

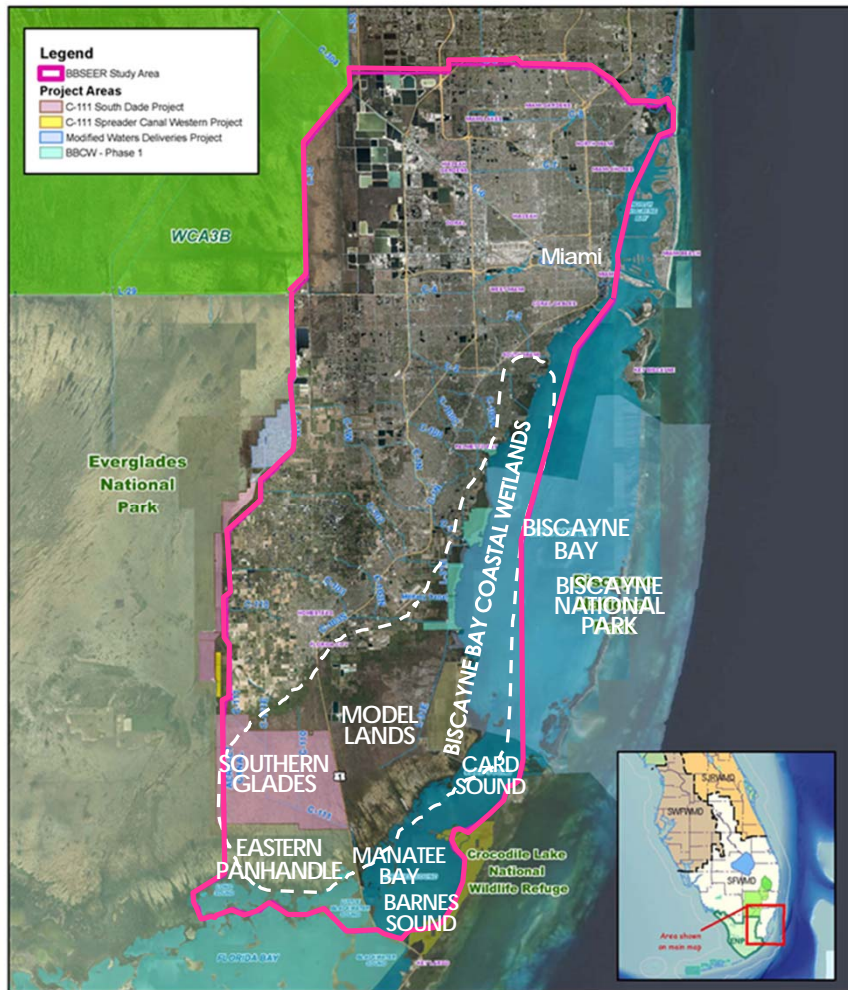
BISCAYNE BAY AND SOUTHEASTERN EVERGLADES ECOSYSTEM RESTORATION (BBSEER)

Working Group/Science Coordination Group
Project Update – May 19, 2021

April Patterson, Project Manager
Jacksonville District, U.S. Army Corps of Engineers



US Army Corps
of Engineers®



BBSEER RESTORATION OBJECTIVES

1) SALINITY REGIMES AND FRESHWATER FLOWS

Improve quantity, timing and distribution of freshwater to estuarine and nearshore subtidal areas, including mangrove and seagrass areas of:

- Biscayne Bay
- Biscayne National Park
- Card Sound
- Manatee Bay
- Barnes Sound

2) FRESHWATER WETLAND WATER DEPTH, PONDING DURATION AND FLOW TIMING

- Model Lands (and possibly areas further north)
- Southern Glades
- Eastern panhandle of Everglades National Park

3) ECOLOGICAL AND HYDROLOGICAL CONNECTIVITY

- Biscayne Bay coastal wetlands
- Model Lands
- Southern Glades

4) SEA LEVEL CHANGE RESILIENCY

- Coastal habitats in southeastern Miami-Dade County

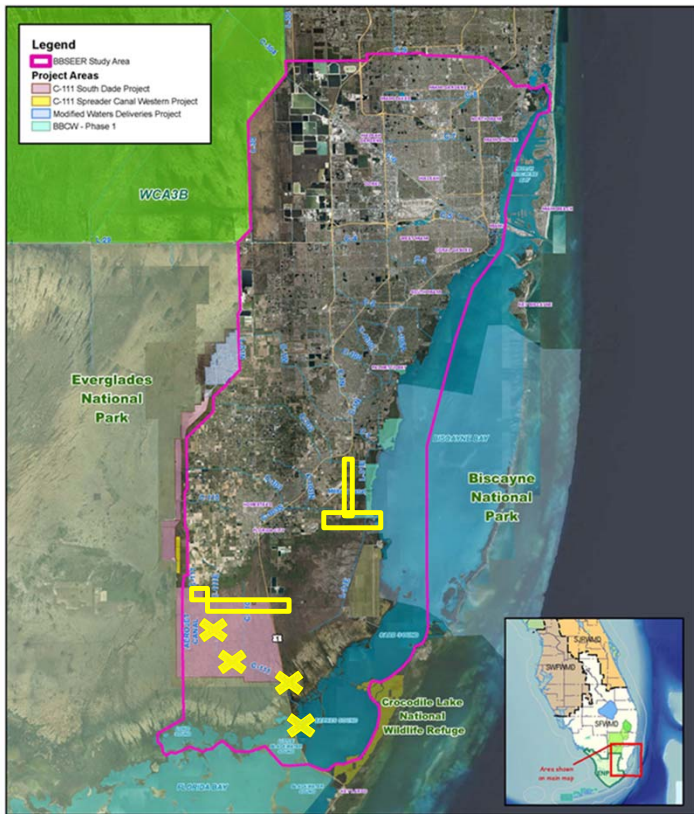
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CERP YELLOW BOOK ALTERNATIVES



YB Alternative 1



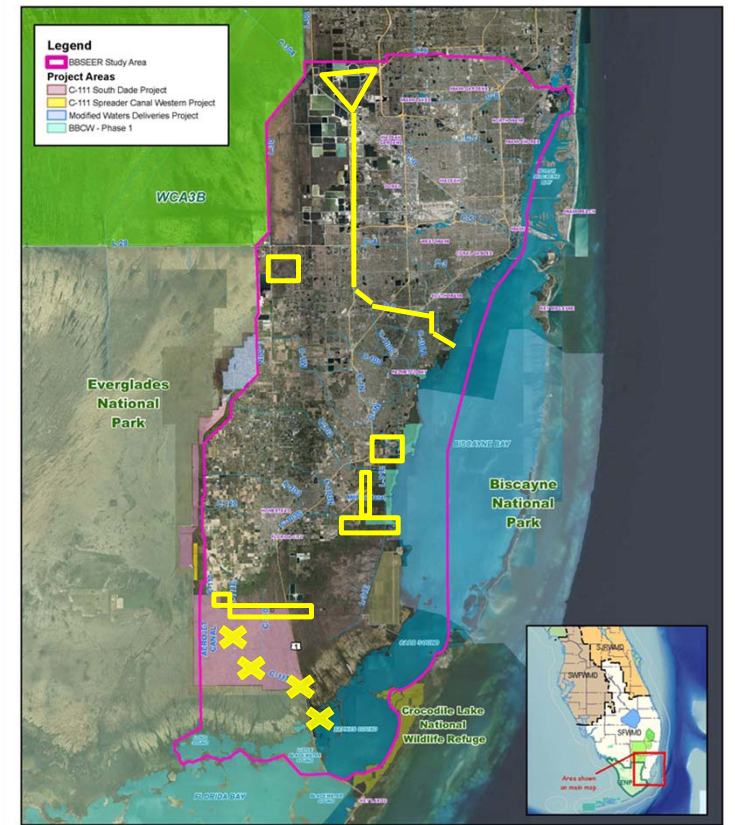
YB 1 Components:

1. BB Coastal Wetlands
2. BB Coastal Canals
3. C-111N Project

YB 2 Components:

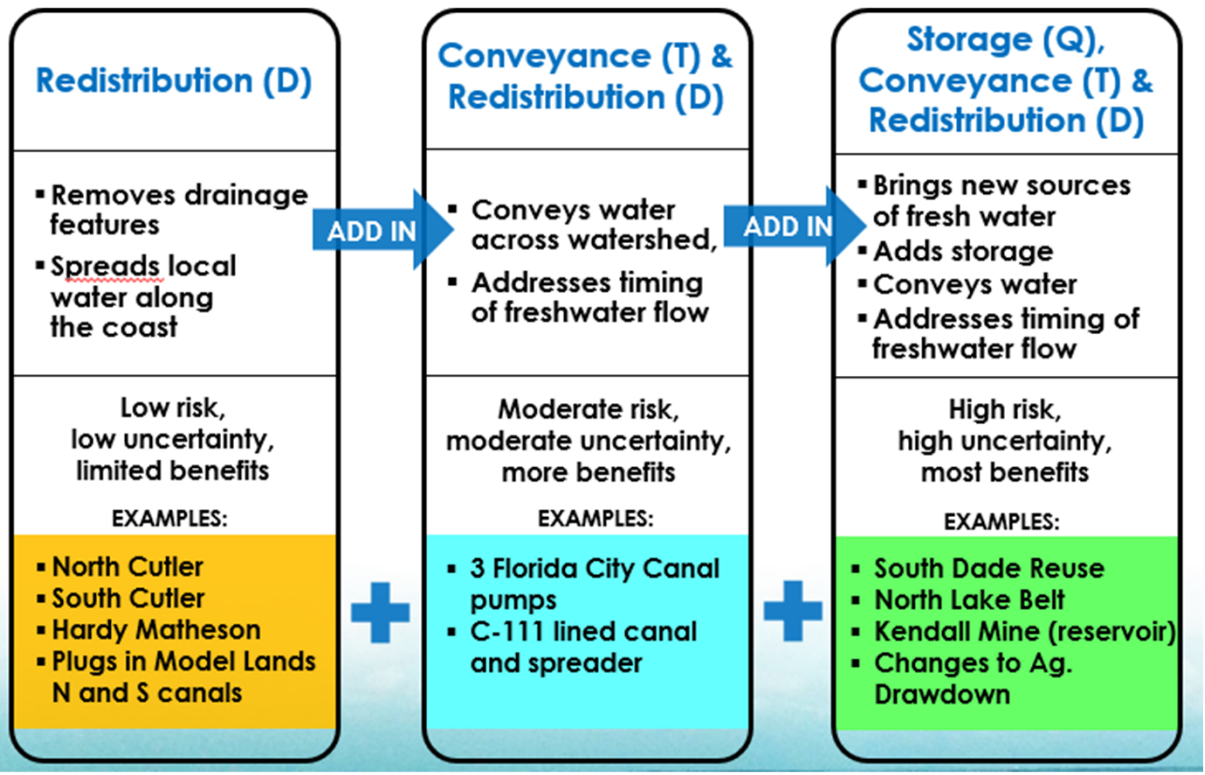
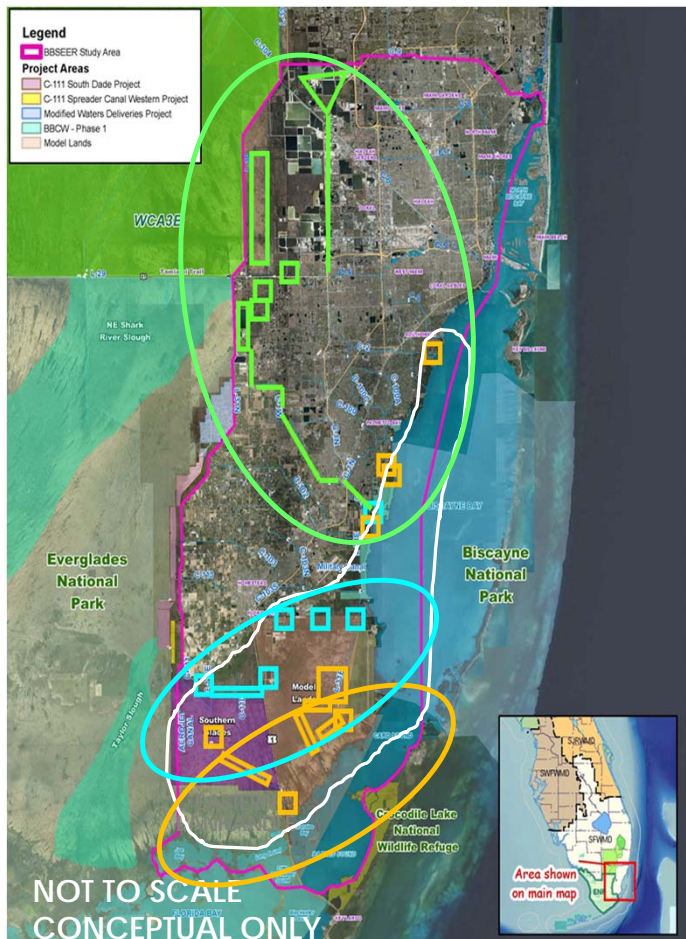
1. North Lake Belt
2. South Miami-Dade Reuse
3. West Miami-Dade Reuse
4. BB Coastal Wetlands
5. BB Coastal Canals
6. C-111N Project

YB Alternative 2



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PLANNING STRATEGY



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PLAN FORMULATION MEASURES



LOW RISK | LOW UNCERTAINTY | BASE BENEFITS

ACHIEVE:

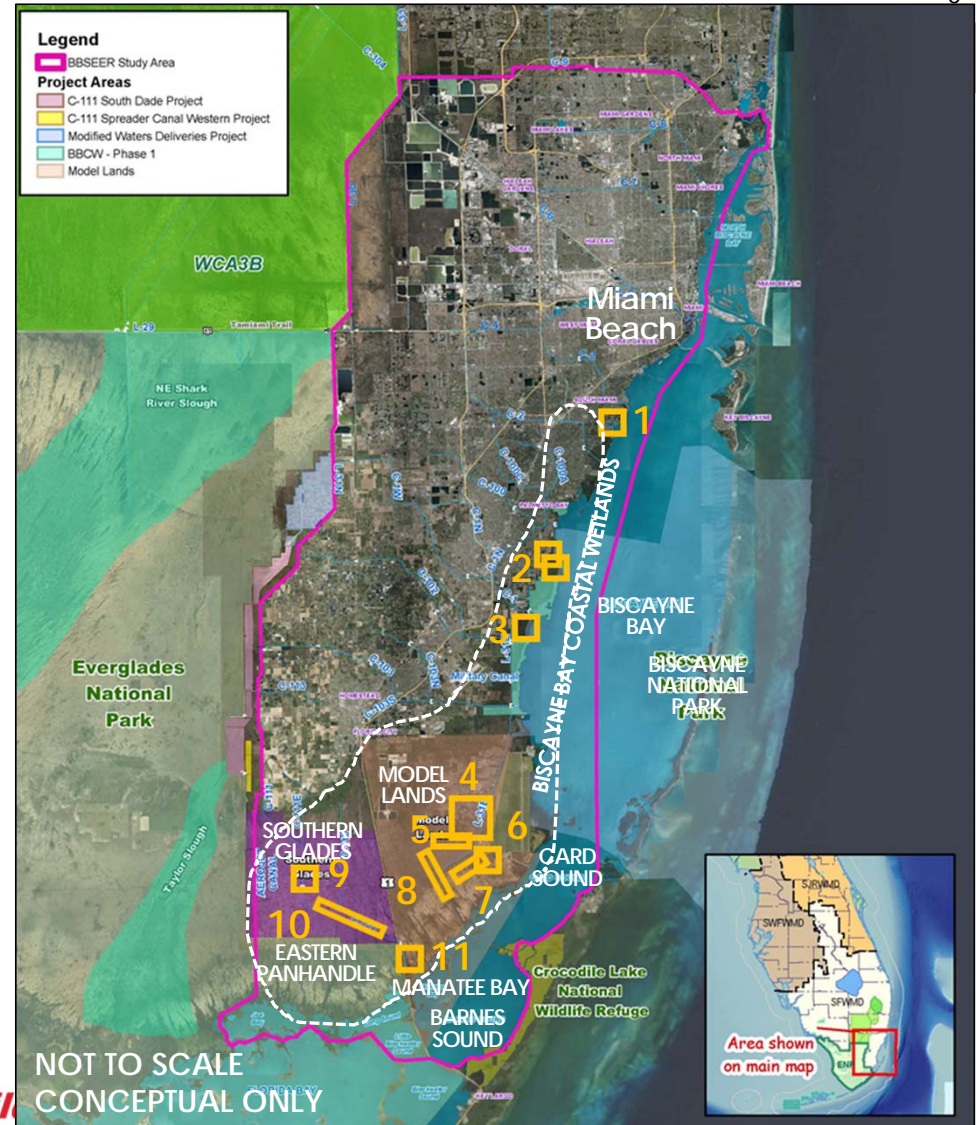
NORTH: Slow flows to hydrate wetlands; minimize periodic high, freshwater pulses from canals that impact nearshore salinity levels

SOUTH: Prevent excess drainage; minimize saltwater intrusion

FROM NORTH TO SOUTH

- 1) Pump and Spreader (Hardy Matheson)
 - 2) Pump and Spreader (North Cutler)
 - 3) Pump and Spreader (South Cutler)
-
- 4) Canal Plugs (North/South Model Lands Canals and Tallahassee Canal)
 - 5) Canal Gaps or Culverts (East-West Berm/Road)
 - 6) Modifications (S-20 Spillway) + Plug (L-31E near S-20)
 - 7) Modifications (FPL culverts)
 - 8) Backfill (Card Sound Road borrow canal)
 - 9) Pump station (works with plug in S-197)
 - 10) Modify culverts in berm on north side of C-111 Canal
 - 11) Plug (near S-197, with upstream pump station)

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PLAN FORMULATION MEASURES



MEDIUM RISK | MEDIUM UNCERTAINTY | MORE BENEFITS

ACHIEVE:

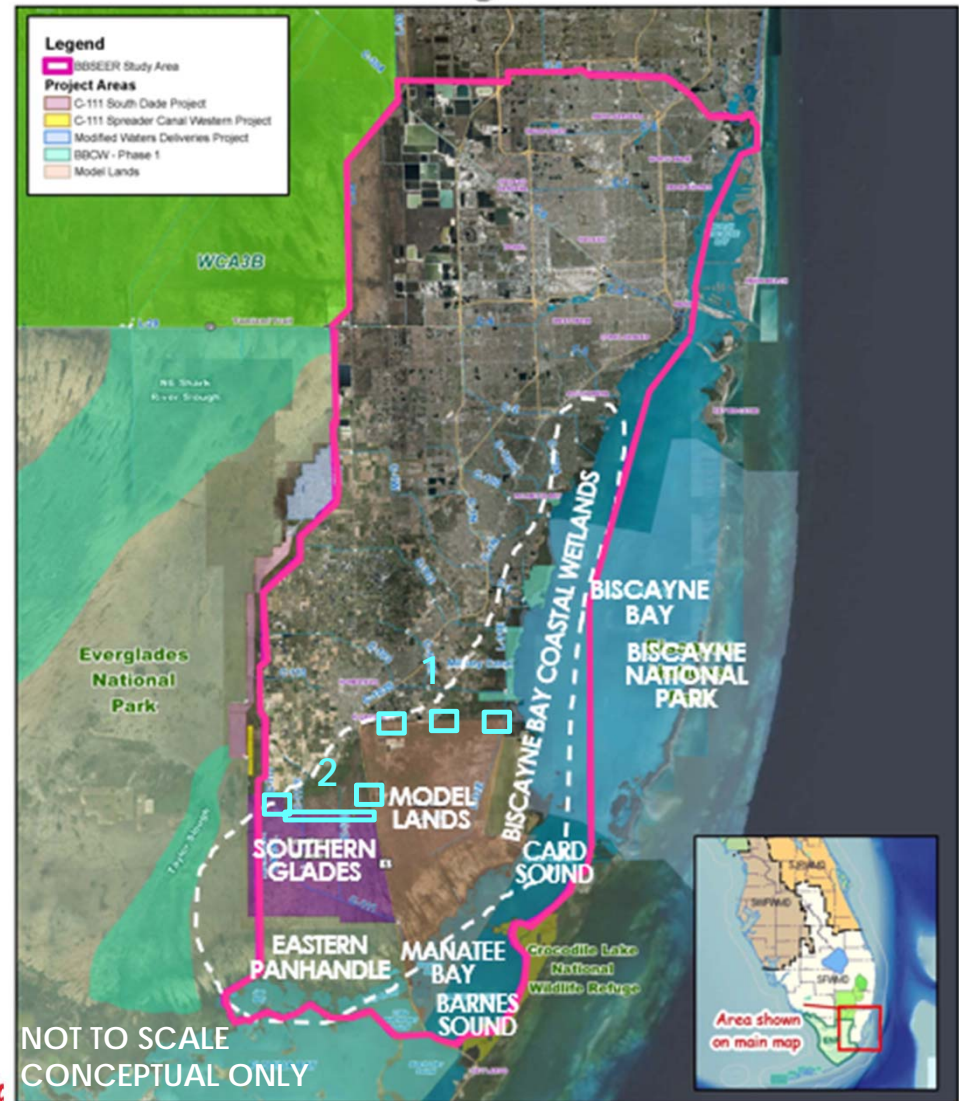
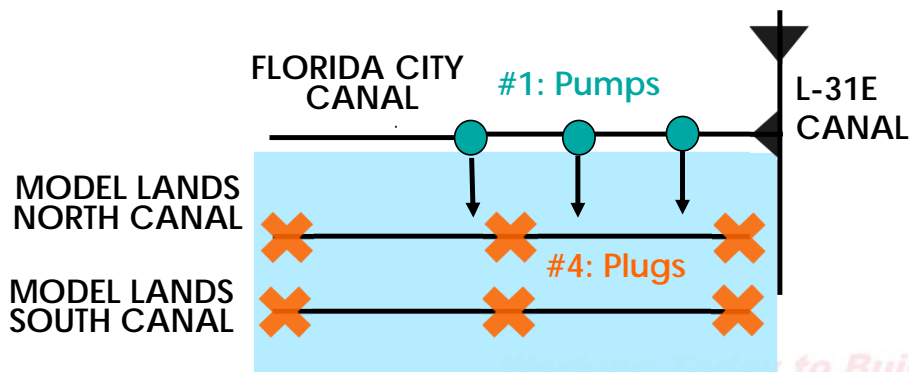
- Provides potential additional water by pumping water south
- Redistributes available water
- Improves timing of water deliveries, but minimally (more water is needed to attain needed benefits)

FROM NORTH TO SOUTH

- 1) 3 pumps (along Florida City Canal)
- 2) Pump, lined channel, distribution at rock mine

NOTE: Pump, spreader channel (C-111N) not illustrated; same location as #2

TEAL MEETS ORANGE





PLAN FORMULATION MEASURES

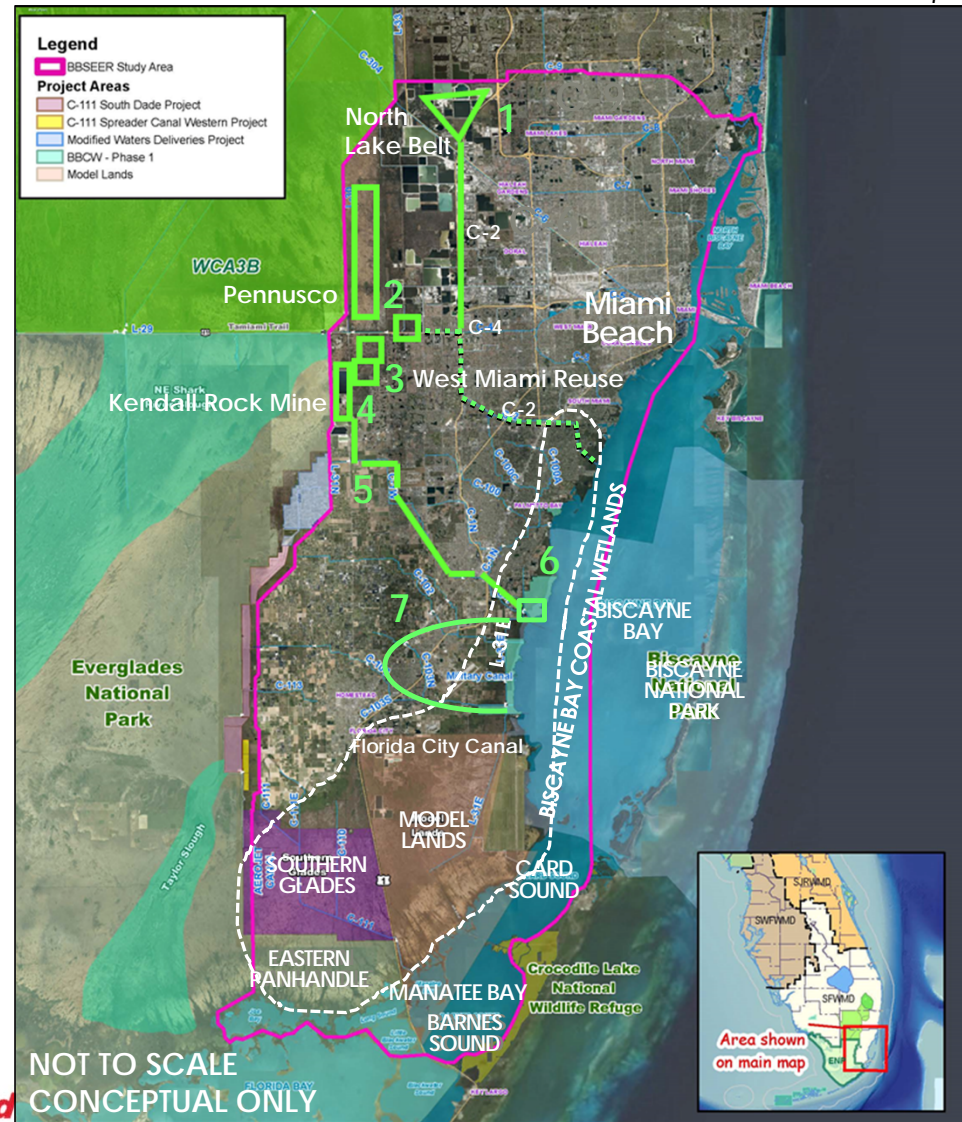
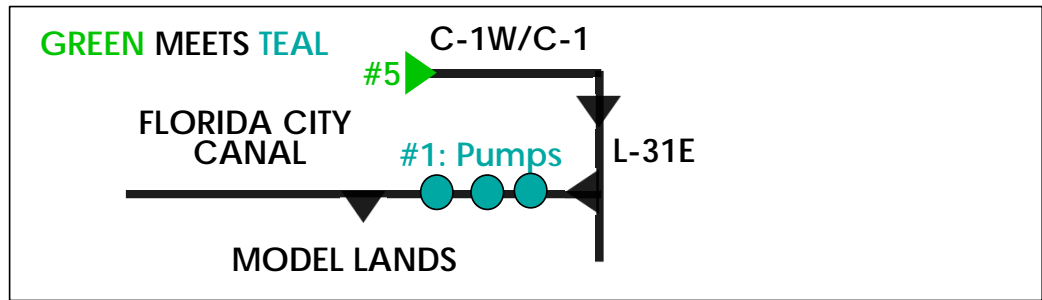
HIGHER RISK | HIGHER UNCERTAINTY | MAX BENEFITS

ACHIEVE:

- Captures excess water in northwest canal basins (e.g., C-4, C-6, C-9) and conveys it south and east where needed
- Storage features facilitate better timing of deliveries

FROM NORTH TO SOUTH

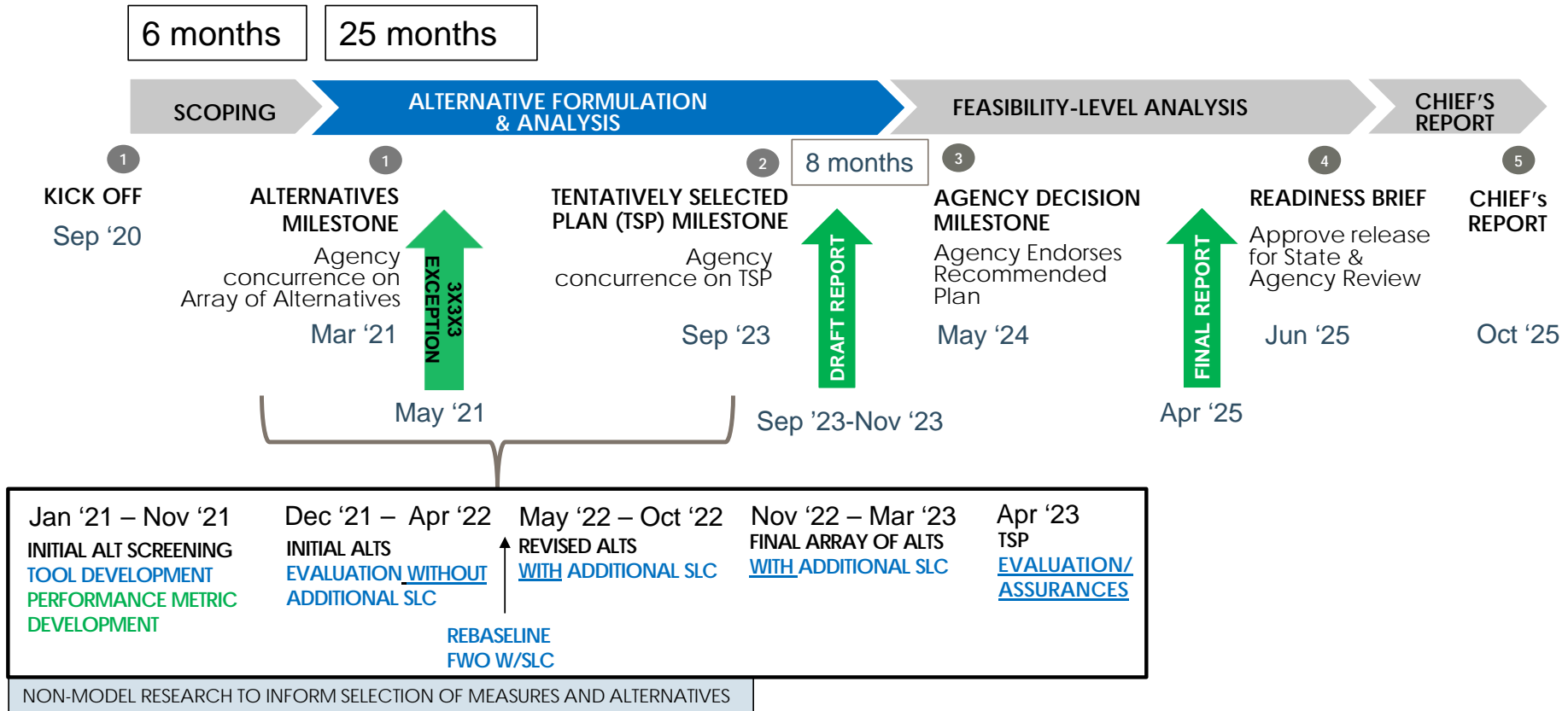
- 1) North Lake Belt Storage with releases south through existing C-2 Extension Canal YB
- 2) Distributed flow through shallow storage (Pennsuco, C-4 detention, Bird Drive wetland flowway)
- 3) West Miami-Dade wastewater reuse **NOT BUILT YET** YB
- 4) Storage (Kendall Properties rock mine)
- 5) Connect to south using C-1W to C-1 to L-31E near the coast
- 6) South Miami Dade County Wastewater Reuse YB
- 7) Alternatives to seasonal agricultural drawdown
 - A) Operation changes or B) Targeted pumps to reduce groundwater, ASR.





ALTERNATIVES FORMULATION AND ANALYSIS PHASE ALTS MILESTONE TO TSP MILESTONE

SMART PLANNING PROCESS



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FUTURE ENGAGEMENTS



26 May 2021 – Sea Level Change and Modeling Workshop

- Purpose:
 - Share the BBSEER Strategy for Evaluating Sea Level Change,
 - Welcome questions, information, and examples from experts working in the climate and sea level change space and learn about local efforts for resilience and climate preparedness.
- Audience:
 - BBSEER Interagency and Interdisciplinary Project Delivery Team (PDT), Resilience Professionals, and the public

8 July 2021 – Ecological Performance Metrics Workshop

- Purpose:
 - Increase PDT/Public understanding of how performance measures will be applied within the BBSEER Project.
 - Provide an overview of performance metrics that have specifically been developed to compare and evaluate alternative plans for BBSEER.
 - Solicit feedback from the PDT/Public and proposed BBSEER Performance Measures.
- Audience:
 - BBSEER Interagency and Interdisciplinary PDT, RECOVER, Everglades Scientists and Universities, and the public
- More Information: www.saj.usace.army.mil/BBSEER
- Email: bbseercomments@usace.army.mil

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