

LAKE OKEECHOBEE WATERSHED PROJECT

INTEGRATED PROJECT IMPLEMENTATION REPORT & ENVIRONMENTAL IMPACT STATEMENT

Project Delivery Team Meeting
December 14, 2016

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US Army Corps of Engineers
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DECEMBER 14, 2016 PDT



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ENGINEERING SUB-TEAM UPDATES

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ECOLOGICAL SUB-TEAM UPDATES



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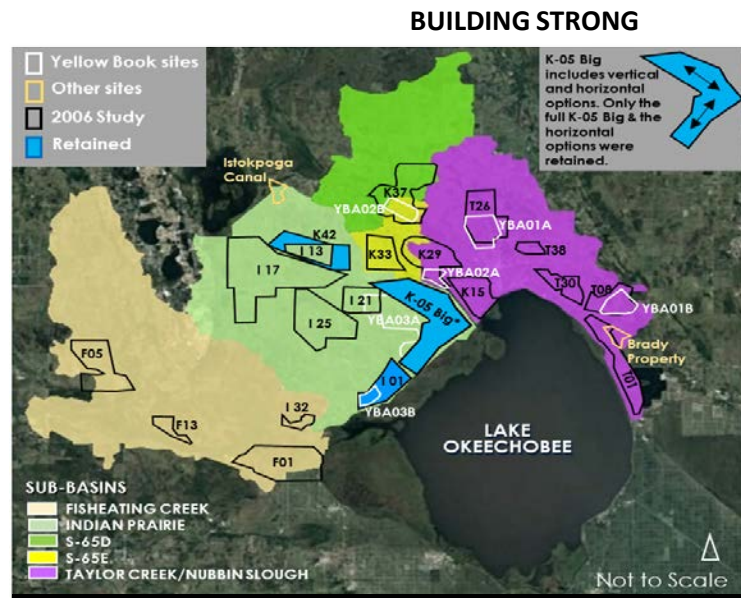


PLAN FORMULATION UPDATE

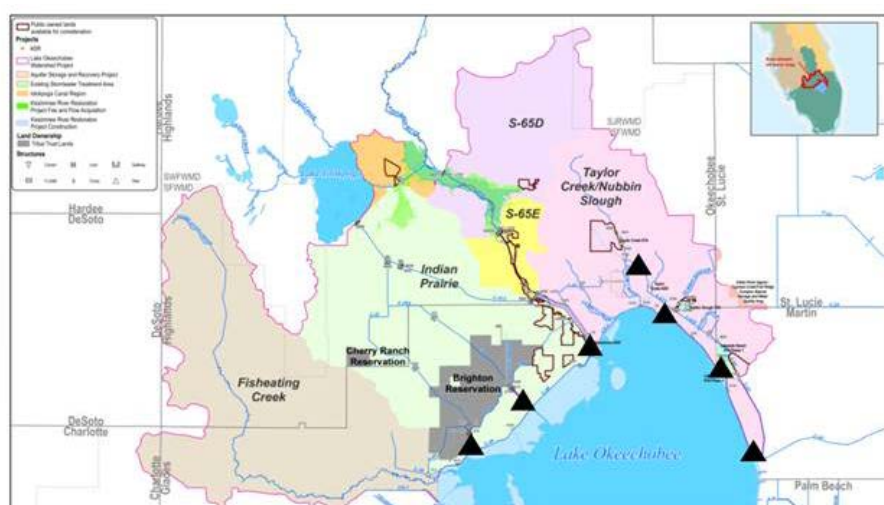
Okeechobee Stages and Discharges to Estuaries



- **Identified Range of Above Ground Storage Options**
 - Static Storage Capacity 150,000 ac-ft to 350,000 ac-ft
- **Identified Range of Aquifer Storage and Recovery (ASR) Wells**
 - 60 to 80 ASR Wells
 - Maximum Capacity: 335,000 ac-ft/yr to 450,000 ac-ft/yr
- **Identified a Range of Deep Injection Wells**
 - 30 to 150 Deep Injection Wells
 - Maximum Capacity: 500,000 ac-ft/yr to 2,500,000 ac-ft/yr



Potential Reservoir Sites



Potential Deep Injection Well Sites



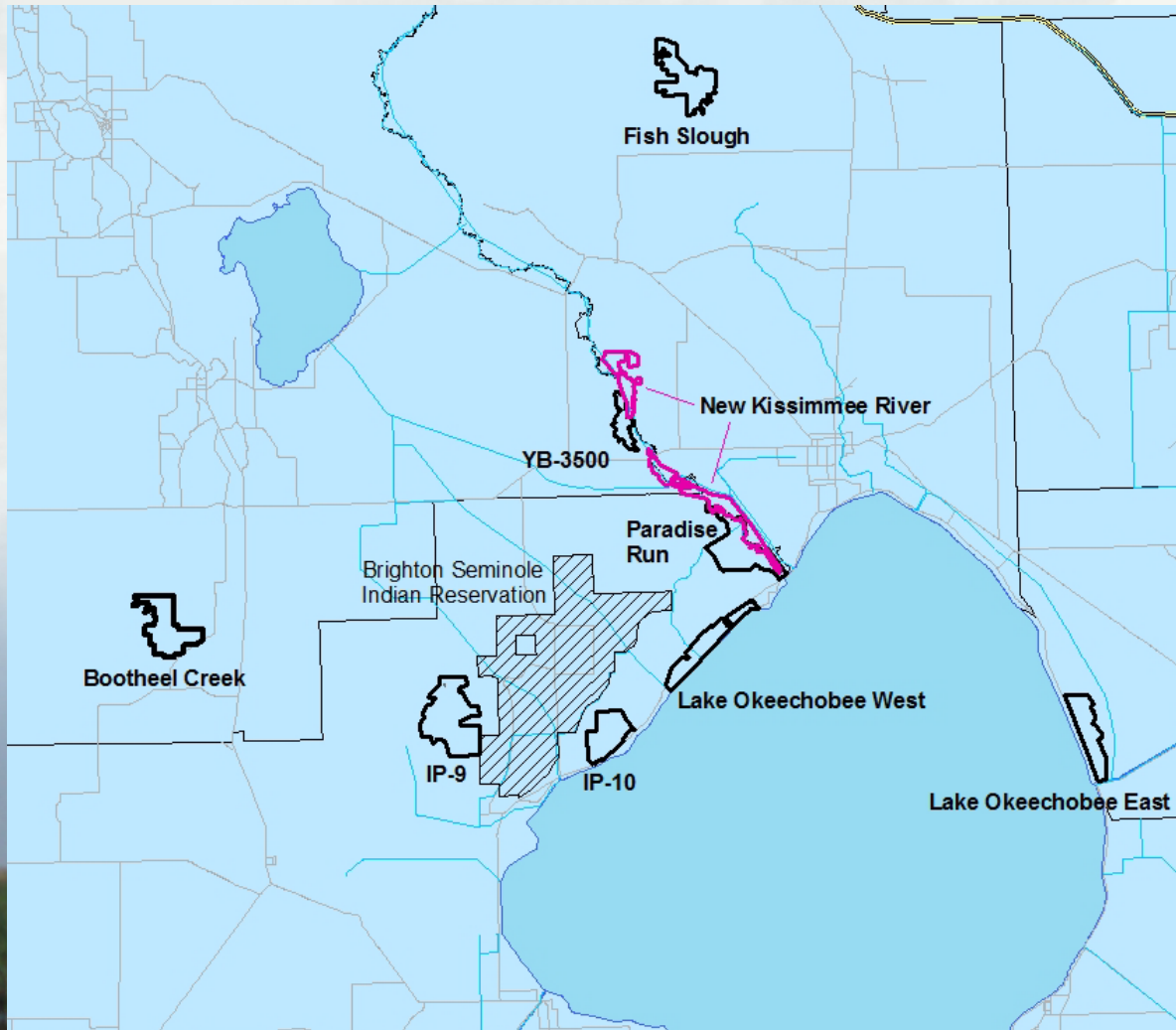
Potential Aquifer Storage and Recovery Well Sites



PLAN FORMULATION UPDATE WETLAND SCREENING



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9 sites considered
for Performance
Measure scoring
and ranking



PLAN FORMULATION UPDATE WETLAND SCREENING



Rank	Sites	Acreage	<u>Wading Birds</u> Score	<u>Percent Connectivity</u> Score	<u>Surface Water Connectivity</u> Score	<u>Restoration Potential</u> Score	<u>Public Access</u> Score	<u>Total Score (out of 5)</u>	BUILDING STRONG Retain or Screen
1	Lake O West	2,800	0.65	1	0.74	0.76	0.77	3.92	Retain
2	IP-10	2,595	1	0.26	0.3	0.71	0.77	3.04	Retain
3	Paradise Run	3,847	0.47	0	1	0.49	0.89	2.85	Screen
4	New Kiss River	4,315	0.47	0.16	0.75	0.33	1	2.71	Retain
5	Bootheel Creek	3,432	0	0.79	0.52	0.39	0.57	2.27	Retain
6	IP-9	5,370	0.47	0.39	0.1	0.53	0.6	2.09	Retain
7	Fish Slough	3,742	0	0.49	0.18	0.66	0.66	1.99	Screen
8	Lake O East	2,713	0.12	0	0	1	0.86	1.98	Screen
9	YB-3500	1,145	0.06	0	0.31	0.56	0.74	1.67	Screen

- Screened Paradise Run site due to conflicts with K05 reservoir footprint
- Removed lowest 3 scoring sites due to either fair or poor scores for 2 or more performance measure categories.



CONCEPTUAL ALTERNATIVES



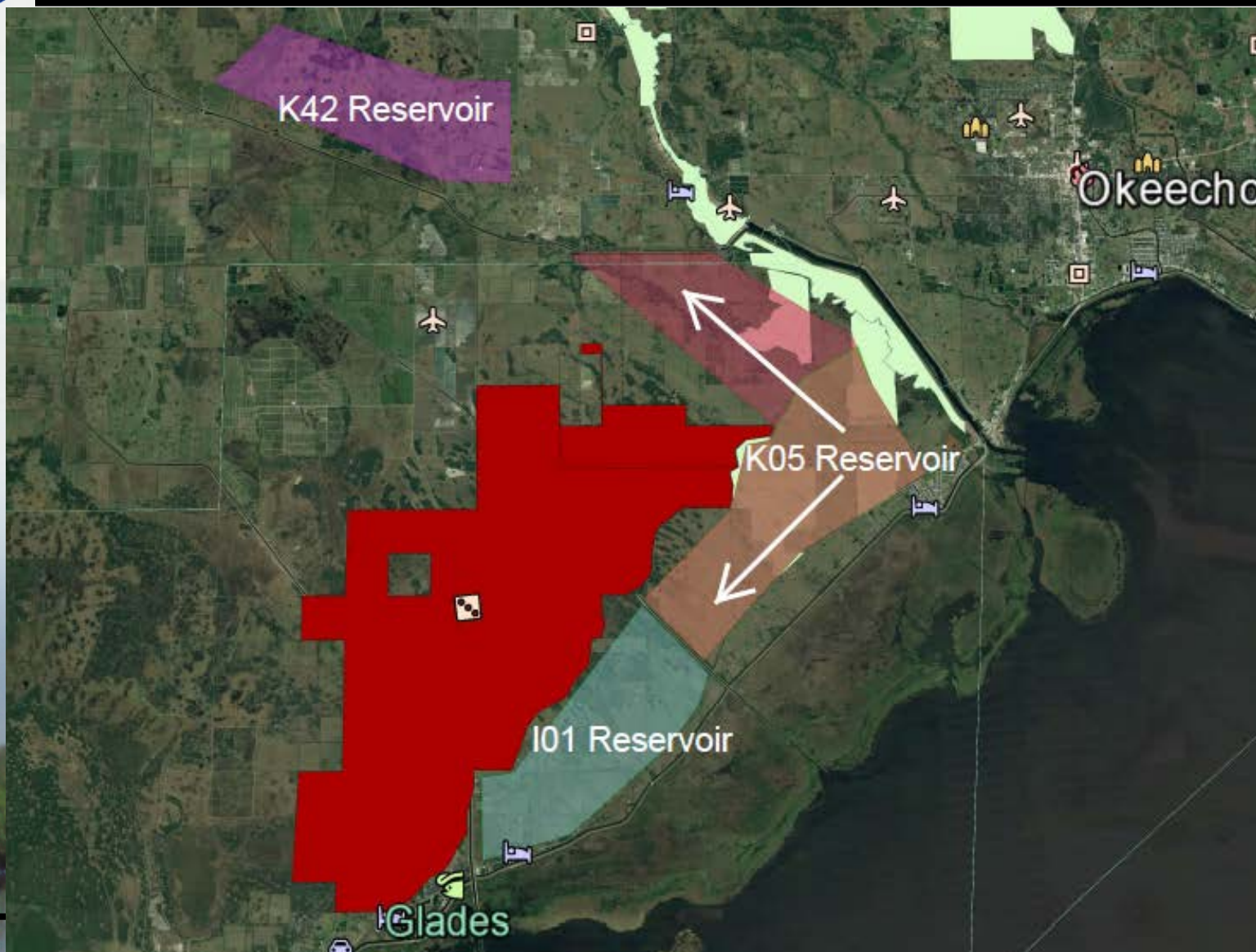
Alternative ID	Reservoir Component		ASR Component		DIW Component		Compatible Wetland Components	Acreage
	Reservoir (s)	Storage Capacity (acre-feet)	# of ASR wells	Storage Capacity (ac-ft/month)	# of DIWs	Maximum Capacity (ac-ft/year)		
Alternative 1	K05 Horizontal (14')	154,554	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West IP-10 New Kissimmee River Bootheel Creek IP-9	2,800 2,595 4,315 3,432 5,370
Alternative 2	K05 Big (10')	189,214	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West IP-10 New Kissimmee River Bootheel Creek IP-9	2,800 2,595 4,315 3,432 5,370
Alternative 3	K05 Horizontal (14') and I-01 (12')	248,822	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West New Kissimmee River Bootheel Creek IP-9	2,800 4,315 3,432 5,370
Alternative 4	K05 Big (14')	263,584	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West IP-10 New Kissimmee River Bootheel Creek IP-9	2,800 2,595 4,315 3,432 5,370
Alternative 5	K-42 (16') & K05 Horizontal (14')	315,817	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West IP-10 New Kissimmee River Bootheel Creek IP-9	2,800 2,595 4,315 3,432 5,370
Alternative 6	K05 Big (12') and I-01 (12')	320,761	60-80	28,000 - 37,000	30-150	500,000 - 2,500,000	Lake O West New Kissimmee River Bootheel Creek IP-9	2,800 4,315 3,432 5,370



CONCEPTUAL ALTERNATIVES



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CONCEPTUAL ALTERNATIVES NEXT STEPS



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- **Optimize reservoir sizing and siting based on site specific conditions and constraints (infrastructure, cultural, environmental)**
- **RSM model runs to inform storage capacities and how they translate to benefits to Lake Okeechobee stages and discharges to estuaries**
- **Refining ASR wells and deep injection wells capacity and siting per alternative**
- **Design, rough order of magnitude (ROM) costs and habitat unit calculations for wetlands to determine recommended wetland site(s)**



STAKEHOLDER INPUT



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- Include water supply for agriculture, industrial, municipal and tribal use in project planning
- Consider optimizing the Lake Okeechobee Regulation Schedule in the future with project condition to maximize project performance and benefits
- Desire to include potential increased capacity of Lake Okeechobee that Herbert Hoover Dike DSMR may provide
- Consider similar or improved water supply level of service than WSE



WATER SUPPLY GOAL NEXT STEPS



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- Identify the most favorable approach for modifications and operational changes for environmental restoration of the south Florida ecosystem while providing for other water-related needs of the region, including water supply and future CERP projects.
- Upcoming USACE vertical team engagements



90 DAY LOOK AHEAD



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