

# Dredged Material Containment Area 1N

## Half Dredged Material Containment, Half Wildlife Habitat

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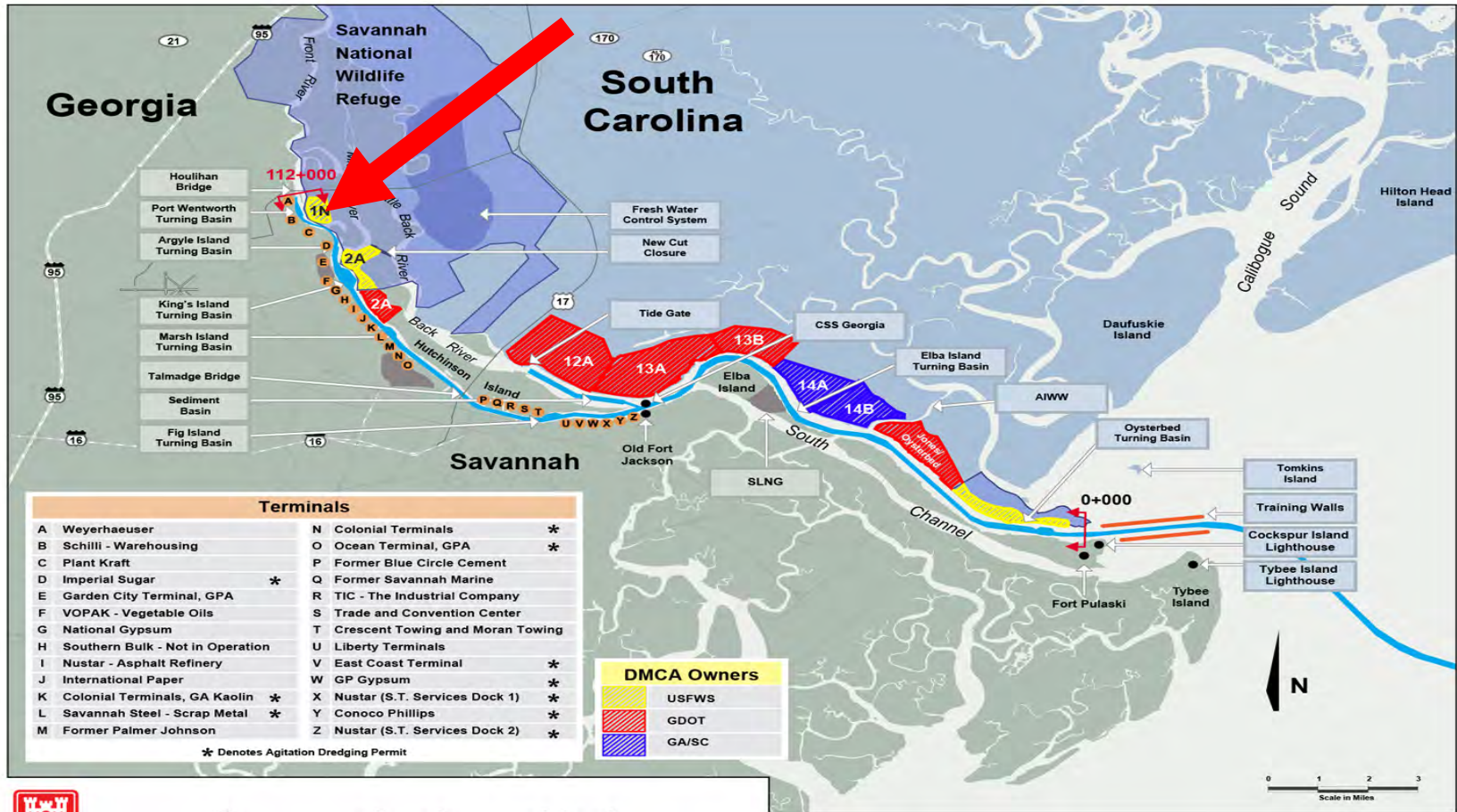


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# Savannah Harbor & 1N Location



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US Army Corps of Engineers  
Savannah District

## Savannah - Inner Harbor

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# The Need for Additional Habitat



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- In 1998 it was determined additional Dredged Material Containment Area was needed. DMCA 14A was identified to be that area.
- In 2006 the first dredged material was placed into the 800 acre DMCA 14A adversely impacting 300 acres of salt marsh.
- As a result of these impacts, several mitigation actions were required:
  1. Establishment of 3.5 acres of salt marsh near DMCA 14B.
  2. Establish as near shore bird island (Tompkins Island).
  3. Annually provide 1,769 bird Habitat Units in four categories;
    - A. Bare ground nesting (bare ground bird islands)
    - B. Shorebird feeding (shallow ponded)
    - C. Waterfowl feeding (deeper ponded)
    - D. Wetland nesting including rookery (inundated vegetation)
- By 2010 a trend towards less annual dredging (funding) and fewer Habitat Units than estimated in 1998 was recognized.
- The creation of additional Habitat Units was needed and an alternative sought.



# Past Successful Agency Coordination



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- **New Cut Closure in 1980 for \$1M**
- **Savannah Harbor Expansion (47' deepening) 1996 to present for \$706M**
- **Tomkins Island construction in 2001 for \$5M**
- **Old Fort Jackson stabilization in 2008 for \$4M**
- **Savannah Wildlife Refuge Water Control Structures Rehab in 2012 for \$12M**
- **Cockspur Lighthouse stabilization in 2013 for \$1.5M**





# Closure of New Cut



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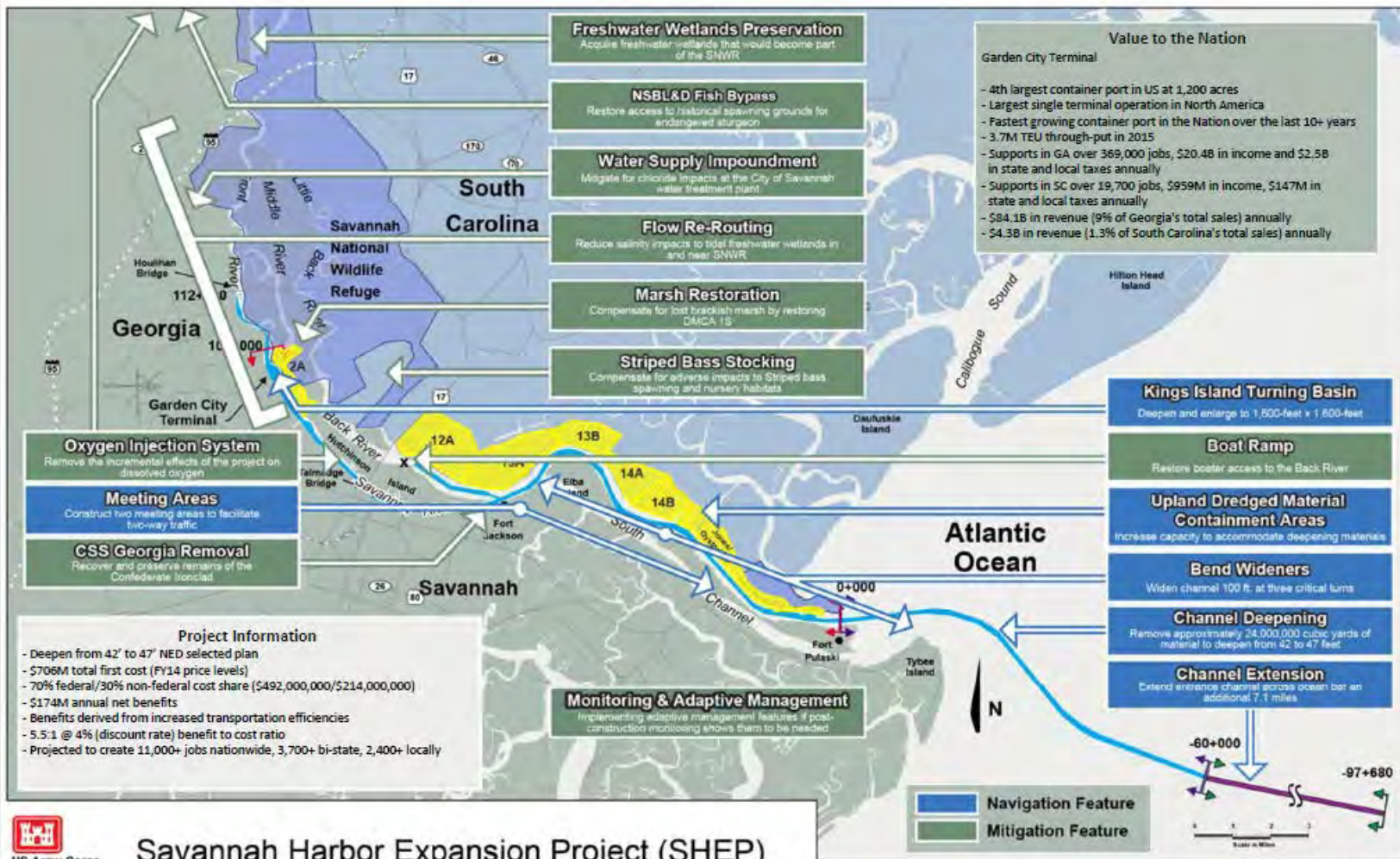


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# SHEP



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## Savannah Harbor Expansion Project (SHEP)

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# Tomkins Island



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# Old Fort Jackson



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# Savannah National Wildlife Refuge



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# Cockspur Lighthouse



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# The DMCA 1N Restoration Solution



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- 130 acre DMCA 1N was originally constructed in 1973.
- Was used until the 1990's when it was no longer possible to place sandy material there and the owner (USFWS) did not wish silt to be placed.
- The abandoned DMCA had become overgrown with invasive species.
- An agreement between the Corps and the US Fish and Wildlife Service for restoration was signed in 2013.
- Restoration included clearing the site, dike and drainage weir improvements and a cross dike to create two separate containment areas, one for dredged material, one for bird habitat.
- Cost was estimated at \$2.5M.

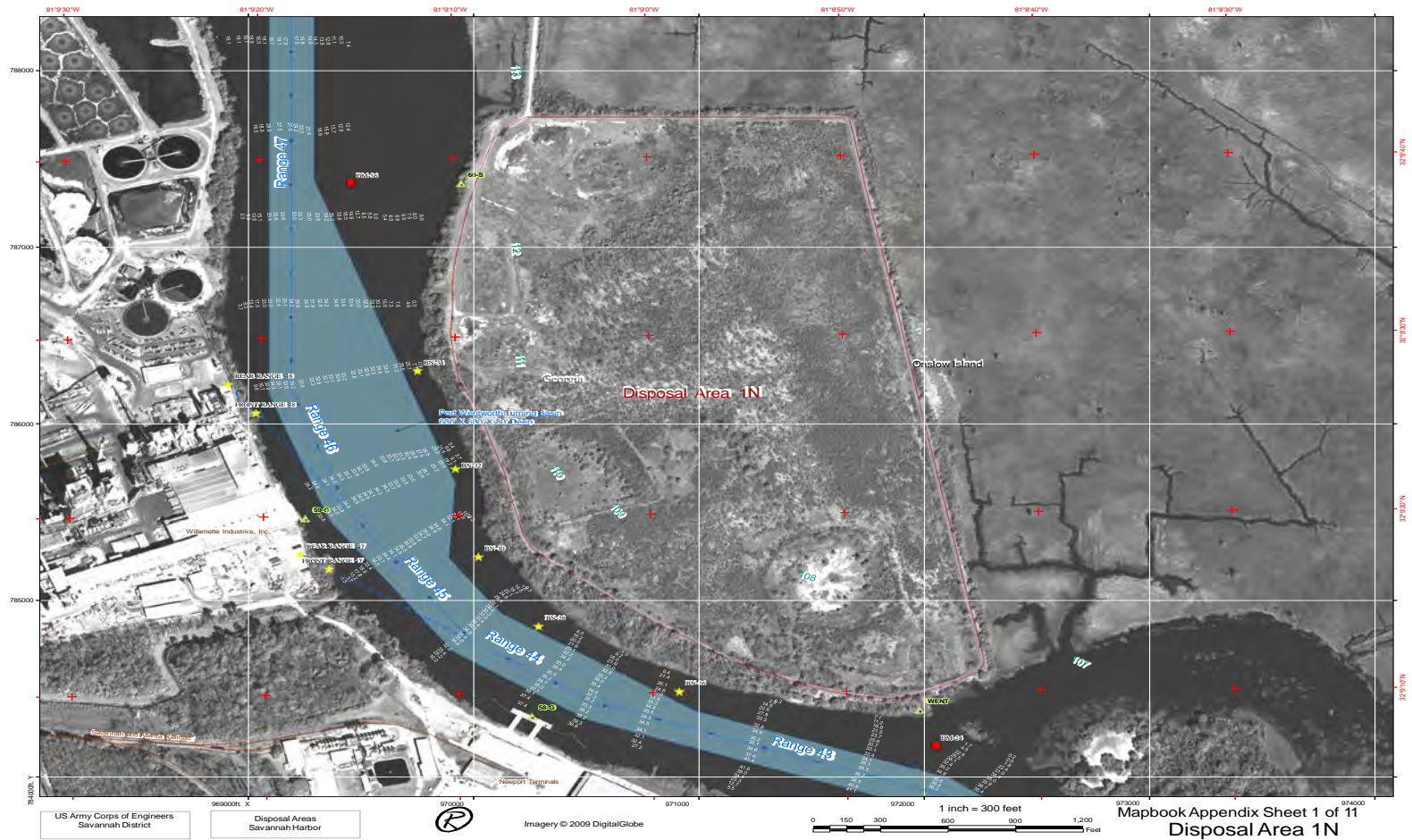




# DMCA 1N Before Restoration



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# Conditions of the Work



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- Memorandum of Understanding between USACE and USFWS
- USACE Responsibilities
  - Place only sand in the dredged material containment area.
  - Conduct regular maintenance including mowing, ditching, bird island clearing.
  - Pump water into area to maintain water levels if necessary.
  - Meeting Georgia water quality certification for water discharged into the Savannah river.
  - Conduct invasive species control.
- USFWS Service Responsibilities
  - Controls water level in the habitat area.
  - Monitor invasive species in area.
  - Monitor public use and safety of area.
- Joint Responsibilities
  - Coordinate between organizations before dredge events.
  - Coordinate water levels for maximum habitat.
  - Bird surveys would be conducted to document habitat produced.

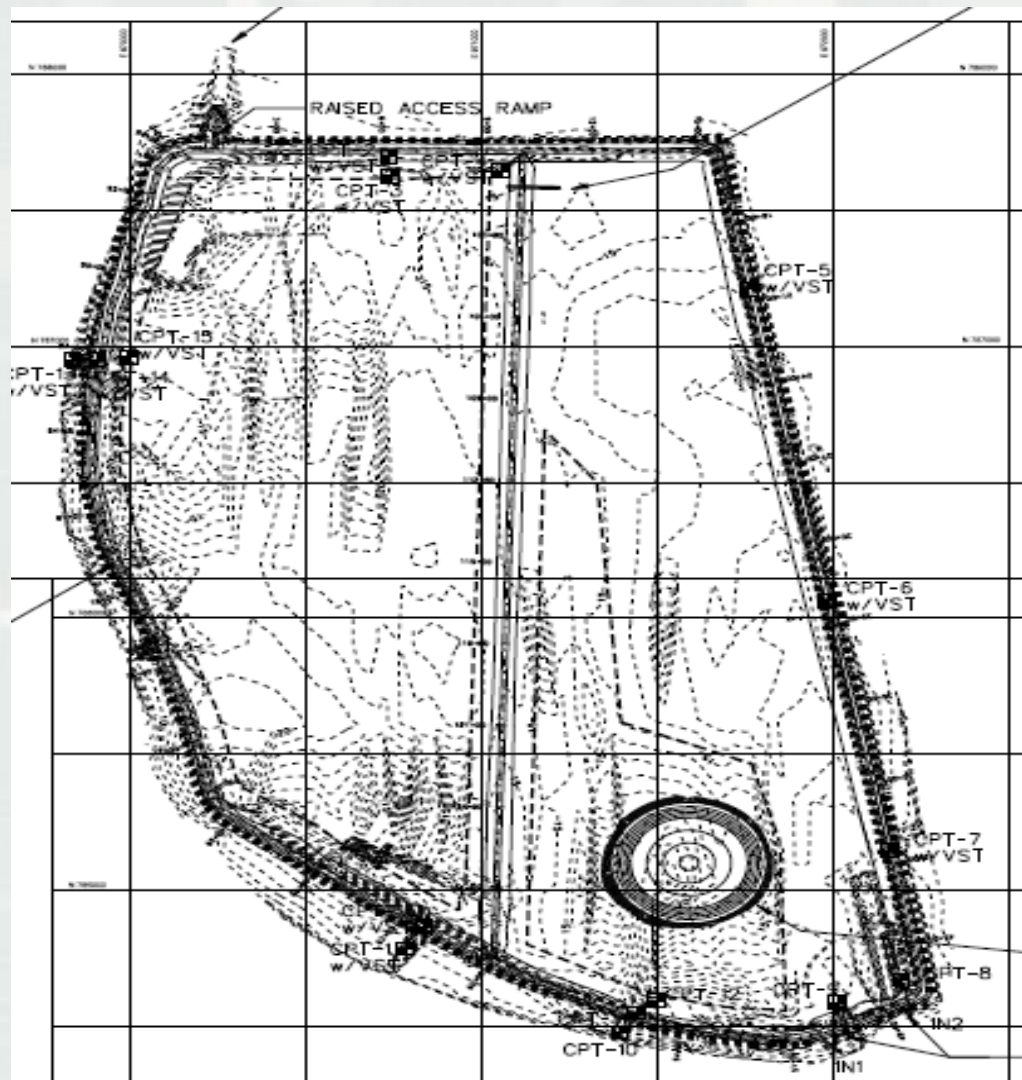




# DMCA 1N Restoration Design



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# Design



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- **The perimeter dike was raised.**
- **The access road was improved.**
- **A cross dike was constructed through the middle of the area creating two 60 acre areas.**
- **The upstream side would be used by the USACE for dredged material containment.**
- **The downstream side would be used to generate bird habitat including a 2 acre bare ground nesting area (bird island).**
- **Two weirs we added to the cross dike to control flow between the areas.**



# Top of Dike Before



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# Discharge Weir Before



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09/09/2013 11:34



# Interior Before



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# October 2013 Construction Begins



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# On-Site Conferences During



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# On-Site Air Curtain Burner During



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# May 2014 Construction Ends



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03/03/2014



# DMCA 1N Today



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- **Dike and weir construction has proven successful with little seepage and efficient operation.**
- **The USFWS has hosted Wounded Warrior hunts at the site & the area is open to the public one day per week for bird watching when no placement is occurring.**
- **Through reduced pipeline dredge pumping distances, cost savings to the Savannah Harbor O&M Project will surpass the \$2.5M construction cost by 2018.**
- **The area has been used continuously since construction by numerous Federal Migratory birds and contributes significantly to Savannah Harbor's Habitat Unit annual creation requirements.**
- **Another successful project balancing human and environmental needs in an environmentally sustainable way.**





# DMCA 1N



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# Least Tern on Nest



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# Yellowlegs



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# Whistling Duck Family



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# Key Points of Success



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- **Senior executives must buy-in.**
- **Numerous working level discussions and plan version reviews were necessary to define success.**
- **During construction points of contact (call lists) must be defined.**
- **The agreement must include long term management details.**
- **Vertical team coordination including all key stakeholders is a necessary investment to keep your ducks in a row.**



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# Questions?