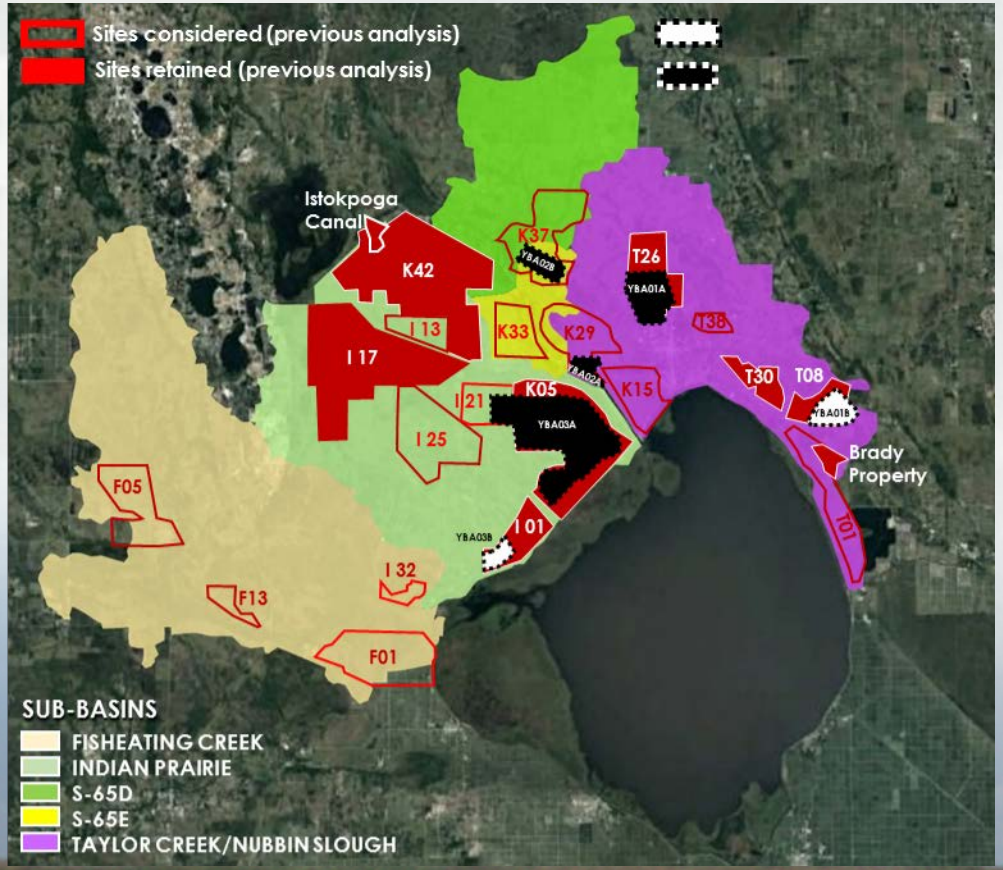

- Institute of Water Resources Plan (IWR Plan) used to determine cost-effective and best buy reservoir configurations within selected storage range
- Included top scoring reservoirs in IWR Plan: K-42, T-26, K05 Horizontal, K05 Big, Brady Property, and I-01

PLAN FORMULATION STRATEGY
Reservoir Formulation

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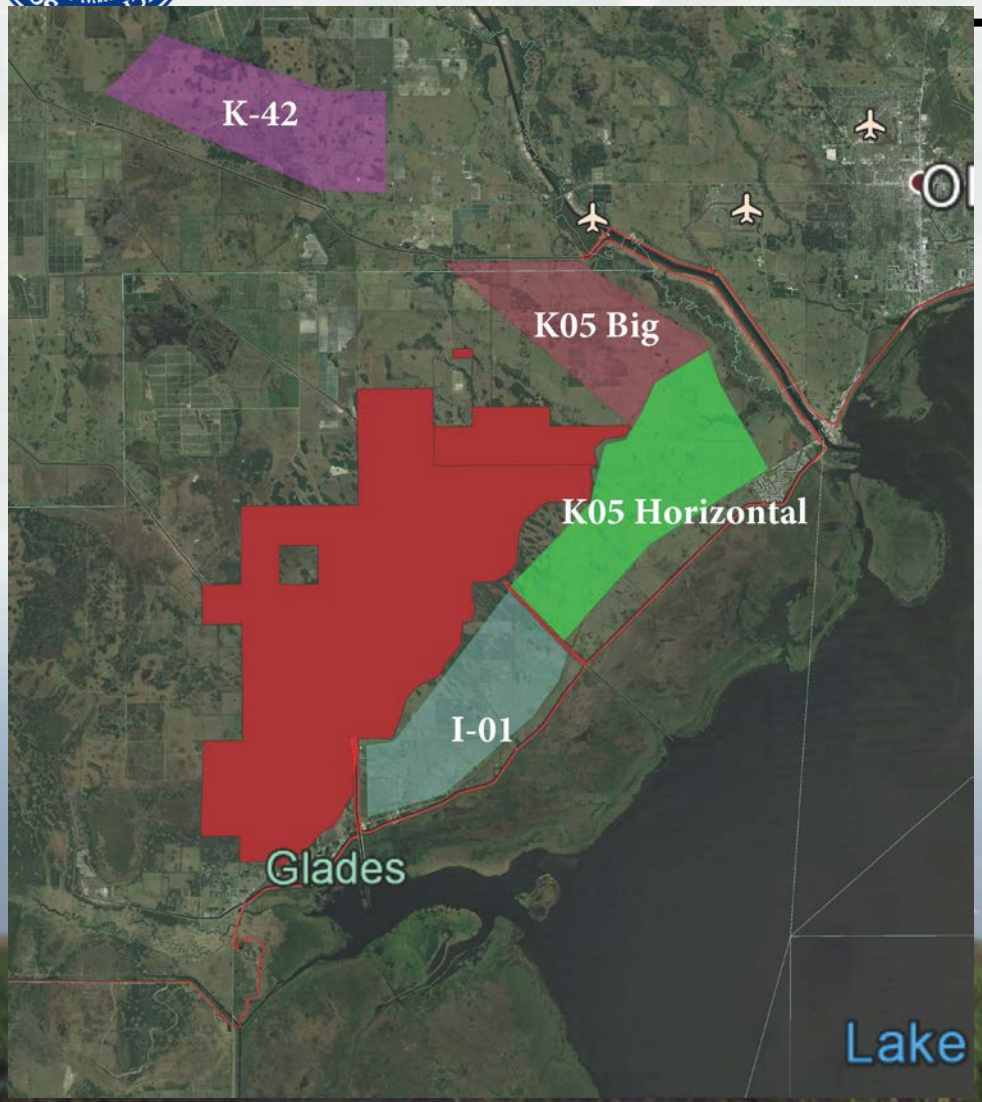

Reservoir (s)	Storage Capacity (ac-ft)	Cost (USD)
K05H (10')	154,554	$ 895,974,736
K05 Big - 10'	189,214	$ 985,857,666
K05H and I-01 (10')	248,822	$ 1,505,899,999
K05 Big (14')	263,584	$ 1,427,446,173
K-42 & K05H (14')	315,817	$ 1,901,564,758
K05 Big (12') and I-01 (14')	320,761	$ 1,802,149,113

PLAN FORMULATION STRATEGY
ASR

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- CERP ASR regional study identified suitable ASR locations
- 80 ASR wells associated with Lake Okeechobee
- Analyzed increments of 60 and 80 ASR to suite of reservoir storage capacities and determine best-buy based on flow reductions and cost

# of ASR	Injection/Recovery Limit (ac-ft/mo)
20	9,431
40	18,682
60	28,023
80	37,364

PLAN FORMULATION STRATEGY
Deep Injection Well Formulation

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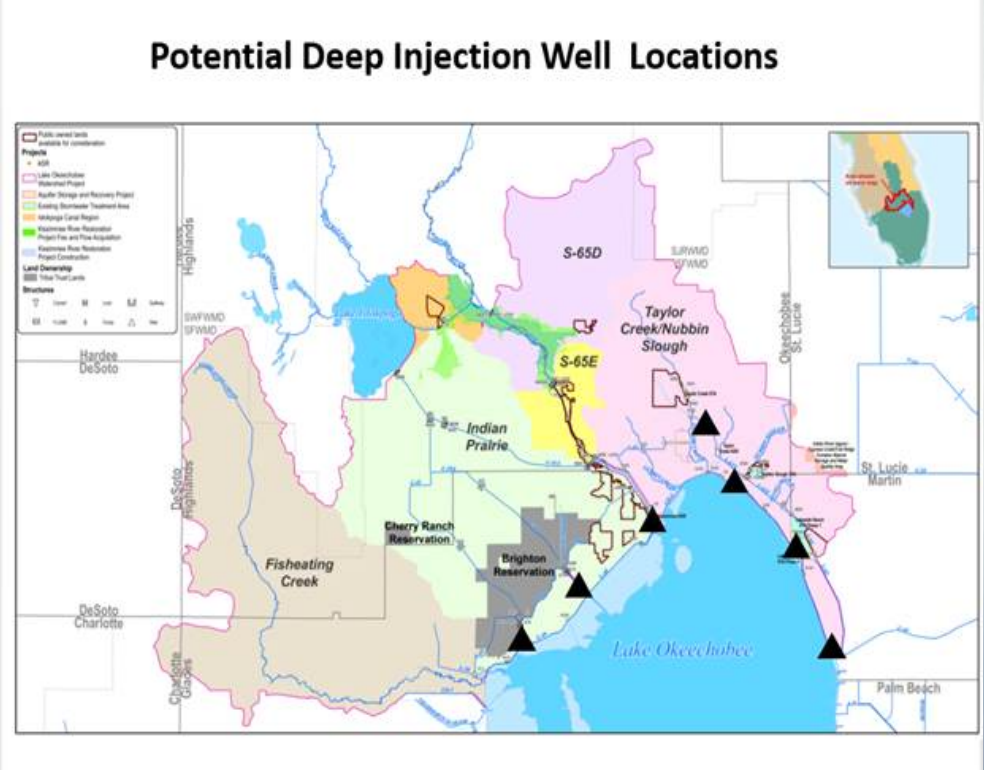

- RESOPS results show improvement in release in estuaries and in Lake Okeechob high stage scores with addition of DIW
- 'Last resort' option during extreme wet times
- Once the Lake Okeechobee stage is high enough to trigger regulatory releases to th northern estuaries in excess of estuary nee portions of excess flows would be discharged through DIWs rather than discharged to the northern estuaries and consequently lost to tide.

Initial Storage Alternatives

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Storage Alternative	Management Measures	Total Storage (ac-ft)	Total Cost
Alternative 1	K05H (14')	154,554.00	$ 895,974,736
	+ ASR - 60	182,635.00	$ 1,195,974,736
	+ DIW - 30	303,890.00	$ 1,438,974,736
	+ ASR - 80	191,996.00	$ 1,295,974,736
	+ DIW - 30	313,251.00	$ 1,538,974,736
Alternative 2	K05 Big (10')	189,214.00	$ 985,857,666
	+ ASR - 60	217,295.00	$ 1,285,857,666
	+ DIW - 30	338,550.00	$ 1,528,857,666
	+ ASR - 80	226,656.00	$ 1,385,857,666
	+ DIW - 30	347,911.00	$ 1,628,857,666
Alternative 3	K05H (14') & I-01 (14')	248,822.00	$ 1,505,899,999
	+ ASR - 60	276,903.00	$ 1,805,899,999
	+ DIW - 30	398,158.00	$ 2,048,899,999
	+ ASR - 80	286,264.00	$ 1,905,899,999
	+ DIW - 30	407,519.00	$ 2,148,899,999

Alternatives are formed with a base reservoir storage, then adding 60 ASR and DIW, then adding a configuration of 80 ASR and DIW.

Initial Storage Alternatives

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Storage Alternative	Management Measures	Total Storage (ac-ft)	Total Cost
Alternative 4	K05 Big (14')	263,584.00	$ 1,427,446,173
	+ ASR - 60	291,665.00	$ 1,727,446,173
	+ DIW - 30	412,920.00	$ 1,970,446,173
	+ ASR - 80	301,026.00	$ 1,827,446,173
	+ DIW - 30	422,281.00	$ 2,070,446,173
Alternative 5	K-42 (14') & K05H (14')	315,817.00	$ 1,901,564,758
	+ ASR - 60	343,898.00	$ 2,201,564,758
	+ DIW - 30	465,153.00	$ 2,444,564,758
	+ ASR - 80	353,259.00	$ 2,301,564,758
	+ DIW - 30	474,514.00	$ 2,544,564,758
Alternative 6	K05 Big (12') & I01 (14')	320,761.00	$ 1,802,149,113
	+ ASR - 60	348,842.00	$ 2,102,149,113
	+ DIW - 30	470,097.00	$ 2,345,149,113
	+ ASR - 80	358,203.00	$ 2,202,149,113
	+ DIW - 30	479,458.00	$ 2,445,149,113

PLAN FORMULATION STRATEGY
Watershed Wetland Restoration

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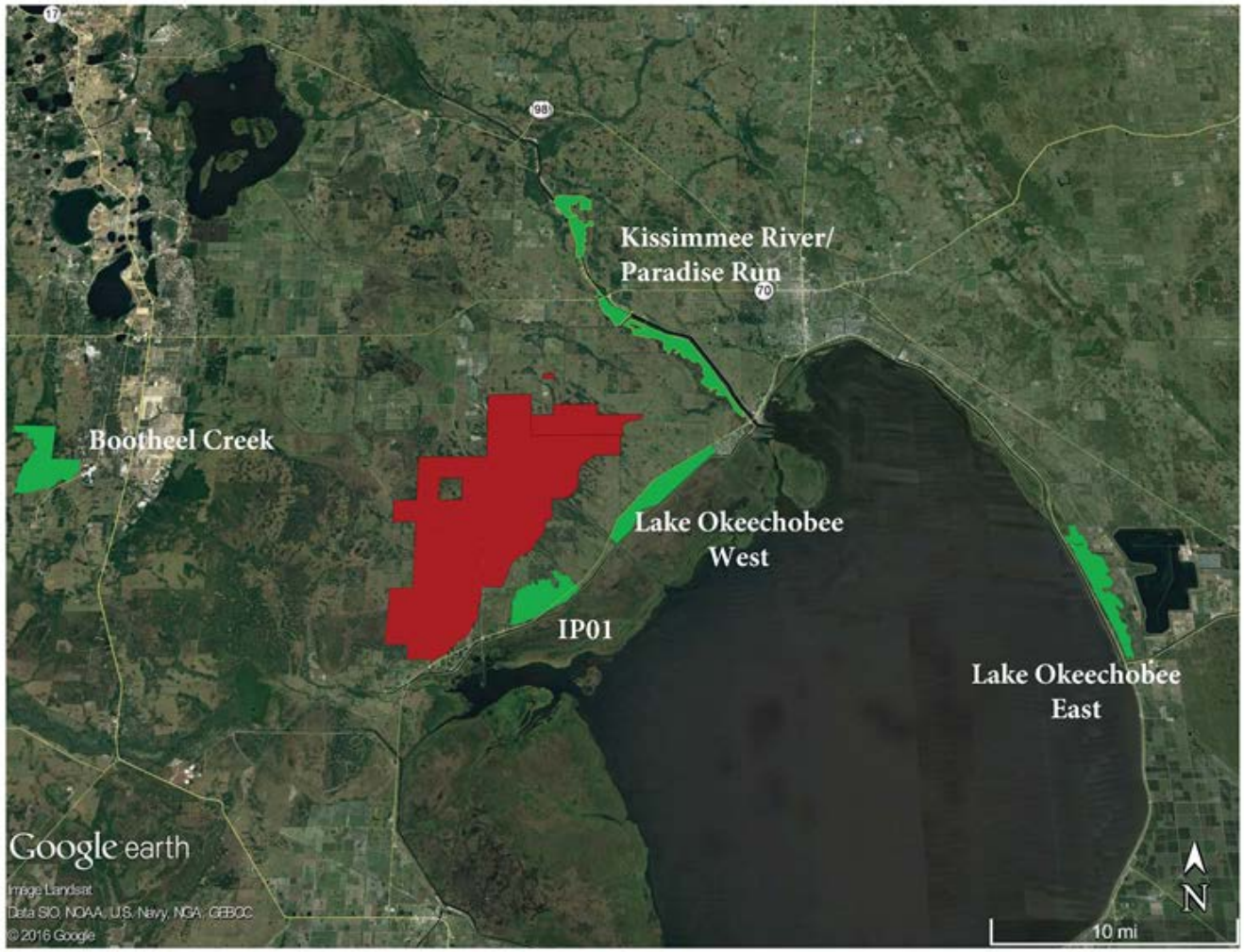

PLAN FORMULATION STRATEGY
In-Lake Littoral Zone

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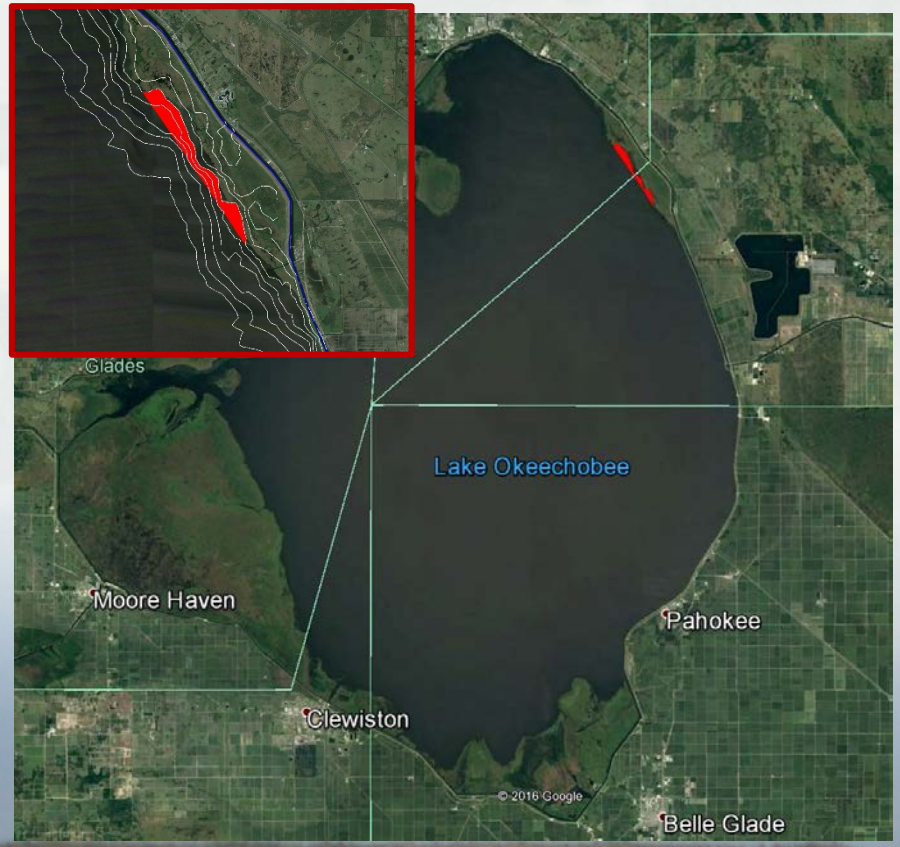

Chancey Point

- Add 500+ acres to the existing littoral zone using material located at the mouth of the Kissimmee River
- ~ $34million

Separable Elements
Wetland Alternatives

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Wetland Alternative	Potential Restoration Site	Acres	Total Cost
Wetland Alternative 1	Kissimmee River/Paradise Run	4215	$41,871,810
Wetland Alternative 2	Lake O West	2750	$27,318,500
Wetland Alternative 3	Lake O East	2693	$26,752,262
Wetland Alternative 4	Bootheel Creek	3393	$33,706,062
Wetland Alternative 5	IP-10	2372	$23,563,448
Wetland Alternative 6	Chancey Point	~500	$34,000,000

PROJECT RISKS

Scoping Choice or Event	Risk and its cause
Siting managment measures in areas with probability of cultural resource impacts	Probability model shows risk of cultural resources throughout the study area. No available surveys know in study area
Basing water supply impacts on older version of tribal water entitlement, which is currently being updated	Difficult to determine if storing water north of Lake Okeechobee will impact tribal water supply if entitlement hasn't been updated
Siting features in areas with potential for HTRW or ag chemicals	Risk for HTRW or ag chemicals in project area
Delay cultural resources survey until TSP	Waiting until the TSP to initiate surveys or needing remedial surveys to adequately determine effects. If historic properties are discovered and the effects of construction are determined to be adverse, strategies shall be developed to avoid, minimize or mitigate adverse effects in consultation with the Tribes and

PROJECT RISKS

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Scoping Choice or Event	Risk and its cause
Use existing data and studies for initial design	Reduced design data acquired, no new contracts to acquire data. May result in high cost contingency
Lower than 30% design in the Engineering Appendix.	Increased uncertainty
Formulating for freshwater releases to estuaries amidst future uncertainty regarding sea level rise	If sea level rises, it will require greater volumes of freshwater discharges to reduce salinity levels. At some point, the freshwater required to protect the estuarine habitats will be great enough to substantially compromise the ability of the regional water management system to satisfy environmental, urban, and agricultural water demands.

PROJECT RISKS

Scoping Choice or Event	Risk and its cause
Including large reservoirs requiring acquisition of large tracts of land within the project area	The real estate market in South and Central Florida has been very dynamic and large tracts of formerly agricultural areas have been converted to residential housing with an accompanying above average increase in real estate prices. There is significant uncertainty regarding whether the required land will be developed prior to project implementation, how many willing sellers will there be, and how the estimated costs will change