RESEARCH NEEDS

A. Waterbirds

Four basic fronts of waterbird research have been identified. These are:

1) Basic inventory of species/groups and habitats

2) Species oriented research, including risk and vulnerability, trend analyses, and limiting factors

3) Applied research to include fisheries and aquacultural conflicts, fishery stock assessment and seabird populations, predator impacts, and effects of human

disturbance

4) Basic ecology, including metapopulation dynamics, winter ecology, ecology of prey species, and effects of long term ecosystem changes

For a detailed description of waterbird research needs, visit: <u>Waterbird Research Needs</u>

B. Pelagic

- 1. Determine the role of commercial fisheries in seabird mortality.
- 2. Determination population level effects of oil and hazardous materials on seabirds.
- 3. Identify key marine habitats and or focus areas.
- 4. Determine the value of sargassum to seabirds.
- 5. Effects of sargassum harvest to seabird habitat and populations.

C. Shorebirds

1. Assess the degree of depredation on nesting populations.

2. Determine factors inhibiting successful reproduction of plovers and oystercatchers.

3. Determine shorebird disturbance tolerance levels, primarily from human use and their pets. Determine whether the disturbances are at such levels that shorebirds are unable to store as fat an average of 1 gm of food per day, which is thought to be necessary for successful migration.

4. Determine effects, if any, from contaminants for migrant versus resident populations in known problem areas.

5. Determine factors influencing or inhibiting effective management of impoundments for shorebirds, including hydrodynamics, mosquito control, vegetation control protocols,

minimizing exposure to contaminants, and public use (including possible disturbances associated with early teal seasons).

6. Determine factors influencing invertebrate diversity and abundance, among both natural and managed habitats, among seasons, and among all the conditions listed under item 5.

7. Investigate the actual effects of beach renourishment on shorebird foraging habitat and determine the time necessary for a return to pre-renourishment shorebird food resources.

8. Develop local and regional monitoring protocols that may improve upon the International Shorebird Survey.

D. Waterfowl

Encourage, facilitate and coordinate applied research, and disseminate results to test key planning assumptions and reduce management uncertainties to improve conservation design and implementation.

Strategy 1: Develop a Science Advisory Committee (including Patuxent Wildlife Research Center members) to discuss and address priority research needs of the joint venture;

Strategy 2: Work cooperatively with the ACJV Waterfowl Technical Committee, Integrated Bird Conservation Committee and Science Advisory Committee to identify priority applied research needs for bird conservation within the joint venture area.

Strategy 3: Seek funds for priority applied research projects through USGS Science Support and Quick Response Funding, National Fish and Wildlife Foundation and other funding sources or cooperative agreements.

Future research in the joint venture will focus on determining limiting factors and testing assumptions to allow for habitat models and population-based habitat objectives. These efforts will also allow for an evaluation of the effectiveness of conservation actions on these populations.

E. Land Birds

There exists a voluminous and extensive database relative to landbird research needs at: Landbird Research Priorities and Needs.