

NABCI MONITORING ACTION ITEMS, October 2001

ALL INITIATIVES

- ◆ A national migratory bird data center, a component of the NBII (National Biological Information Infrastructure) Migratory Bird Node, needs to be fully developed to serve as a primary source of information on bird populations and habitats for implementation of NABCI. The node will enable rapid and direct access to widely dispersed databases around the country and provide applications (e.g., GIS-based applications) to enable users to summarize or analyze and display data relevant to local management questions. This effort began in FY 2001 as a joint venture of the USFWS, USGS Patuxent Wildlife Research Center, and NBII and shows great potential.
- ◆ Workshop Proposal -- Monitoring programs should be structured in order to yield information that is both biologically relevant and useful to managers. Presently, however, only weak connections exist between most monitoring programs and migratory bird management interests. Because NABCI emphasizes active management of birds, NABCI should provide managers of present and future monitoring programs the guidance needed for strengthening those connections. The NABCI Monitoring Subcommittee proposes to sponsor a workshop designed to foster a common approach among the Initiatives to conceptualizing population monitoring questions and implementing solutions based on sound scientific principles, as well as pragmatic management considerations. The workshop will address practical qualitative and quantitative goals for monitoring, given the biological attributes of species and species groups, and how the results of monitoring might be applied in conservation planning and implementation. It will further explore ways in which specific goals identified for monitoring programs relate to data requirements, the development of survey designs, and the selection of counting methods. Of particular emphasis will be demonstrating how existing programs might be upgraded to greatly increase their management value while permitting them to continue to meet current goals.

PARTNERS IN FLIGHT

- ◆ The draft PIF Landbird Monitoring Strategy needs to be refined and presented for adoption at the March, 2002, PIF meeting in California. Clear, accomplishable, action items need to be developed for each of the goals of the Plan.

SHOREBIRDS

- ◆ The best data available suggest that many species are declining for unknown reasons. However, these conclusions are somewhat tenuous, because no really

effective program for monitoring long-term population change in shorebirds at the continental scale exists.

- ◆ The feasibility of developing volunteer-based, multi-species surveys during the non-breeding seasons for obtaining reliable information on long-term population change needs to be explored. A workshop will be convened to explore existing efforts and the opportunities for expanding and integrating them into what is needed for large geographic scales. Simultaneously, new and more effective methods and designs need to be developed for shorebirds using ephemeral, wetland systems, such as the Great Plains. Experimental work on this is being funded by USGS in response to needs identified by the USFWS.
- ◆ The feasibility of establishing a broad geographic sampling frame for the remote North American Arctic to develop independent population estimates for high-latitude-breeding shorebirds needs investigation. Preliminary work on this was initiated in 2001 in a collaborative effort among U.S. and Canadian biologists. Additional field work is planned for the next couple of years. The practicality of including such a survey as a component of a comprehensive, continental, monitoring program will be evaluated.
- ◆ The potential of aerial photography for use as a tool in monitoring migrating or wintering populations of shorebirds needs to be investigated. Initial geographic emphasis will be in the Great Basin, where shorebirds tend to be concentrated in limited numbers of suitable roosting and foraging sites. This work is similarly being funded by USGS in response to needs identified by the USFWS.

WATERFOWL

- ◆ Eastern Waterfowl Survey Review: FWS and USGS scientists have proposed developing a hierarchical model framework by which to assess the consistency of results derived breeding waterfowl population surveys in eastern North America. The framework will also allow researchers to evaluate the effects of habitat, weather, and interspecific interactions on short-term changes in black duck and eastern mallard population size.
- ◆ Waterfowl Production and Habitat Survey: FWS and USGS scientists are assessing the spatial distribution of brood observations during this aerial waterfowl survey, and comparing distributions to landscape features. Consistency of the distribution of survey observations with those expected on the basis of landscape configuration will be evaluated. Also, ground-based brood survey methods, based on mark-recapture, are being considered to supplement estimates derived during the aerial survey.
- ◆ Atlantic Coast Joint Venture Wetland Change: FWS scientists are using data from the National Wetlands Inventory Status and Trends Survey to model and map changes in wetland extent and distribution since 1955 in the 17 states that

comprise this JV. The database is being developed to assist in the establishment of waterfowl habitat conservation objectives for the North American Waterfowl Management Plan. It is expected that the database will also be useful in research or planning for other wetland associated species.

- ◆ Duck population monitoring needs to be coordinated with more extensive monitoring of biotic (e.g., habitat, food resources, predators) and abiotic (e.g., weather) elements of the environment in order to provide data needed to better understand relationships between the environment, harvest, and bird demographics.
- ◆ Improved and more cost-effective methods to monitor cross-regional and cross-seasonal movements and survival of ducks need to be developed.
- ◆ Population monitoring protocols for individual duck species for which traditional breeding and wintering surveys are either too narrow in scope (e.g., most sea ducks) or simply ineffective (e.g., scaup, redhead) need to be reviewed. Existing methods or new methods need to be developed as appropriate.
- ◆ Development and expansion of surveys of breeding arctic geese and their habitats needs to be continued, to improve goose productivity forecasting.
- ◆ Breeding arctic goose banding programs need to be both continued and improved.

WATERBIRDS

- ◆ New monitoring techniques need to be developed for species that are difficult to monitor, such as burrow-nesting seabirds.
- ◆ Techniques need to be developed to monitor waterbirds outside of the breeding season. There are opportunities to link North American waterbird databases with global waterbird databases – but not until we have established and implemented non-breeding season monitoring protocols and programs.
- ◆ A specific continental sampling design needs to be developed for secretive marsh birds and field methods necessary for optimizing the detection of different species need to be refined (NOTE: This work has been funded by the USGS, at the request of USFWS.)
- ◆ Need to develop protocol for monitoring habitat in concert with waterbird data.
- ◆ The scope of existing colonial waterbird data housed in the national colonial waterbird database at the USGS Patuxent Wildlife Research Center needs to be

expanded. A network of contributors who agree to bias-estimated approaches for monitoring needs to be developed.

- ◆ An integrated approach to colonial waterbird monitoring and inventories in unmonitored areas, such as Mexico, needs to be continued and expanded.