

# Potential effects of inlet modification and management on coastal birds

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All photos (and most ideas) are from presentations given at previous meetings on the effects of coastal engineering on birds available at: <http://el.erdc.usace.army.mil/dots/coastalbirds.html>



# Inlets are extremely important for birds



# Features around inlets that attract birds



Dynamic shoreline

Large sand surplus

Abundant food supplies

Low predator densities

**Inlets are major nesting areas for birds**

Emergent shoals are < 1% of beach area in GA

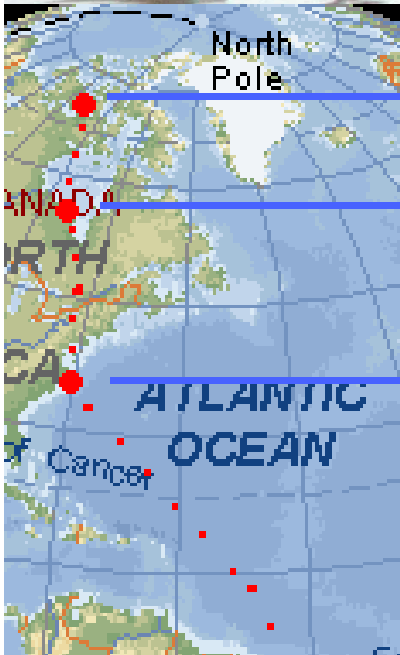
**Support ~100% beach-nesting seabirds**

~35% beach-nesting shorebirds

**SAND = BIRDS**



# Inlets are major stopover sites for migrants



# Inlets are major wintering areas for birds



# Inlet-o-philic species

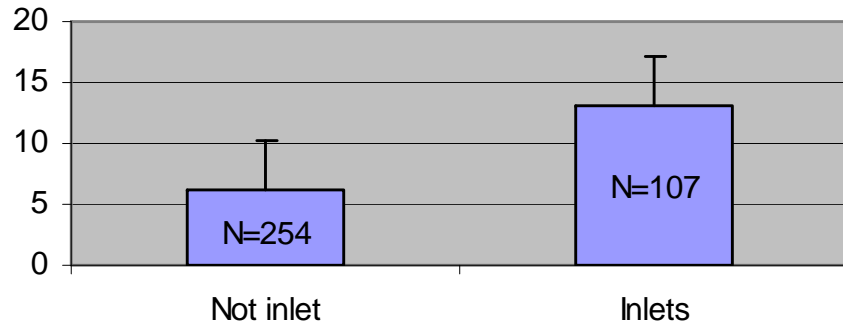
Highly imperiled



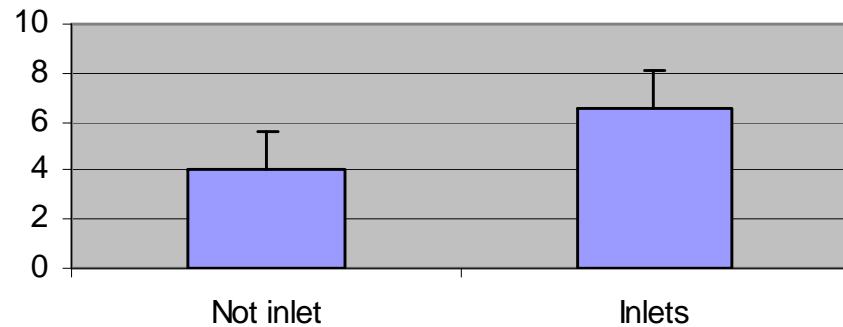
High concern ↓

## American Oystercatcher

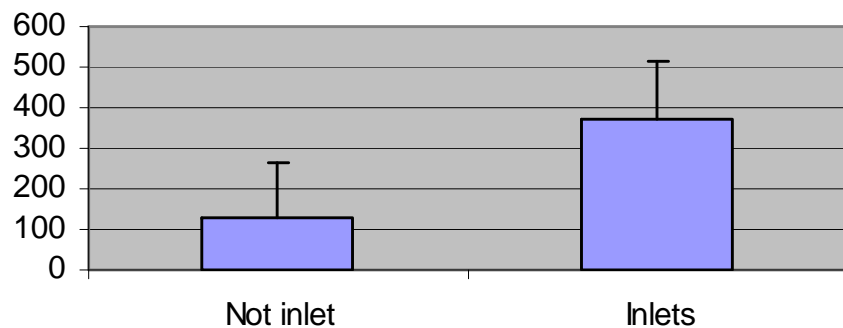
Mean of counts with standard error



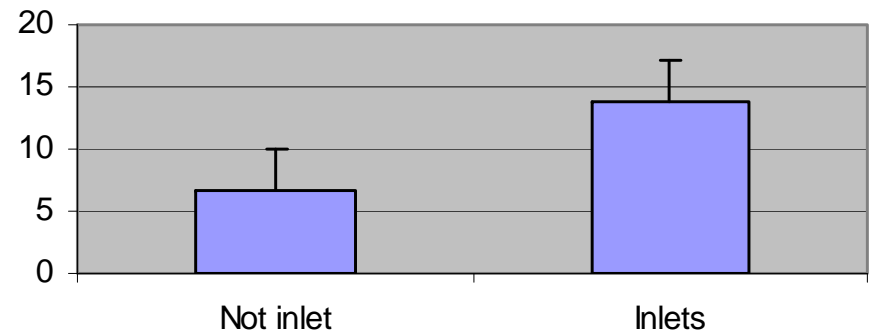
## Piping Plover



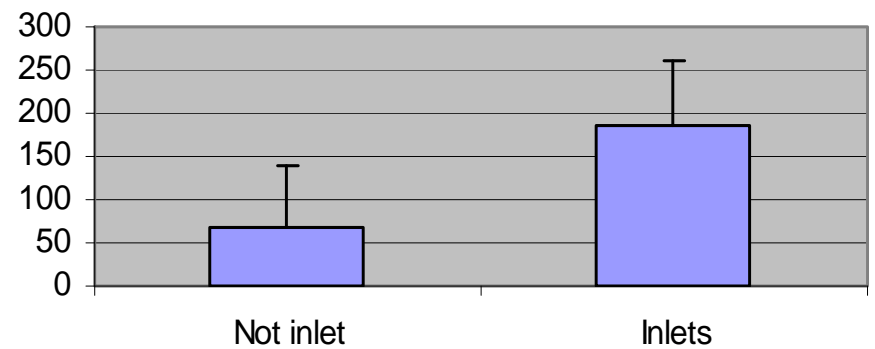
## Red Knot



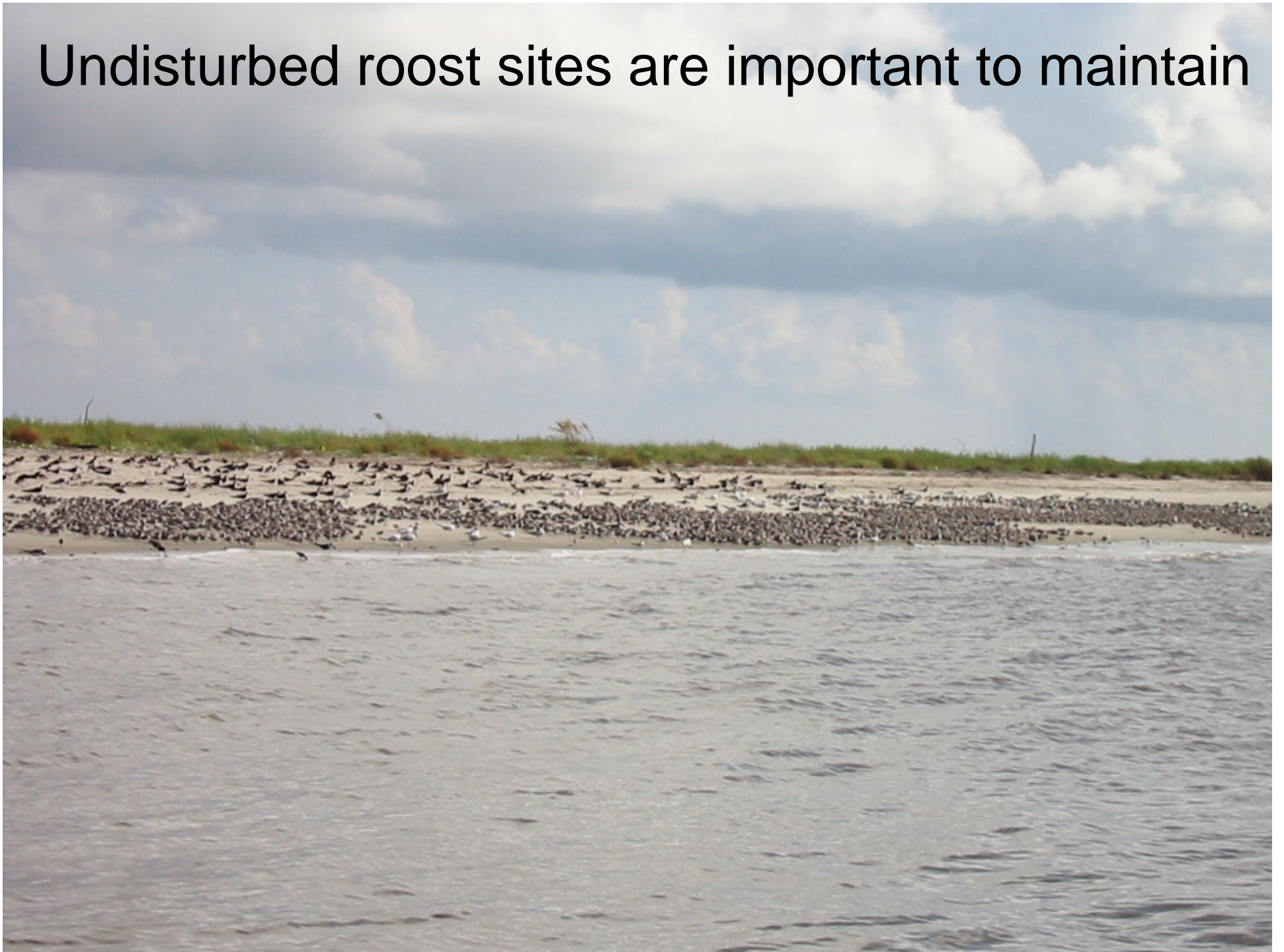
## Wilson's Plover



## Short-billed Dowitcher



Undisturbed roost sites are important to maintain





# “Natural” inlet with shoals and intertidal habitat



# Stabilized inlet with no shoals, intertidal habitat



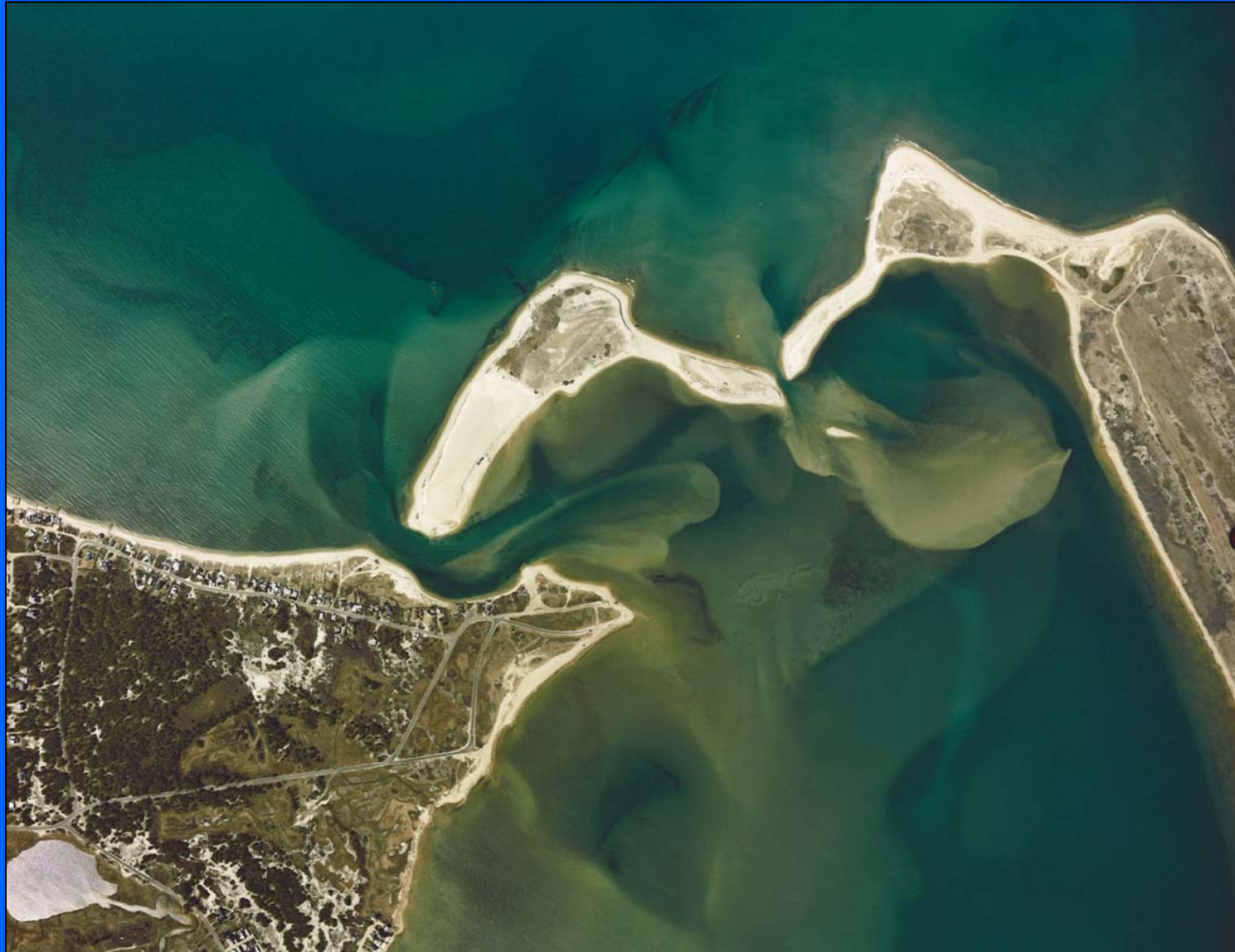
## Potential effects of inlet stabilization or dredging

Loss of intertidal foraging habitat will affect shorebirds

Loss of roost sites (shoals, beaches) will affect birds

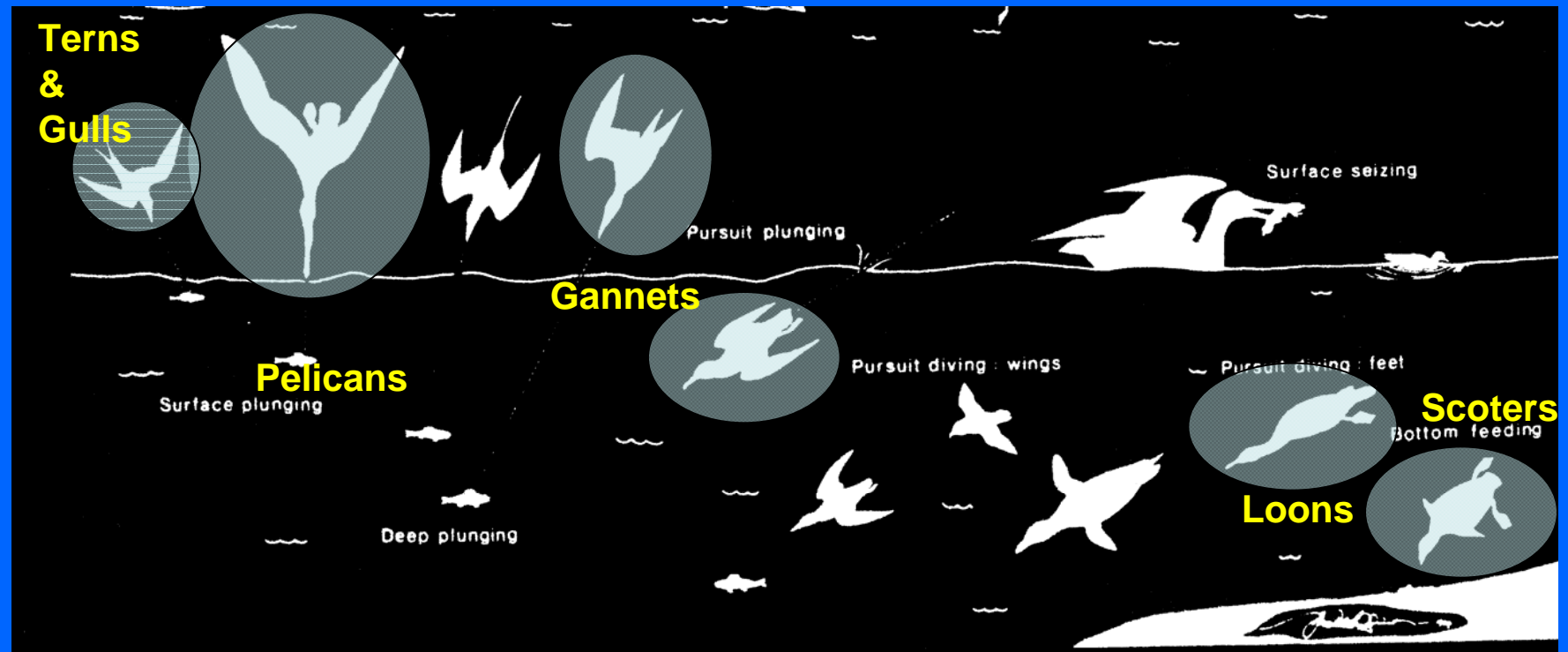


Channel dredging and bird nesting habitat creation  
Roost habitat creation also worthy of consideration



# Effects of inlet sand removal for beach nourishment?

Will depend on foraging ecology of local species



Identify seasonal bird use of inlet shoals

Avoid mining shoals that have major bird concentrations

Determine the foods of birds using shoals

Determine effects of partial shoal removal on food

**Invertebrates are more abundant on low energy flats**

Removal of ebb-tidal and flood-tidal shoals increases wave energy inside inlet, may affect good foraging areas

