NPS Research Activities

- Full time research coordinator
- Research has been focusing on management questions related to ORV
  - Lacking in basic ecological concepts (e.g., habitat availability, etc.)
- Issue about 25 research permits per year, about 20% of those are related to focal species
- In progress – 3 different adaptive management focused studies

Historical Data Analysis and Management Recommendations for CAHA

Virginia Tech, Dr. James Fraser, Principal Investigator

Objectives:

1. Enter, QA/QC, organize, and summarize biological data collection for ongoing biological monitoring of shorebird, seabird, and sea turtle nesting.
2. Perform analyses of existing data sets for both publication and to assess current methods.
3. Provide recommendations and SOPs for improved monitoring methods to capitalize on future efforts.
4. Where possible, provide a routine for simple data analysis.

Assessing the effects of NPS predator and vehicle management practices on shorebirds at CAHA

USGS/NCSU, Dr. Theodore Simons, Principal Investigator

Objectives:

1. Examine historic predator and vehicle management practices and American Oystercatcher distribution, abundance, and productivity data to assess whether these practices are meeting the Seashore's short and long term management objectives.
2. Experimental evaluation of current vehicle and pedestrian closures for breeding AMOY to determine relationship between closure type, size, and duration and AMOY behavior, physiology, and nesting success.

Piping Plover Adaptive Management Support for CAHA:

Demography, Movement, and Behavior

Virginia Tech, Dr. James Fraser, Principal Investigator

Tasks:

1. Chick fledge rate – evaluate the reproductive output targets in the recovery plan to determine what is achievable and what will lead to a growing population. Suggest and evaluate management strategies to achieve these at CAHA.
2. Chick buffer distance – evaluate the recommended buffer distances in the ORV plan relative to multiple stages in the plover life cycle and make recommendations for improving effectiveness.
3. Pass-through buffers during incubation – evaluate recommended buffer distances relative to shorebird nesting and incubation and make recommendations for improving their effectiveness.

Other Participation/Permits

- Turtle Hatchling Activity Sensors
- Turtle Sense – Hatteras Island Ocean Center
- Shoreline change mapping – NPS
- Canadian Wildlife Service – banded PIPL resighting
- State bird and turtle monitoring/reporting
- Decision Support Modeling for PIPL Recovery – State Univ. of NY study
- Sea level rise modeling/mapping