

## EXHIBIT T

**Notes**  
**Coordinated Bird Monitoring in the Midwest**  
**30 June 2009**  
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KATIE:

Thank you for providing us the opportunity to share the exciting endeavor with you! Today we are going to take a three-pronged approach to outline the need for, vision of, and method for implementing a regionally coordinated network of monitoring for bird conservation here in the Midwest.

- Agency directors to justify greater support for conservation programs
- Program administrators to allocate resources according to need and opportunity
- Conservation biologists to formulate and test hypotheses about ecological relationships
- Public and private landowners to make informed management decisions
- Extension educators to promote bird-friendly agriculture, forestry, and municipal planning
- Public affairs specialists to communicate urgent problems and conservation achievements
- Land protection agents to conserve properties of high value to birds
- Lawmakers to craft public policies that reduce threats to birds and other wildlife
- Regulators to assess the risks of issuing development, emissions, or discharge permits

Monitoring for conservation assumes many auspices, ranging from status and trend measurement to setting population and conservation goals for species, determining the causes of population changes and ultimately informing management to make conservation decisions.

As you well know, the ornithological community has vast data resources. This slide alone shows only a small cross-section of projects, but the message is very clear. Every project collects and stores data in their own way. Even within organizations there is often little effort to organize data resources. Data management strategies vary from well-maintained databases to paper forms in boxes. How easy would it be for a decision-maker to ask intelligent questions of these data sets to guide conservation and management? How well do you think these data sets can be linked together?

A colleague of ours at Cornell was recently tasked with synthesizing all data on three endangered species along the Atlantic Coast (Piping Plover, Forrester's Tern and Red Knot) in order to inform a wind farm risk assessment project. His goals were to 1) organize existing data, 2) use data to identify gaps in existing knowledge, and 3) design studies to fill those gaps so the assessment could be as useful and proactive as possible.

Slide 6 – no notes

We're going to follow three case studies throughout the progression of this talk. The first involves a group of birds that are traditionally under-sampled, difficult to detect, and are good

indices of the success of our wetland management practices. Large-scale monitoring efforts, such as the Breeding Bird Survey, suggest that many of these species are declining throughout their ranges. In the case of hunted rail species, the long-term sustainability of our harvest levels hinges on a well-coordinated monitoring and data management strategy. Other evidence suggests that, because of their very strong associations with water levels and wetland size, monitoring these species could provide a good index for evaluating changing climatic conditions.

The second case study involves a suite of species that has responded very favorably to large-scale policy changes, most notably the Conservation Reserve Program (CRP). Grassland habitat has suffered a tremendous loss, amounting to some 300 million acres, since the days of European settlement, and Breeding Bird Survey trends have indicated associated declines in the presence of these species. However, a notable upturn in many of these trends parallels implementation of CRP throughout their ranges. As the need for ethanol, biomass and wind energy increases across the landscape, how can we balance providing for these needs with maintaining adequate populations and core habitats for these species? What information do we have right now to guide development of alternative energy sources and also allow land managers to meet goals established in well-thought out planning efforts, such as State Wildlife Action Plans?

The third case study involves moving from status and trend monitoring to demographic monitoring. Imagine how much better we could prioritize and evaluate our conservation efforts if we know how well they are meeting birds' needs? For instance, one may be quick to write off a suburban park as an ecological trap for breeding birds, but what about the value as stopover habitat in a changing landscape to help birds meet their energetic needs for migration? Similarly, how can we know whether shorebirds leaving our ephemeral wetlands are in good condition to then breed in the arctic if we only count how many are there on a given day?

Slides 10, 11, 12 – no notes

The link between habitats and populations is important because it allows us to answer the burning questions of Conservation Planning, such as: (read)  
How much habitat do we need to create to see a population increase at a given scale?  
How will management to benefit one species affect populations of another?  
Which design alternative will provide the most benefit for the greatest number of species?

This slide illustrates the outcome of working strategically versus opportunistically. For this Wetland Management District in western Minnesota, there is a population objective of producing an annual average of 32,000 mallard recruits. Because of the juxtaposition of wetlands and grasslands, our objectives can be attained by conserving about 300,000 acres of high efficiency landscapes versus about 2 million acres of habitat in low efficiency landscapes. Opportunistic conservation tends to provide an intermediate level of efficiency because there is much land owner interest in high efficiency landscapes because they have lower agricultural potential, but low efficiency landscapes are so extensive there are numerous opportunities there as well. The dots are the centroids of tracts actually conserved in each type of landscape by the Service and our partners. 37,000 acres conserved in high efficiency landscapes are estimated to yield an annual average production of over 7,000 recruits. Conversely 113,000 acres conserved in low efficiency landscapes yield about 2,100 recruits per year.

Assuming land costs in the two landscapes types are similar, working in high efficiency landscapes (5 acres/recruit/year) is roughly 10 times more efficient than working in low efficiency landscapes (52 acres/recruit/year).

Monitoring for conservation is not an end in itself but is rather an integrated component of strategic conservation planning and delivery. Monitoring programs should address explicit questions aimed at improving conservation efforts for species of interest. I am working to help partners realize their potential within a regional context, as so many of our bird species extend beyond just state boundaries.

ANDY:

In contrast to the traditional paradigm, the emerging conservation paradigm is founded on the delivery of biologically-driven landscape-scale conservation plans developed and implemented collaboratively by the community of conservation partners. These community conservation plans are strategic in that they seek the greatest biological benefits at the lowest relative cost and are founded on the best available science. But they require a new way of thinking. (slide courtesy of Rex Johnson)

Rarely does one monitoring program meet all six objectives, let alone the first one. However, collaborative monitoring at a broader scale helps us move from status and trend monitoring to effectiveness monitoring...

The NABCI February 2007 Report challenged partners to adopt the philosophy to explicitly state management or policy objectives at appropriate scales, scopes, and intensities, coordinate efforts across spatial scales, and increase the value of monitoring programs by improving statistical design. Doing so (read from slide)...

Increased Survey EFFICIENCY  
CONSISTENT Methods  
Better Species and  
Geographic COVERAGE  
Greater POWER to Detect Trends  
EVALUATION of Management and Conservation Actions  
IMPROVED Data Management  
REDUCED Cost

Something about ensuring the information is useful at multiple scales to guide conservation and management—this hinges on ensure the information are being shared among partners.

Until (voila) we are monitoring in context!

This is our vision--to keep the conservation wheel turning through coordinated monitoring.

KATIE:

Think of Coordinated Bird Monitoring as a mixed-species flock, moving over the landscape. It first settled into the West, where bird observatories such as Klamath, Point Reyes, and Rocky

Mountain are now coordinated bird monitoring and data management across multiple spatial scales. Then this flock settled in the Northeast for three years (advance slide)

... that involved multi-state working groups. This flock then duplicated and spread to the Southeast and Midwest. However, we are building upon the great foundation established in the Northeast to ensure we are able to work at multiple spatial and temporal scales and to ensure collaboration beyond regional boundaries.

In order to better solve conservation problems

In order to allocate resources appropriately

To ensure efficient and cost-effective implementation

To increase the credibility of our results

In order to increase value of data through improved access and metadata documentation

Slides 25 and 26 – no notes

In an ideal world, there would be a single workshop to bring all the partners together to identify those priority issues that would most benefit from regional coordination. However, with budget and travel restrictions, I instead chose to host three sub-regional workshops at the borders of states to allow partners to come together while also honoring travel restrictions. During each of these workshops, we are collectively prioritizing conservation challenges among SWAPS, large-scale plans (PIF, JV), etc. that are in need of a well-designed monitoring collaborative to move us all forward.

Wisconsin has been the first state in the country to pilot the National Secretive Marshbird Monitoring program. The goals for Wisconsin have been three-fold: 1) Estimate population trends for Marshbirds, 2) Inform habitat management decisions, and 3) Provide status data for harvested species. However, the ability to understand how Wisconsin is impacting marshbirds is somewhat limited without neighboring states contributing information. I'm very excited to share the news that Michigan is building capacity to become the second Midwest state to come on board, and Illinois expressed interest recently at seeing how their on-going marshbird surveys can be augmented to fit within the National Program. In addition to helping other Midwest states come on board, it is also imperative that we identify conservation and evaluation questions that can be answered at the state and regional scales (e.g., how does timing of drawdowns influence marshbird occupancy of key wetlands within the Midwest?).

There is a lot of great research and conservation happening for grassland birds, but these efforts are not often linked together. Amassing existing grassland bird monitoring data is an extremely important goal, but an additional need from the second workshop was to ensure states had equal access to private lands enrolled in conservation programs (such as CRP). Many of our plans and population goals cannot be met by the capacity of publicly-owned lands alone, and being able to identify how many private acres are also contributing to grassland bird conservation success is imperative to evaluating our progress in meeting these goals. Additionally, we are working to link individual grassland managers with the Eastern Grassland Working Group and National Bobwhite Conservation Initiative to begin assessing the value of our existing data and to prioritize what information is still needed to guide strategic conservation.

Demographic monitoring, in particular stopover ecology, emerged as high priorities from the first two workshops. One first step will be to assess and coordinate current demographic monitoring taking place in the Midwest (banding stations, bird observatories, MAPS stations, refuges, etc.). The IN-OH-MI working group drafted up an action plan to: 1) guide researchers towards highest priority information needs, 2) select focal species (>25% of their population is contained in the Midwest) that represent the suite of Midwestern landscapes, 3) Establish connectivity using geolocators, satellite telemetry, banding data and observational data, and 4) pool money and resources from several organizations.

Slide 31 – no notes

There is a newly emerging collaborative of partners that are interested in contributing to an understanding of regional populations. Much like in the Northeast and Canada, these surveys would be used to track population trends and to identify areas where these species may still be relatively abundant in order to guide land protection efforts, habitat management, and future research. We are working to establish common protocols and sampling frameworks that can easily work together to inform at multiple scales. Consistent monitoring will also be ensured through implementing the National Secretive Marshbird Monitoring program, and we will continue to work towards this goal for other conservation issues as we move forward.

A tool that is being developed by the Southeast CBM Coordinator can be implemented in the Midwest to help bird monitoring program leaders determine:

- 1) Appropriate uses for the data being collected
- 2) Potential survey biases
- 3) Regional Coordination Score
- 4) Management Relevance Score, and
- 5) Data Security Score.

Recently, USFWS solicited for proposals to help advance a few key CBM projects that exemplify the benefits of regional coordination for bird monitoring and conservation. In the case of Secretive Marshbird Monitoring, webless funds may also be made available as seed money to help states come on board with implementing this program. Ultimately, the success of ensuring that our monitoring informs our actions hinges on cooperation and support from all partners involved to keep the strategic conservation wheel turning. We are currently exploring ways to develop our capacity to house a Midwest data node where individuals can access and interact with multiple data sets to ensure data are securely stored, organized, and available to guide conservation.

Remember that data organization reveals patterns...

And that ultimately sharing data benefits birds.

Our overall goal is to ensure that information is packaged in such a way that it is useful to managers and decision-makers so that our initial investment of limited time and resources is not

lost and we are well-equipped to interface with climate change, energy needs, land use practices, and food production across our Midwestern landscape.

Please consider this your VIP invitation to attend a half-day symposium dedicated to Midwest CBM taking place at this year's Midwest Fish and Wildlife Conference! We have a very premiere cast-up of speakers and topics, and we are very excited to share our progress with symposium attendees and engage additional partners. Thank you for your time today, and we heartily welcome questions if there is any remaining time (advance slide)

Okay Andy, this slide is completely dispensable if you think so...

Slide 40 – no notes (their addresses)