

Identified priority projects/questions to be conducted in future years by workshop participants.

Identified key projects/questions related to local weather and sea turtles:

- \*\*\*What are baselines for sex ratio and hatchling mortality? What are spatiotemporal predictions for thermal mortality and changes in sex ratio with projected global warming?
- What is the breeding/operational sex ratio for sea turtle populations (how many male turtles do we need to sustain sea turtle populations)?
- What life history stages are sea turtle populations most at risk from climate change?
- What are the effects of climate change at foraging grounds and what are the effects on growth and reproduction and ability for turtles to shift diet, if needed?
- What are the potential impacts of ocean acidification on reef-dependent populations?
- What are the relationships between changing ocean conditions and the survival of young of the year turtles that derive from Florida beaches?
- What are mechanistic underpinnings between changes in climate, ocean, and Florida sea turtle nesting remigration probabilities?
- What is the hierarchy of cues that determine sea turtle movements at different life stages and in different behavioral states?
- Are hatchling dispersion models affected by climate change?
- Will turtles shift nesting? How will existing refuges (and those established now) be relevant later?

Identified key projects/questions related to sea level rise and sea turtles:

- \*\*\*How sea turtles respond to the presence of sea walls on the beach. How, to what degree, and where do seawalls and other armoring structures “take” sea turtles? What remediation (wall placement, sand maintenance, etc.) could minimize “take”?
- How can we identify sea turtle nesting beaches that are most prone to having seawalls and support proper beach nourishment at those areas?
- What are preferred geomorphological traits, for turtles, for nesting grounds? Can we predict where those geomorphological traits will exist when sea level rises?
- How far landward of the dune toe do sea turtles nest? How do recently eroded beaches discourage nesting?
- How will sea turtles respond to changes in nesting beaches - temporal shifts? Spatial shifts? Both?
- What are the cumulative impacts of armoring on a nesting beach, regionally and statewide, particularly regarding beach/shoreline dynamics?
- What is the result/impact of losing a high-density nesting beach to erosion?
- How will human response to sea level rise affect nesting beaches and how will sea turtle protections limit/change human response?
- How will sediment transportation be modified as climate change progresses and how will this affect nesting beaches?
- How can we reduce impacts from tilling? Compaction-wise what is better for turtles?
- Is nesting and hatching success different at pocket beaches? Where are the pocket beaches and how important are they for population stability in face of sea level rise.

- What are beaches carrying capacities for turtles? How many sea turtles can beaches support in light of sea level rise predictions (need to consider density dependent and density independent effects)?

Identified key questions related to management/policy:

- To what extent will Florida government allow natural beach erosion to take place?
- What actions can be taken to protect nesting beaches from climate change?
- What actions can be taken to lessen climate change impacts at varying stages of the life history of sea turtles?
- What are the biological, physical and economic thresholds above or below which would trigger management action?
- What types of information does the State of Florida need to make better-informed sea turtle conservation decisions under climate change? What data/modelling are needed to provide this information?

\*\*\*Key questions identified by all groups.