

COMMENTS ON DOCUMENTS POSTED TO
<http://www.fws.gov/birds/waterbirds/monitoring/marshmonitoring.html>

February 6 to February 24

2/6/2006

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I have not taken the time to read this material in depth, and am a little comforted by the fact that the Limpkin is not emphasized in the strategy. Nevertheless, I think the playback techniques would work well for Limpkins (and I know it has been used). I do offer the following thoughts:

The commonly heard Kreow and Kow calls are male calls. The female call is quite distinct and different, but usually overlooked by those who do not know Limpkins well (see BNA account). Nevertheless, in breeding season, a territorial male's call will often be answered duet-fashion by the mated female, so field workers can record females if they are used to their call. To clarify, females would not respond to a playback of a male call, but their mate will, and if he does, she may duet.

A related point is whether the other secretive species have similar sexual differences in calls. If some female calls are quieter, different, and less often uttered, as with the Limpkin, this should be appreciated. Some species, of course, may have male and female calling equally detectable, which would tend to give higher (albeit accurate) counts when compared to species with sexually different calling habits.

Especially in South Florida, Limpkin habitats can be in the interior of marshes, including vast expanses of the Everglades. Surveys there would be very difficult without airboats, which are sometimes VERY disturbing to birds at great distances. I say "sometimes" because incubating Limpkins are reluctant to leave the nest even for a very close airboat, and the same may be true for other secretive marsh birds. Anyway, when I skimmed the document, I didn't notice any guidelines for vehicles, and wanted to point out the issue. An additional point is that airboats are very visible in a low marsh, so even sitting quietly field workers may not be able to mitigate their presence.

Lastly, this may not be true in other species, but because Limpkins are so large and vocal, it is fairly easy to determine how many Limpkins live at a site with a few days of saturated

observing. Then the playback method could be independently assessed for % detected. I would think this kind of ground-truthing would be valuable when possible.

2/7/2006

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Comments on Management issues to be addressed by the North American marsh bird monitoring program

Page 1, Para. 1, Sentence 2 – last half of this sentence seems reach a bit, “...and will provide a measure of whether society is living in a manner that is sustainable for the long-term.” Marsh bird population trends are just a small component of the question as to whether society is living sustainably. I don’t need results of the marshbird surveys to tell me that society isn’t living sustainably. Best to leave that clause out.

Page 1 – Primary species: add common moorhen. I have no problem with surveyors making note of the secondary species during surveys of primary species as long as it doesn’t interfere with they’re ability to survey the primary species. All design considerations should be made based on the primary species.

Page 4 – Coots are monitored as part of the BBS and Waterfowl Production Survey. Data from these surveys are pretty good, even down to the regional level. Although BBS data are not nearly as good for other rails and snipe, there is enough data to provide some data on trends. Yes, continental surveys focused on rails is needed for rails. I’m not sure how good it will be for snipe because they weren’t studied much by Courtney. However, don’t imply we don’t have *any* population data for hunted rails and coots. Please re-word this section.

Page 5, **Investigating Basic Biology**, last line – replace “or” with “of.”

Overall Concern – I’m worried that people will try to monitor too many species using the same survey resulting in mediocre data for lots of species. I’d rather see Marsh Bird Surveys focused on secretive marsh birds (rails, bitterns, and moorhens, but no need to include coots) with an emphasis on harvested species because there isn’t a population survey focused on these species. If people try to count too many birds at once quality will decline. For example, I much prefer the dove data from the Mourning Dove Call Survey over that from the BBS because surveyors are focused on one species and the survey is designed for that species. Yes, it was difficult to standardize the CCS across North America (i.e., north-south variation in breeding chronology), but it’s a lot better than the BBS.

Comments on **A sampling plan for secretive marshbirds**

Summary of products - “Aquatic Bird Sampling Frame Reports” were not available at <http://amap.wr.usgs.gov>, unless this reference was to “CBM Aquatic Site Profiles,” which

was more of a how to write a site profile than details on the designated sites selected for each site and more information on what the matrix sites were for each site.

I am concerned that not enough sites will be sampled to make population estimates and trends at regional levels that can be used to manage harvested species. I understand that marshbirds aren't evenly distributed across the country. Will states with few designated sites be encouraged to sample more matrix sites to increase the number of sites sampled? Although I like the flexibility, which seems to be the basis of the sampling plan, I would like to see more information provided on the statistical consequences of a state or region not sampling at least x amount of sites.

If the USFWS decides to start this continental marsh bird survey, who will be asked to work out the details for each state. I encourage whoever is charged with initiating this survey to involve the webless migratory game bird biologist in each state in making these decisions on the state level. I also suggest that the webless migratory game bird technical committees in each of the 4 flyways be able to review the survey designs developed by each of the states within their flyway. If webless migratory game bird biologists are not involved, I worry that these surveys would be inadequate for monitoring population trends of hunted species, which is one of the primary reasons for initiating marsh bird surveys.

Comments on the objectives of the process of developing continental marshbird monitoring program

1) Determine the current status of the development of marsh bird survey protocols, survey sampling designs, and a data management system for marsh bird survey data;

No comments other than it appears that you have studied all aspects of implementing continental marshbird surveys.

2) Assess whether these efforts are technically adequate to commence implementation of a large-scale marsh bird monitoring program;

I support the work that Courtney Conway has done developing the survey protocols, but I think there is substantially more work to do on the survey sampling designs. Perhaps if I could attend the meeting March 6-8 to hear more about sampling designs, I would understand and support them more. I am very concerned that too much flexibility in the design could compromise the quality of the population estimates and trends at the regional level (e.g., Flyway).

3) Establish whether additional research and development are needed to enhance the program, and, if so, prioritize these research/development needs; and

I would like to see more statistical work evaluating the effect of sampling different numbers of sites on the quality of the population estimates and trends at the national, regional (Flyway, BCR), and state levels. If states are going to be able to select the number of sites they are going to survey, they need to know how this will affect the

quality of the data. Has there been much discussion about who is going to do these surveys? Based on Courtney's protocols, surveys at each site will require quite a time commitment. Many agency biologists/managers may resist taking something like this on because they are already committed to other surveys or activities (e.g., controlled burning) at this time that also require the same weather conditions (e.g., calm winds). Volunteers who have full-time jobs may not be likely candidates to do these surveys because few would have the flexibility to do surveys when weather conditions warrant, rather than just when work conditions allow. I don't want to see marsh bird surveys done during 10-20 mph winds as BBS surveyors are allowed to Kansas. Retired volunteers may have hearing problems that limit their ability to detect calling birds. Surveyors will need to be chosen carefully because results will be compromised if there is too much turnover.

4) Identify steps needed to move towards implementation of a large-scale marsh bird monitoring program, and the roles for agencies and organizations involved in it, if the framework is determined to be technically adequate.

- **Review.** After comments from the March 2006 meeting have been incorporated into the monitoring plan, have all aspects of the plan reviewed by those interested in or responsible for marsh bird populations (e.g., USFWS Regional nongame and webless migratory game bird biologists, state migratory game bird biologists, state nongame bird biologists, flyway webless migratory game bird technical committees, flyway nongame bird technical committees, members of the IAFWA Migratory Shore and Upland Game Bird Committee, and IAFWA committee dealing with nongame marsh birds).
- **Seek endorsement.** Once this input is received and before a decision is made to go forward with the monitoring program, ask each of the 4 Flyway Councils, the IAFWA Migratory Shore and Upland Game Bird Committee, and the IAFWA committee dealing with nongame marsh birds to endorse the survey.
- **State sampling designs.** Involve state webless migratory game bird biologists in developing the sampling design (i.e., which species, how many sites, which sites) in each state. This should be a cooperative effort between game and nongame bird biologists.
- **Flyway review of state sampling designs.** After states have completed their designs, ask webless migratory game bird and nongame bird technical committees in each of the 4 flyways to review the sampling designs in the states within their flyway to make sure that they are sound from a flyway perspective.
- **Start-up funds.** USFWS and/or USGS will need to allocate funding to the states to purchase survey equipment and provide training for surveyors.

2/08/2006

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I have been involved in Least Bittern (and other marshbird species) surveys over the past 2 years in southern Québec, Canada, and I had a chance to quickly review some of the documents posted on the web site

(<http://www.fws.gov/birds/waterbirds/monitoring/marshmonitoring.html>) related to marshbird monitoring and the upcoming March workshop. I have a few comments/suggestions for the Framework element: "Sampling protocol"

1) The National (Canadian) Least Bittern Recovery Team has developed a specific survey protocol for Least Bittern that has been tested the last 2 summers and that is still in progress. We are doing call-broadcast surveys with a 4-min silent period, 5 minutes of call-broadcast (Least bittern call only) and a second 4-min passive listening period. Observations are recorded every minutes as suggested by Conway. Several Least Bitterns have been detected in the second passive listening period in southern Québec and I was wondering if the option of having a passive listening period after the call-broadcast has ever been considered in the proposed survey protocol. This increases the length of each survey point (thus reducing the number of point that could be covered every morning) but may provide valuable information for some marshbird species.

2) Habitat features. Because vegetation and water depth generally varies drastically during the season, I would stress more the importance of measuring water level at specific locations using gauge (as suggested by Conway) and possibly note the presence and apparition of key vegetation species during each survey at each point (ex. Nuphar, sparganium and butomus that are generally not emerged during the first survey). This does not take a lot of time to do and may provide valuable information on the habitat at the time the survey is conducted.

2/8/2006

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At PRBO Conservation Science (formerly Point Reyes Bird Observatory), we have implemented (and are implementing) several tools, database structures similar to the USGS "point" and the new rail database this group is forming. If interested, you can find some of this at www.prbo.org/tools. Other tools are not in operation but being tested, and include a shorebird portal of tools and a rail (in our case, Clapper and Black Rails) portal.

...I think there are a number of ideas and issues that PRBO may be able to contribute to the discussion and or agenda.

To summarize what we have going currently in San Francisco Bay: there is a somewhat outdated (I believe) protocol being used within the SFBay area, and I have hopes of changing that to something more standard that will also provide a more quantitative assessment of the rail population and trends in the population. We are currently finishing up an initial SF Bay wide monitoring for CLRA in SF Bay, and there is a request submitted for an additional 2 years. All of which plans to culminate in a bay wide monitoring protocol/strategy that addresses not only the survey protocol and methods of analyses, but also survey design (how many sites per year, how often a site needs to be surveyed within a year, etc etc). Some of the initial parts of these protocols I am developing are being gleaned from many of the recent papers (including Bart's recent paper and Conway's recent protocol papers). I also am testing some of the more recent methods such as estimating occupancy rates, double-observer, etc. California Clapper Rail are pretty rare (on state endangered list) and populations are pretty clumped, and so there may be some specific regional needs for our protocol. Anyway, a bit of a digression.

My point is, though, I believe we currently have a lot going on with Marsh birds (besides Clapper Rail: Black Rail, herons and egrets receive some special attention - e.g. non-standard survey methodology) and I would very much like to be involved in the working group at whatever capacity I can.

If there is the ability to attend the conference, that would be good to know, and I can try to see what my early March schedule looks like and whether there is any money to support my trip. I am assuming this will be at Patuxent? But, in any event, I would greatly appreciate being placed on any contact lists, email distributions, etc. for the marshbird workshop, and the working group in general, if that is possible.

Without knowing even a hint at the goals or final outcome that is desired at this workshop, here is an initial important (I think) agenda item. This are made without reading any of the new documentation I see is available at the website -- some of which looks fairly comprehensive.

I will try to do that as well before the Feb. 16 deadline and if I have some more will reply again.

Agenda Item:

How to integrate with regional monitoring programs that may have more specific needs (and more specific, already developed or in development data portals)? How are we able to work this in such a way that eliminates confusion or data entry in the wrong location? How do we ensure data transfer between desperate databases (e.g. linkages with AKN or KNB, regional data portals, etc.)

In the end, I think it would be great if our regional work was able to contribute nationally to the national level monitoring strategy this working group is hoping to develop, and I would really like to be a part of that development, if possible. PRBO's work (in collaboration with others in SF Bay) on rails and other marshbirds, I think will be crucial to the final success of this product.

2/15/2006

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I'm excited to see this going forward. I have a couple of general, hopefully useful comments. I'm not too concerned about the sampling protocol as it seems to be well-documented. I'm generally not a fan of having volunteers lug a bunch of equipment into the marsh, but if it's necessary then so be it.

I see two issues that are of interest/concern for myself and possibly agency staff, etc.

1. How do we go about setting up survey points/routes?

Bart's method makes sense in many landscapes where wetlands are very static and isolated. In fact this would probably work to some extent in Wisconsin where we seem to have a handle on where the best wetland/marshbird sites are. However; there are lots of wetlands in Wisconsin and stratifying the majority of the state and selecting sites seems like a big job. Many of these sites will have fluctuating water levels and varying conditions for the species in question from year to year. Probably happens along BBS routes too, but I would guess that this would introduce a lot of variability into the dataset?? Leading to less power, etc. Probably unavoidable and best to just plow forward and get lots of sites sampled on an annual basis.

We are in the business of trying to write a CBM plan for Wisconsin and this issue will likely lead to a lot of work unless the team decides to go a different route. Identifying who will perform this task is probably going to be a hot question.

2. Who's going to do the surveys?

This is really the question that I'm most interested in. I wonder if there's been any thought to which types of surveys lend themselves to volunteers and which lend themselves to agency staff/contractors, etc.? I'm guessing that it's easier to do a Marsh Monitoring survey than a BBS route, but accessibility/timing might turn some folks off. This will probably take a

coordinated effort by state/region to ensure that routes are being run, training is done, etc. Having a great website for entering/serving data/training, etc. would be a big help (kudos to B. Peterjohn).

2/13/2006

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Working in Texas, I wanted to get an idea of how complete a listing of sampling areas were identified in Texas. The map in the report was not detailed enough to identify most sites. As expected, when I looked at the material you sent there are a number of public and private conservation sites that were not listed. That being said. What does it mean?

Is the "marsh birds" group trying to set up monitoring at best sites across the nation? [My experience with monitoring rare species indicates the first change detected will be at poor and marginal sites. The best sites don't tend to change in a direct relationship to population changes. Declining populations continue to pull back into the best sites while marginal sites are being vacated. The results at the best sites can show fairly stable conditions while major declines are happening at poor sites.] If so, this listing needs periodic revision.

One of my co-workers expressed concerns of the validity of the data if the complete range of the species is not surveyed.

Reply by Jon Bart:

Hi Brent

The list of sites is meant to include the areas that people in TX might want to include non-randomly in a survey of aquatic birds. Other areas, including marginal ones, might be randomly selected. The two groups of sites would be placed in different strata so overall results would be unbiased. Thus, we would not recommend ignoring marginal sites. That said, this document is meant solely as a resource for people in TX who would take the lead in designing any surveys there. Also, while we contacted whoever we could in each State we recognize that a great deal of revision will be needed (my experience so far is that any time a new group looks at these reports, they identify sites that should be added).

I'd be glad to talk with you about the report and ways it can be improved.

2/13/2006

Brent again

I was impressed with the amount of work and detail put into developing the marsh bird monitoring protocol. It appears fairly good even though there is no perfect survey and marsh birds add lots of difficulty due to their behavior and the habitats they occupy.

My main concern with continental scale marsh bird monitoring is that it be set up in a manner suitable to actually track true population changes. It appears the monitoring project will be set up primarily on public and private conservation lands that probably have some of the best marsh bird habitats. I am very concerned that monitoring best habitats available will not track true changes in status of species being monitored. As species decline, they tend to continuously populate the best remaining habitats to the extent they mask changes occurring throughout a range. Any monitoring system should have a wide range of quality and poor sites being monitored simultaneously.

My concerns with the methodology of the survey within a track is similar to that of the Breeding Bird Survey in that it monitors species where it is convenient to the observer and not necessarily where it is best to monitor them. The protocol references accessing sites that can be surveyed. So, monitoring will mostly be done from roads, waterways and edges of wetlands. Will this give us an accurate picture of the population status of targeted species? Do we go with a relatively large number of easier to access sites that might not be statistically valid or do we need to invest more into accessing difficult random sites and use smaller samples?

Considerable study has been invested into the actual development of the standard methodology for soliciting responses by marsh birds. National use of the same recordings is commendable. I am not aware of a large enough differences in local dialects to make a difference. However, I believe more refinement is needed in standardizing the db of the broadcasts. I know from experience that the louder the broadcast, the more birds tend to call.

I am also concerned with the validity of comparing surveys conducted in sites with widely varying number of sample points and species assemblages.

There is a need to work closely with a variety of public and private conservation groups to develop a willingness for them to conduct these surveys which are not typically easy. The International Association of Fish and Wildlife Agencies would be a good group to influence participation from state conservation agencies.

2/13/2006

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I have a comment on “A sampling plan for the North American marsh bird monitoring program.” That document delineates new “bird monitoring regions” constructed by intersecting a States map with a Bird Conservation Regions map, smoothing the BCR boundaries, and deleting small polygons.

I would strongly suggest that we use the existing system of 37 North American BCRs rather than creating a whole new map and system of 119 Bird Conservation Subregions (BCS). It would be easy and intuitive to identify or label subregions (i.e., BCR/jurisdictional intersections) within BCRs without reinventing a new map. For example, the Ontario portion of BCR 13 could be identified as subregion “ON-13,” or as “13-ON.” That kind of subregional system would be clear, intuitive, and avoid two problems (below) with the new BCS system proposed, which involves a) a whole new mapping system to introduce and familiarize to partners, b) a potentially confusing numbering scheme (i.e., adjacent portions of a BCR have non-continuous numbers), and c) changes to the existing BCR map that would not facilitate integration of surveys or data within a BCR.

The most serious implications of the proposed BCS system are that:

- 1) It complicates current efforts to simplify the complexity and jargon associated with bird conservation planning by introducing a new map and planning system at a time when conservation partners are just beginning to fully understand and use the current BCR system. It has taken time and effort to familiarize partners on the ground (e.g., staff from many different state agencies, NWRs, and NGOs) with the BCR system, and the way that it integrates the planning strata of all the bird initiatives. The appeal of the BCR system is that it is simple and integrative. Much administrative and programmatic effort has gone into the adoption of this BCR system. For example, virtually all bird habitat joint ventures now focus regional planning at the BCR scale. The proposed BCS system does not piggyback on the existing BCR system in a straightforward way (see above), but rather replaces it with a new system. This represents an unnecessary burden and difficulty for the people who coordinate efforts at the BCR scale, and for those working with a variety of many partners, many of whom already have trouble following the jargon and complexity of existing continental/regional bird initiatives.
- 2) Instead of simply identifying BCR subregions the proposed BCS map dissects, dissolves, and reassigns some subregions to other BCRs. This does not, as the proposal states “permit aggregating results to either the BCR or Province and State level.” For example, the proposed BCS system takes important parts of BCR 13 (the Lower Great Lakes/St. Lawrence Plain) in Quebec, Vermont, and New York, and reappoints them to BCR 14 (the Atlantic Northern Forest). How does this permit aggregation to the BCR level? Partners in these jurisdictions already are cooperating with others across BCR 13 in regional conservation planning and the proposed BCS map would call those efforts into question. It would certainly hinder the process of collecting BCR-wide data on waterbirds, since much of BCR 13 would be in one BCS but two of the most important focus areas for waterbirds (i.e., the St. Lawrence and Lake Champlain Valleys) would be in another BCS—and a different BCR.

I realize that it would always be possible to use a GIS or database to aggregate data to the appropriate BCR-level, but I don't think we should create a new system that makes conservation planning or sampling at the BCR-scale more difficult or complicated than necessary. A final criticism of the system proposed is that it obscures or deemphasizes the fact that existing BCRs stress regional planning and cooperation across jurisdictions. The proposed BCS system may reinforce the notion that state agencies need not look outside their state boundaries or try to coordinate across their region. This notion has long been a challenge to many USFWS staff and regional conservation planners, and should not be encouraged.

2/16/2006

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We have comments/questions about the marshbird monitoring data management system proposed in the concept paper. Our comments are prompted by the fact that much of the non-USFWS point count monitoring data are being integrated into the Avian Knowledge Network (www.avianknowledge.net) coordinated by Cornell University.

1. If the marshbird system were developed as proposed, would the data be downloadable/uploadable to the larger Avian Knowledge Network or any other databases? Presumably these other databases have some data on primary and secondary marsh bird species. Although the data may be collected differently, people who use these networks may wish to combine the AKN data with the continental monitoring data for their own analyses. Also, the continental effort may yield little data on some of the secondary species and it may make sense to combine the small amount of data with larger databases for some purposes. In other words, there may be many advantages to creating a marshbird database system that can communicate with the Avian Knowledge Network or other continental monitoring or biodiversity systems.
2. It seems that the data management system outlined in the concept paper would be 'housed' along with USFWS refuge data. What about point counts not conducted in refuges or by non-federal biologists? Would these data be mixed in with refuge data? It seems that there could be the potential for 'balkanization' of the data if the continental data management system is created around the needs of one particular agency and housed within one agency. Other agencies, states, provinces, and non-governmental orgs may create their own databases to meet their own needs, which definitely would not be an ideal situation.
3. Does the proposed system parallel existing systems for other taxa? If so, can a existing system be used instead of creating a new one?

Even if most of the marshbird monitoring occurs on USFWS refuges, these data will be of great interest and use by a wide range of scientists, managers, and policy-makers. We encourage the committee to evaluate the advantages and disadvantages of using existing systems or creating a system that is consistent with and can easily be used in combination with other national and international data sources through larger networks such as the AKN.

2/24/2006

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We started conducting surveys in 2002 and 2003 as a pilot project on 2 of the refuges in our complex. Our first survey points were along roadsides, on top of levees, and along the interface of marsh and woodland where it was easier to walk. We weren't getting many call backs and surveys along roadsides were hard to conduct with noisy morning rush hour traffic, even in remote areas people would see us and want to talk. So, in 2005 we changed most of the survey points to areas of shallow ponds and marsh. We bought small kayaks that proved easy to transport and use in shallow water. One problem we encountered and will have to work on is that tide fluctuations made some surveys impossible to access during dry times that were accessible during spring. It isn't so much the difference between high and low tides that cause the water level change as changes in wind direction. We have already supplied the coordinates to Dr. Conway, but if you need them again let me know.

2/24/2006

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I think there are too many uncertainties associated with the proposed survey for me to offer specific suggestions as to how the survey could be improved. I suggest we begin the meeting by addressing these uncertainties and making sure that everyone is in agreement as to what is being proposed and why it is being proposed. Perhaps my interpretation of the documents is wrong and we're only going to be considering a handful of extremely secretive species (i.e., rails). If that's the case, our job will be greatly simplified. But I suspect the situation is more complicated, and I think designing a useful survey will require answers to most, if not all, of the following questions:

What programs or treatments have been identified as in need of evaluation?

Who has identified these needs?

Where are these programs being implemented?

What species and how many individuals do these programs/treatments affect?

Who is responsible for implementing these programs, and how are they being held accountable? Is there a mechanism or willingness to change programs or treatments depending on the outcome of any evaluation?

What specific, on-the-ground programs will benefit from results of this survey?

Who will conduct the surveys?

Once we have concrete objectives, how large of an effort will be necessary to accomplish the desired objectives?

How will results from these surveys affect conservation decisions? (Merely documenting population trends and sounding the alarm for conservation action will not be a sufficient answer for the management community.)