

Wading Birds (Roseate Spoonbill)

Summary Findings

Roseate spoonbill nesting results in Florida Bay indicate that conditions in Florida Bay and Taylor Slough are still unable to support colonies with target numbers of spoonbills bay-wide. The colonies in the northwestern portion of the bay seem to be doing well and have been stable both in numbers and nest success for the last 10 years. However, the total numbers in the northwest part of the bay are relatively low and numbers bay-wide are still not meeting targets. Northeastern bay colonies and bay-wide numbers continue to decline. There have been improvements, however, in water management operations that have allowed for favorable climatic conditions to result in four consecutive successful nesting cycles for both the northwest and northeast parts of the bay. The chicks hatched in these four nesting cycles should start reaching sexual maturity and this may result in an upturn in the number of nests. The spoonbill performance measures are expected to further improve after proposed changes to the South Dade Conveyance System (SDCS) (i.e., Mod Waters and the C-111 Spreader Canal Phase 1) are completed.

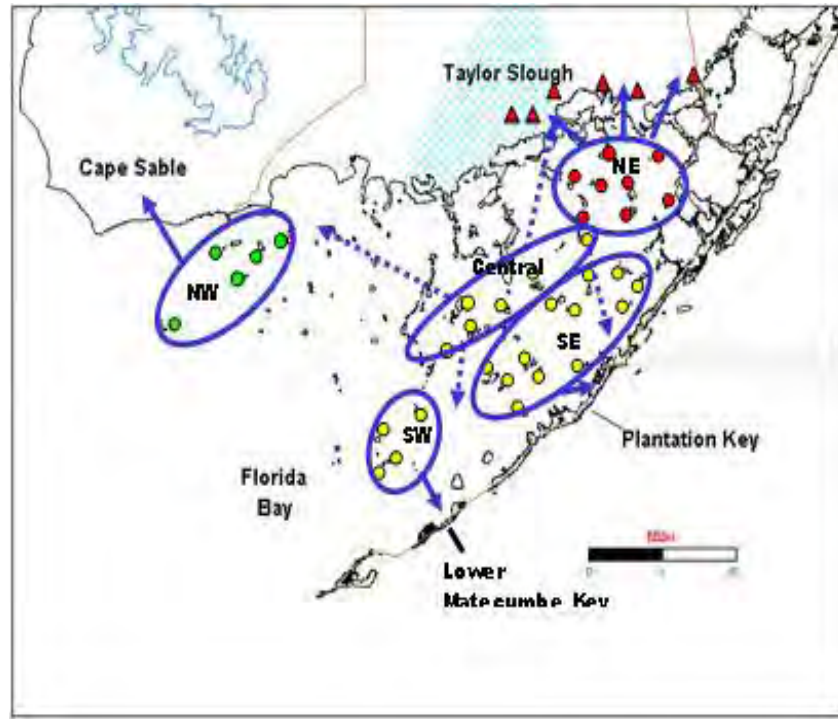
Key Findings

1. Northeastern Florida Bay is in need of immediate action in order keep spoonbill numbers from continuing to decline. Although the northeast colonies have performed well over the last four years, the average productivity in this region is still well below production rates observed in the northwestern colonies. The number of nests in the northeastern bay remained very low in 2007 with only 90 nests out of a target of 688 nests in this region.
2. Taylor Slough and the C-111 basin remain less productive than under historic conditions based on prey fish data.
3. There were 433 nests bay-wide in 2009. This was well below the target of 1258 nests. Bay-wide and northeastern nest numbers continue to decline but might begin to increase in the next

few years as chicks hatched during the last four successful cycles reach the age of reproduction.

4. Number of nests and nest production continue to exceed targets in northwestern Florida Bay. Data suggest this is probably because this area is less affected by water management and provides a more stable habitat condition.
5. The northeastern Florida Bay colonies forage in estuaries that rely on water from Taylor Slough (see map). Their continued failure to meet restoration targets indicates that water timing, quantity, and distribution in Taylor Slough and northeastern Florida Bay are not meeting criteria necessary for proper estuary function in these locations.

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Location of all known spoonbill nesting colonies within Florida Bay (blue ovals) and prey fish sampling sites in the Taylor Slough and C-111 Basin foraging grounds (red triangles). Colonies are grouped into five regions of the bay based on important foraging grounds for the colonies. Arrows from each region indicate the primary foraging ground. Colors of colonies and prey sampling sites are based on stoplight scores for various performance measures.

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Zone/ Performance Measure	LAST STATUS	CUR- RENT STATUS	2-YEAR PROS- PECTS	CURRENT STATUS	2-YEAR PROSPECTS
Total Number of Nests					
Number of nests in FL Bay (5-year mean)				The target number of nests for the whole bay is 1,258. The 5-year mean number of nests was 433 or 34% of target. This indicates that the FL Bay spoonbill population is not recovering.	The 5-year trend of the mean has declined from 41% to 34% and is approaching the 33% threshold which would change the stoplight from yellow to red. Based on the trend, we expect this to happen within 2 years, however, four consecutive years of nesting success may prevent this from occurring.
Nesting Location					
Number of nests in NE FL Bay (5-year mean)				The target number of nests is 688. The 5-year mean number of nests was 90 nests or 13% of target, indicating that the NE FL Bay spoonbill population is in jeopardy.	Although 4 consecutive successful years may result in recruitment into the nesting population, thereby reversing the downward trend, it is unlikely to increase numbers sufficiently within the next 2 years to change this metric.
Number of nests in NW FL Bay (5-year mean)				The target for the number of nests in NW FL Bay is 210. The average number of nests for the last five years was 222, exceeding the target.	The 5-year trend for the number of nests has been above 210 for most of the last 10 years indicating that the NW colonies are doing well. There is no expected reason for this to change in the next 2 years.
Number of nests in SW FL Bay (5-year mean)				No data is being collected in the SW estuaries.	No data is being collected in the SW estuaries.
Nesting Location Overall				The overall score for nesting location is the lowest of the three component scores. In this case the number of nests in NE FL Bay is red therefore the overall score is red.	Until the C-111 canal is managed so as to not disrupt spoonbill foraging grounds, the declining trend will continue. Although there are plans to rectify this situation, it is highly unlikely to occur within 2 years.

The Last Status column reflects data prior to 2007.

The Current Status column reflects data collected in the 2006-2007 nesting cycle.

The 2-Year Prospect forecast assumes that no large scale hydrological restoration projects are implemented during this time period which would result in significant ecological response of this indicator. The occurrence of significant climatological events during this period may affect the forecast.

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Zone/ Performance Measure	LAST STATUS	CUR- RENT STATUS	2-YEAR PROS- PECTS	CURRENT STATUS	2-YEAR PROSPECTS
Nesting Production and Success					
Chick Production in NE FL Bay				The 5-year mean of NE production was 1.22 chicks/nest (c/n). This is above the success threshold of 1c/n but below the overall target of 1.38 c/n based on pre-SDCS conditions.	Greater sensitivity to the spoonbill nesting cycle by water managers has resulted in greater nesting success during years with favorable climatic conditions. This sensitivity is expected to continue increasing the 2 year prospectus from red to yellow.
Chick Production in NW FL Bay				Nest production of >1 c/n in NW FL Bay is being maintained. In 2007, the 5-year mean of NW colonies production was 1.50 chicks per nest indicating that the NW continues to perform well and is currently greater than Pre-SDCS NE colonies.	The trend has been above average production in 4 of the last 5 years indicating that the NW colonies continue to be highly productive.
Percent successful years in NE FL Bay				In NE FL Bay, 6 of the last 10 years have been successful at >1 c/n. Current conditions are well below restoration targets.	Greater sensitivity to the spoonbill nesting cycle by water managers has increased the possibility of nesting success during favorable climatic conditions.
Percent successful years in NW FL Bay				In NW FL Bay, spoonbills have been successful 8 of the last 10 years.	The trend is increasing and there is no expected reason for this to change in the next 2 years.
Overall Nest Pro- duction and Suc- cess				The overall score for nesting success is the lowest score of the four component metrics. In this case, both the nesting success and nesting production in NE FL Bay are yellow. Therefore the overall score is red.	The greater sensitivity to the spoonbill nesting cycle by water managers has increased the possibility of nesting success during favorable climatic conditions, however, until the C-111 Spreader Canal Project is completed, there will still be limitations on maintaining favorable conditions resulting in a prospectus of yellow.
Prey Fish Community NE FL Bay					
Prey Community Structure NE FL Bay				Prey fishes classified as freshwater species made up less than 3% of the total catch at the sampled spoonbill foraging sites in NE FL Bay. The target is 40% suggesting that the prey base for nesting spoonbills remains very low.	Freshwater flows into Taylor Slough are not expected to increase for at least the next 2 years. As a result spoonbills will most likely continue to be unsuccessful in NE FL Bay.

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