

MONITORING WATERBIRDS:

How small-scale projects can contribute to large-scale monitoring efforts

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SHOREBIRD MONITORING

■ Program for Regional and International Shorebird Monitoring (PRISM)

- ◆ Estimate North American population sizes
- ◆ Describe distributions and habitat preferences
- ◆ Monitor population trends
- ◆ Monitor numbers at stopover locations
- ◆ Assist managers to meet conservation goals



SHOREBIRD MONITORING



- **PRISM temperate breeding surveys**
- **17 species in N. America:**
 - ◆ Am. Woodcock by USFWS
 - ◆ Single species surveys: Piping Plover, Long-billed Curlew
 - ◆ BBS: Killdeer, Upland Sandpiper, Wilson's Snipe????
 - ◆ Other species:?????



SHOREBIRD MONITORING

■ **PRISM temperate nonbreeding surveys**

- ◆ Single species surveys: Piping Plover, Am. Oystercatcher
- ◆ Migration surveys to supplement breeding season efforts
 - ◆ Sampling plan to be proposed in Feb. 2005
- ◆ Identify important stopover locations



COLONIAL WATERBIRD MONITORING



- Periodic regional surveys coordinated by USFWS
- State-based surveys:
 - ◆ Variable timing and geographic coverage
- Local surveys
- Initiative-based monitoring strategy is under development



MARSHBIRD MONITORING

- Survey protocols are under development:
 - ◆ Courtney Conway's methods
 - ◆ Bird Studies Canada surveys
 - ◆ Salt-marsh surveys
- Design for continental monitoring is under development



DATA RESOURCES

■ Colonial Waterbirds:

- ◆ Existing database at Patuxent WRC
 - ◆ Data from available sources: Audubon Waterbird Registry, USFWS regional surveys, published sources, ongoing surveys
 - **100,000+ visits to 12,900+ colonies currently in database**
 - ◆ Manages population and demographic data
- ◆ <http://www.pwrc.usgs.gov/cwb/database/>



DATA RESOURCES

Water Bird by Site... RESULTS

SITE	AUO CODE
210006	00800
210037	00800
210038	00800
210043	00800

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<http://mbirdims.fws.gov/nbi>



DATA RESOURCES

■ Shorebirds:

- ◆ PRISM databases to be developed
 - ◆ Migration database to accommodate existing survey data sets

■ Marshbirds:

- ◆ Survey-specific databases



CONTRIBUTIONS OF SMALL-SCALE PROJECTS

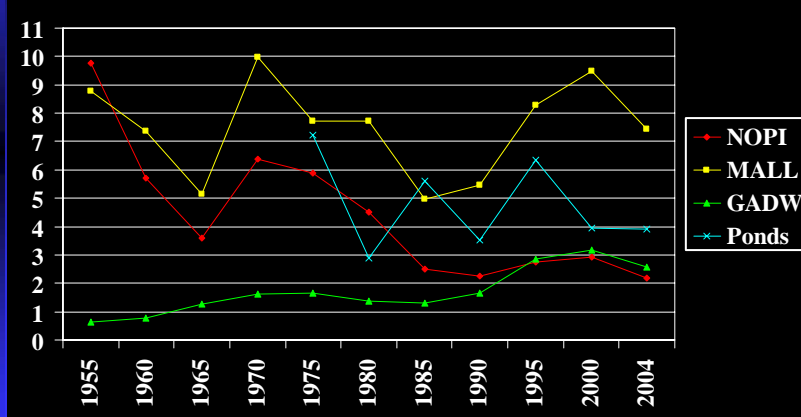
■ Data Integration

- ◆ Define breeding and non-breeding distributions
- ◆ Establish seasonal/geographic patterns of relative abundance
- ◆ Establish species-habitat relationships
- ◆ Breeding and migration chronologies



WATERFOWL POPULATION STATUS

Estimated population sizes in millions of individuals



Source: U.S.F.W.S. 2004. Waterfowl population status, 2004.

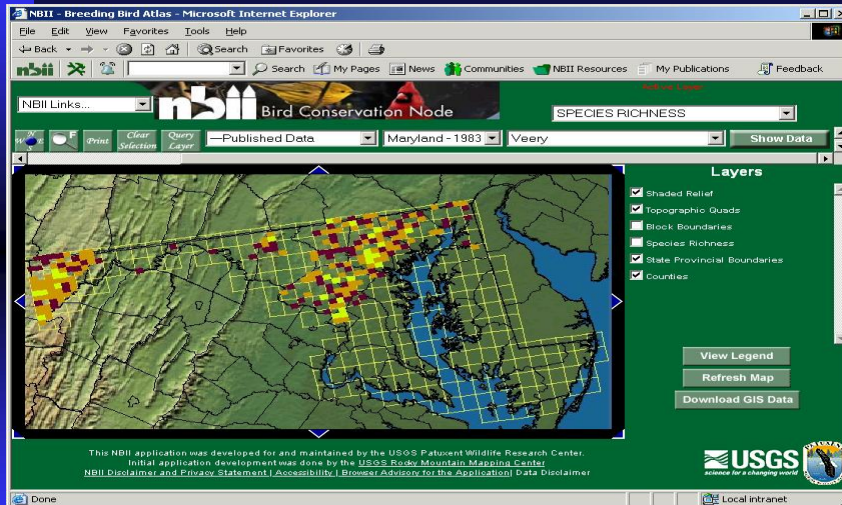


BIRD POPULATION OBJECTIVES

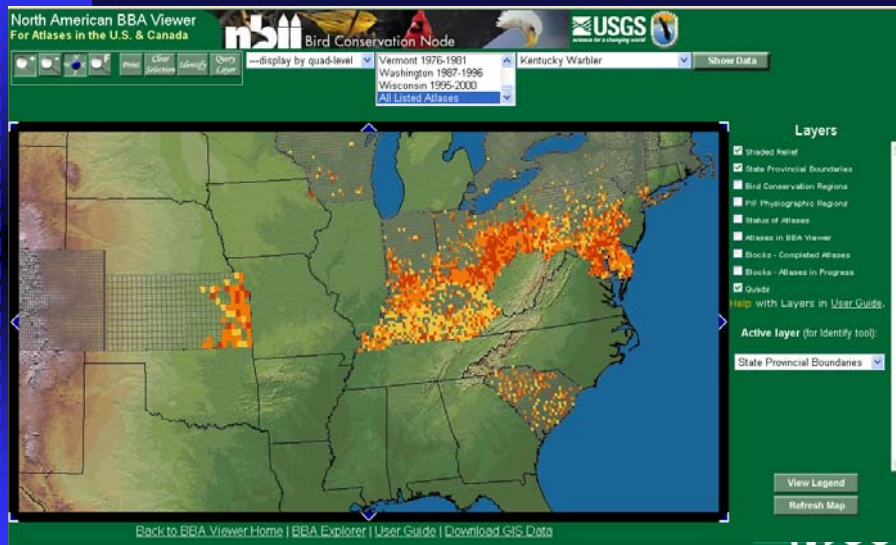
- Initially based on “best available” data for:
 - ◆ Distributions (from field guides)
 - ◆ Relative Abundances (based on BBS)
 - ◆ Habitat preferences
 - ◆ Emphasis on breeding populations
- Integrate project-level data into processes for establishing larger scale objectives



DATA INTEGRATION



DATA INTEGRATION



CONTRIBUTIONS OF SMALL-SCALE PROJECTS

■ Data Integration

- ◆ Contributions to existing surveys
 - ◆ Use comparable methods when possible
- ◆ Contributions to existing and new data resources
 - ◆ Status during non-breeding seasons
- ◆ Identifies the importance of state/region to the conservation of species as a whole



CONTRIBUTIONS OF SMALL-SCALE PROJECTS

■ Data Integration

■ Data Accessibility

- ◆ Provide access to full data sets from completed studies
- ◆ Provide data summaries for ongoing studies
- ◆ Provide access to analyzed results
- ◆ Information should be web-accessible





Photo by Luther Goldman

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