

Upper Mississippi / Great Lakes Joint Venture Science Team Compiled minutes from three virtual bird-group committee meetings - Winter 2021

Between 22 January and 26 February 2021 the JV Landbird, Waterbird, and Waterfowl Committees met virtually and on separate dates. The purpose of these meetings was to reconnect committee members, share updates on member research and monitoring projects, discuss related ongoing scientific evaluation on birds and Human Dimensions (HD), review current and changing priorities relevant to JV science foundation, and discuss progress on communications and implementation of JV habitat conservation strategies. With each committee meeting, JV Science Team Chair Greg Soulliere reviewed the history of the Science Team and its relationship to the JV Technical Committee and Management Board. That history is provided below, followed by minutes and *action items* from each bird-group committee meeting, and a chart of committee membership and contact information is at the end of this document.

History of the JV Science Team: The JV Technical Committee (TC) is a *standing committee* of the Joint Venture. The TC has its own Charter and Bylaws, and membership (limited to 10; with 3-year terms) requires approval by the JV Management Board. In 2005, when given the task of writing an *All-bird JV Implementation Plan* by the JV Management Board, the TC decided to develop separate habitat strategies for each bird group having a continental/national plan. The TC also determined they lacked adequate knowledge regarding “all-birds,” plus they needed help with biological modeling. A recruitment effort took place, with the 8-member TC bringing in 10 additional scientists and establishing ad-hoc workgroups focused on the four primary bird guilds. Hence, the TC established our bird-group committees in 2005 to develop the first regional habitat conservation strategies for Landbirds, Waterfowl, Waterbirds, and Shorebirds.

Because each bird-group committee had a similar task, we began meeting annually in 2005 as an assembly, eventually referred to as the JV Science Team. Annual meetings of the Science Team included breakout sessions for each bird-group committee, and committees often met separately during the year for “writing sessions” or to cover specific planning issues related to their bird group. Following completion of the 2007 JV planning effort, which resulted in four JV Bird-group Strategies and the JV All-Bird Implementation Plan, the TC led a discussion at a subsequent Science Team meeting about the fate of the ad-hoc bird-group committees. The theme of iterative JV planning had become well established by this point, recognizing the need to regularly incorporate new research findings and changing conservation priorities into JV planning documents. The 2007 JV Implementation Plan stated, work of the “*Joint Venture Implementation Plan is scheduled to be completed between 2007 and 2022. However, during this 15-year time horizon we expect periodic changes in the technical JV bird-group strategies...*”

Thus, the TC decided to retain the ad-hoc bird-group committees, but with focus on research and monitoring important to build our science foundation, leading up to the next iteration of each bird-group strategy. Although some TC responsibilities (from 2004 TC By-laws) have been dispersed across the larger Science Team since 2007, TC members remain the primary group providing science guidance to the JV Science Coordinator and they, collectively, provide recommendations to the JV regarding financial support for research and monitoring projects. Moreover, each bird-group committee has always consisted of multiple TC members (see current Science Team organization chart at end of this document).

Our JV Science Team has grown over the years (now 35 members), and some members are involved in bird habitat delivery, communications, and establishing partner networks, responsibilities beyond the mission of the JV Technical Committee. The decision regarding composition of the TC is up to the JV Management Board, and probably best made in the context of our JV’s greatest science needs during the next 5-10 years. Integrating key Science Team members into habitat delivery and communication networks may provide more immediate benefits to Management Board conservation initiatives.

Landbird Committee (Chairs = Kelly VanBeek and Chris Tonra)

Meeting dates: 22 January (11:30 – 3:30 ET) and 25 January (12 – 4 ET)

Committee attendance: Chris Tonra, Kelly VanBeek, David Ewert, Mohammed Al-Saffar, Allisyn-Marie Gillet, Shawn Graff, Jim Herkert, Sarah Kendrick, Katie O'Brien, Mark Nelson, Greg Soulliere, Wayne Thogmartin, and Mike Ward. *Note:* Long-term committee member Tom Will retired from the FWS on 31 December, and following this meeting, member Erin Giese retired from the committee due to workload challenges. **Guest:** Doug Gorby.

Half day 1 - Project updates

Research/Management updates – presenters

- ***Kirtland's Warbler – Dave.*** Breeding census planned for 2021 (including some new approaches to make more cost efficient) as the delisting plan moves forward, cowbird parasitism will be evaluated again, and a MOU was completed, confirming multi-agency management commitment. Non-breeding season work includes evaluation of goat pasture use compared to random sites (assess value of goat farming). Non-breeding conservation plan has been revised based on new density data, leading to refinement of the full life-cycle conservation plan. Newly hired KIWA conservation coordinator (Krisie Hynrich sp?) to lead and enhance team effort for plan implementation. Various funding sources building for long-term management. Question about planning for sea level rise, as much of the current wintering habitat may be under water or subject to ocean influence. Should other, higher-ground areas, be increasingly managed for species? Question about WI population, currently about 25 singing males. Small population in Ontario as well. Discussed likely synergy in management for KIWA, Night Hawk, and Whip-poor-will, and possibly Upland Sandpiper in recently cleared sites.
- ***Golden-winged Warbler – Katie and Wayne.*** Katie -- Referred to GWWA Working Group foci, species habitat needs, and 2.5% annual decline since 1966. Our JV region accounts for 80% of the BPOP. Working group generated 2021-25 strategic priorities related to 1) full annual cycle, 2) breeding grounds, and 3) non-breeding period (migration, stationary overwintering). Overall, working group emphasis is to shift into implementation of completed plans; development of a Working Group organizational flowchart was helpful to identify connections and synergies with other conservation efforts (e.g., JVs and focal species). Katie (and Shawn) reviewed multiple conservation initiatives on the breeding grounds.
Wayne – Reviewed a predicting range shifts project, as part of ongoing status assessment. BPOP declining in most of range according to BBS, but may be increasing in other small areas of the range. Looking at climate response, habitat suitability models, and interaction with Blue-winged Warbler. Developing integrated population model (IPM). Working with Canadian Wildlife Service, assessing sub-regions with abundant and growing populations vs. areas with small and declining populations, and contributing factors. Related work on extinction risk should be refined with this effort; factors most limiting population growth should also be a valuable project outcome.
- ***Eastern Whip-poor-will – Chris and Mike.*** Project review -- Landscape factors influencing distribution and population status of whips. Used BBS-style routes (the nocturnal bird survey routes in IL) and insect sampling (availability and abundance). Found 13 of 23 IL sites occupied, detectability declines due to roads and later-morning sampling, but moon illumination also seems key factor in detection, presence of moths (esp. large moths) also important to occurrence. Species avoids developed areas, likely being pushed into agricultural settings to avoid artificial lights. About 80% Lepidoptera in fecal samples. Nest and juvenile survival relatively high in IL. Moon, cloud cover, and temperature most influence male nighttime activity (foraging). By far, most active at dusk and dawn. Loss of insects have had a disproportional effect on the species given its limited foraging period (need moonlight to forage effectively). Appears sandy soils do not hold residual pesticide particles as much as clay or loamy soils, so less pesticide influence and potentially more insects. New students coming on to better evaluate insects (moths) and bird ecology (nest survival in particular).

- ***Migratory connectivity and behavior of Whips in the Midwest – Chris.*** BPOP growth quite variable in sub-regions, suggesting important limiting factors outside breeding range. Examined strength of migratory connectivity, which was relatively low, with a lot of wintering overlap by multiple populations from across the Midwest region. Strong support for “telescopic migration,” with species from north and mid-latitudes ending up in common wintering areas. However, winter re-location (up to 100 km) seemed common. Fall migration took about 4-15 days, strong temporal overlap in movement (early Oct), and avoided open-water migration over the Gulf.
- ***Rusty Blackbird – Chris.*** Stopover ecology on Lake Erie project review. A forest wetland specialist, with 80-90% decline since 1960s. Study addressed lack of migration stopover information. Stopping over in this area for about one month, longer when in “poor” condition related to degree of molt. Communal roosting, but readily moving up to 10 km for diurnal use areas. Migration flight typically starts around midnight, with a strong tail wind, and species will readily cross Lake Erie. Key management implication is potential threat of over-water wind energy development near stopover sites. Species selected dogwood swamps in fall (feeding) and roosted in cattail and Phragmites. Used wet sites, typically close to edges. There is a Rusty Blackbird Working Group collaborating on several projects, including parameterizing a full annual cycle model.
- ***Motus / Migration Network happenings – Sarah.*** Technology proving especially useful for smaller species, assessing migration timing, stopover sites, and wintering grounds habitat use. In two years, the number of receivers increased substantially (there were none in the Midwest in 2018). C-SWG grant will fund 59 new receivers, 48 in Midwest and 11 in Neotropics, plus three research projects.

NOFO – Greg and Kelly. *Notice of Funding Opportunity* – Reviewed how JV evaluation priorities (research and monitoring objectives and sometimes project ideas) have been posted on the JV website to guide NOFO applicants. Excel workbooks for Research and for Monitoring include tabs / spreadsheets for each bird-group committee. Our landbird tab includes objectives and sub-objectives straight from the JV Landbird Strategy, but guidance can be more specific by adding project ideas and by prioritizing objectives and ideas (e.g., see waterfowl and shorebird tabs).

Considerations to help refine JV evaluation priorities -- project identification and prioritization:

1. Generating/prioritizing project ideas could be the focus of a future committee meeting.
2. Email exercise that includes all committee members (someone to synthesize submissions).
3. Establish an ad hoc R & M subcommittee (3-4 members) to draft lists for review by full committee.

The Region 3 Migratory Bird program has a similar NOFO, which will also be posted within the next month. There is an opportunity for Landbird Committee members to collaborate and potentially submit research / monitoring proposals in response to one of both of these NOFO announcements.

Current MB Program priorities include:

1. Further understanding of migration, migratory connectivity, migratory threats, wintering ecology, and annual survival for birds moving within and through the Midwest—including local movements of young birds (birds of-the-year) during the period between hatching and dispersal/migration. Proposals addressing focal/priority species identified by Joint Venture partnerships in the Midwest are preferred - especially those focused on grassland-dependent species, shorebirds, or aerial insectivores.
2. Build capacity for sustainable conservation and monitoring of Neotropical migrants during the nonbreeding season.
3. Assess trends, status, limiting factors and /or causes of decline of Great Lakes waterbirds (e.g. Herring Gull, American White Pelican, Common Tern, Black Tern) or shorebirds (e.g. Lesser Yellowlegs, Pectoral Sandpiper, Semi-palmated Sandpiper, Short-billed Dowitcher, Dunlin).

Road to Recovery/3 Billion Birds update – Tom. This effort evolved out of a conversation between Pete Marra, Ken Rosenberg, and Tom, with emphasis on coordinating science efforts to elucidate explicit causes of decline for species “on the brink”. NABCI is promoting five key themes, only one of which is purely science -- identifying the factors limiting population growth. Working on this theme means very explicit identification of causes of decline, not just where and when, but the exact cause. There are 39 species considered “On the Brink,” with population declines supported by data. However, there are two more *On the Brink* lists, one with declining species having a data deficient (expert based assessment) and another list of species categorized as “Loss of abundance > 1 million and high urgency.” Tom expressed the need for “Recovery Plan” not a conservation plan for these highest priority birds. The team developed a 7-step pyramid for information need and risk of loss, plus an estimate of cost to move species with limited information to a science-based recovery plan. What does this effort mean to the JV? Maybe a slight adjustment in emphasis, with research determining and management targeting those factors most limiting populations of “species at the brink.”

Day 2 - second half day

Desires/ideas from the committee to communicate the new Landbird Strategy to constituencies

Communicating out the updated landbird strategy: Several examples were provided for how the strategy revision has been communicated out since its December 2020 release. Katie sent it the Northern Forest Working Group, promoting use by partners in BCR 12. She is also formulating ideas around a coordination team for Urban Bird Conservation, one of her new foci since Tom’s retirement. In OH (Chris), they are working on a BCI update so this was a timely release. MO (Sarah) distribution included field and urban bios, but a webinar would be helpful. Mississippi Flyway representatives (Alli) also received the plan. ABC (Shawn and Dave) will distribute to all affiliated foresters in the region and will discuss it at planned meeting with Ruffed Grouse Society (RGS) staff. Erin will share with National Audubon. She thinks webinars will be helpful, plus social media, but need to seek out ways to reach private landowners as well (e.g., webinar to Private Lands bios). Dave suggested Nature Conservancy Canada might find it useful. Doug sent the strategy to Tom Cooper, who forwarded it on to all program leads in R3, and sent it to JV Board, and to General Mills. Greg sent a copy of the strategy with a summary of content to all Unified Science Team and NAWMP Science Support Team members (international science teams including all JV Science Coordinators). He also sent strategy copies with thank you notes to all 30 draft-strategy reviewers. Tom Will/Kelly offered to do a PIF news release, esp. promoting unique aspects such as models and urban birds. Andy will share and discuss with PIF steering committee. Mark shared with USDA Forest Service research bios in northern portion of region; we might also consider TWS (national or state chapters, working groups within TWS). Mohammed plans to present strategy models at the AOU meeting in August. Shawn suggests a presentation to the JV Board first and offer them the presentation for their use at staff and state-scale meetings. Doug said we could do an overall webinar to Board, then breakout webinars with specific topics. Initial step will include Greg developing an overall, broad presentation that can be further developed depending on the audience. A broad rollout webinar could include a variety of partners (NFWF, NRCS, etc.).

Have there been any requests to step the plan down? Sarah believes a webinar will be necessary to instigate manager requests for more information. Alli made the point that if agency leadership (e.g., JV Board members) endorsed, then lower level bios would more likely implement. There was a suggestion to explore potential synchrony between NRCS efforts and landbird strategy priorities.

What does step-down plan look like? The JV Board Implementation Team (Andy, Doug, Shawn, Steve Chadwick-MI, etc.) will discuss this and discuss with the Board, potentially focusing on grasslands as a first priority. Chris mentioned that OH is revising SWAP so timing is right. Erin will provide her network a link to the strategy (http://umgljv.org/docs/JVLandbirdStrategy_FinalV2_12-30-20.pdf) when sending out the summary. Should get strategy to large landowners, such as BCR 12 group (via Katie), but personal touch needed with the groups for greater effectiveness. Must think about messaging to different audiences (e.g., pro agriculture to these landowners). So major talking points varied by group.

JV Board should consider developing working models to grow communication network, with Chicago as a great example for urban bird conservation. Katie suggested a small group be formed that includes Management Board members so we all understand points of view. We might also seek opportunities to meet together (Board and Science Team) and share ideas. Finally, someone reminded the group of communication priorities listed in the Landbird Strategy, including use of social media (e.g., USFWS Facebook page) with targeted language on how to use strategy.

Discuss approach to urban habitat – should we be providing more concrete recommendations?

Katie provided a presentation *Bird Conservation is a Joint Venture of People*, with focus on our urban focal species Chimney Swift and considerations for our developed / projected developed lands. There will be opportunity to work with partners locally. Conservation would include retaining and restoring habitats as well as addressing threats such as collisions (windows, towers, wind turbines) and lights. She covered the Bird City Program, which began in WI. As described in the JV Landbird Strategy, the Bird City franchise can provide conservation partners valuable guidance.

What does a future urban chapter look like? Status of Bird Cities America's coordinator?

Tom mentioned there were 140 candidates for the coordinator position; should expect selection of candidate soon. Urban Bird Treaty program grew out of Urban Wildlife Conservation Program -- supporting partnerships to do good things for birds. There are currently 30 Urban Bird Treaty (UBT) cities, with six in our JV region. Katie compared attributes of *Bird Cities* and the *Urban Bird Treaty Program*.

Committee members spent time brain storming on the future for how to work with bird cities and others influencing potential bird habitats (and other species like pollinators). Urban farms, buffer strips, rights-of-ways and working with power companies (e.g., DTE plantings long the Detroit River). The urban bird effort may be a key to keeping conservation and birds relevant to society. State agencies (natural resources and education departments / curriculums) may need to engage and take the lead to assure better connections over the long term. Question now is at what point the JV Science Team hand-off these types of communication / implementation tasks to others. With so many science priorities (e.g., determining explicit factors driving downward BPOPs), there is an *opportunity cost* to these communication tasks, taking away from our focus on science foundation. Furthermore, some communication/implementation tasks may be better suited to a different team of JV partners with clear roles and responsibilities. In some urban / semi-urban settings there are some real bird conservation opportunities (not just people outreach), such as Henslow's Sparrow in Chicago. There is a need for biological and social science in the urban settings, and potentially underused data sources (like eBird) in population centers. Some urban communities have tremendous money and power to make a great difference. In addition, the Institute for Bird Populations (Central / South America) is funding a coordinator to connect communities across the annual cycle to fill knowledge gaps related to survival during the nonbreeding period. Dave also mentioned potential partner opportunity involving Great Lakes cities via the Great Lakes and St. Lawrence Cities Initiative. Apparently 150 cities in the US and Canada participate and biodiversity is one of their priorities.

Future directions – How do we further inform the new JV Board Implementation Team?

How will the Landbird Strategy be implemented?

How do we (Landbird Committee) fit into implementation? Andy provided an update on the Implementation Committee of the Management Board. He suggested there might be need to break some sections of the strategy out with guidance from the Board Implementation Team. He mentioned the Team could help stand up implementation networks across the region. Katie described how the Northern Forest Working Group has evolved into this type of implementation network. Shawn suggested maybe we could determine who is working on which focal species to form additional networks. In addition, some members of Science Team would logically be on the implementation team as some have a habitat

management background and could provide a key service translating strategy science into habitat delivery. Mark reviewed potential means to leverage Great Lakes Restoration Initiative (GLRI) funding, for example conservation for brook trout and forest birds. This funding source may be especially relevant to projects along the Great Lakes shoreline, and we can inform others so they better incorporate birds into targeting conservation decisions. Mark provided another example of potential networking that could lead to landbird habitat conservation -- Members of Minnesota Association of County Land Commissioners (<https://www.mncountylands.org/>) are interested in wildlife and habitat. They are active members of other conservation entities, like the "Minnesota Forest Habitat Collaborative," and we could work directly with commissioners, or, more efficiently, work through collaborates (where they are already engaged) to better focus their conversation activities on landbirds.

Doug mentioned there are no barriers to what the landbird committee could get involved in, similar to the interconnected aspects of the SHC wheel. Conversation included the need to determine where we can get the biggest return on investment of our time. What are the outcomes we want to achieve (re landbird populations) and how do we get there? Translating science to management is a critical step to implementation (members of the landbird committee can serve as translators). Maybe after the initial plan rollout webinar(s), landbird committee members can actively take on this role. The JV partnership is respected by conservation agencies and organizations, and agency managers consider JV products / endorsements important. Alli reminded the group that the Mississippi Flyway is another good tool for information sharing, more with wetland birds, but this may be a good time to emphasize landbird conservation. Andy, Doug, and Shawn (JV Implementation Team) should realize the Landbird Committee is available to help, while also continuing our focus on science.

Action items (Landbird Committee):

1. Committee members: Share links to the JV Landbird Strategy (http://umgljv.org/docs/JVLandbirdStrategy_FinalV2_12-30-20.pdf) with colleagues to help achieve wide distribution by **10 February**. *Done*
2. Greg, Kelly, and Chris -- will generate spreadsheets with JV research and monitoring objectives and sub-objectives plus add some initial project ideas by **29 January**. *Done*
3. Committee members -- will review, refine, and add to the draft research and monitoring objectives / priorities lists sent by Kelly and Chris and return this information by **4 February**. *Done*
4. Greg and Kelly – will develop a draft presentation by **15 February** reviewing (rolling out) the JV landbird Strategy and Committee members will review and refine the draft, with a final copy shared by **1 March**. *Done* This rollout presentation can be used by committee members in whole or they can dissect out portions for more specific presentations (e.g., grasslands in BCR 22, forest bird habitats in WI).
5. Many communication / implementation ideas resulting from the meeting must be sorted and prioritized, including developing a Landbird Strategy summary (condensed glossy vs. 140 pages), generating more useful / implementable chapters and or summaries (e.g., Urban Birds, Grasslands), forming / flow-charting networks for communication and habitat implementation, implementing the Communications and Outreach chapter of the Landbird Strategy, promoting Bird City enrollment, and firming up the role of key Landbird Committee members in the JV Board Implementation Team. This discussion seems best suited for JV leadership to assure appropriate guidance and support for committee members. These notes seeking that guidance will be provided to Doug, Andy, and Shawn by **1 February**. *Committee meeting notes, including this action item seeking guidance from JV leadership, delivered 29 January.*

Waterbird Committee (Chairs = Rachael Pierce and Mike Monfils)

Meeting dates: 4 February (10:00 – 1:00 ET) and 5 February (1:00 – 4:00 ET)

Committee attendance: Mike Monfils, Rachael Pierce, Auriel Fournier, Dan Holm, Brian Loges, Frank Nelson, Sarah Saunders, Rich Schultheis, Brendan Shirkey, Anna Sidie-Slettedahl, and Greg Soulliere

Day 1: Thursday, 4 February

Co-chairs Rachael and Mike provided welcome and opening comments, and Greg described the history of the JV Waterbird Committee to help frame the meeting.

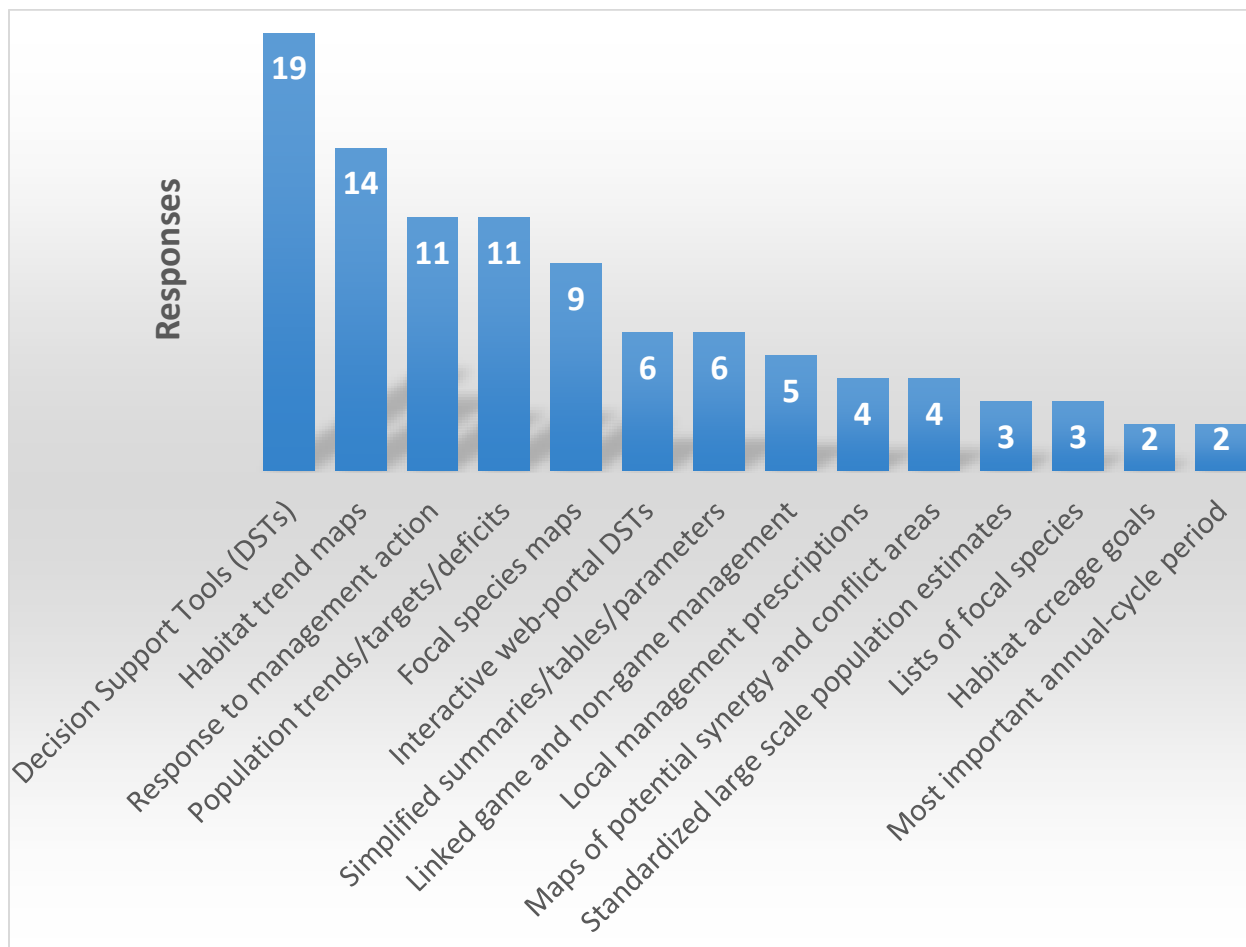
Committee member updates

FWS waterbird initiatives – Rachael

- Results of the GL Colonial Waterbird Survey SDM Workshop were reviewed. Workshop focus was on the pending decadal waterbird survey, as the FWS Region 3 MB program has indicated they are not planning to fund the next survey, and the FWS has been a primary funding partner in the past. Decision Problem: How should partners move forward ...? The group came up with 21 objectives with potentially score-able metrics. Next step is to review tradeoffs and select alternatives, then write a final report. Eventually a leadership team must be developed to make the decision.
- Cormorant rulemaking and the related environmental review was described. There is a monitoring requirement by FWS for control efforts, and perhaps this need can be combined with broader scale (additional waterbird species) monitoring.
- Mid-continent Shorebird Conservation Initiative was reviewed. This effort is meant to fill-in the gap between Atlantic and Pacific flyway shorebird planning (note: the last national shorebird plan was in 2001). Conservation / abundance targets have been established for those species of highest conservation concern. Multiple workshops have been conducted with valuable products including some focus on EGS related to shorebird habitats. Information resulting from this Mid-continent plan may be an adequate update for our 2007 JV Shorebird Strategy or it may provide a foundation for a revision of the JV strategy. In addition, there may be good opportunities for integration of management across bird groups based on information shared during recent workshops.
- 3BB – Road to Recovery. Reviewed the process for PIF prioritization of which species to work on first. Avian Conservation Assessment Database (ACAD) was essential and species of greatest concern were grouped based on data adequacy vs. deficiency, as well as species that have declined by >1M in NA during past 50 years. Wetland bird species at risk included: King Rail, American Golden Plover, Hudsonian Godwit, Pectoral Sandpiper, Semipalmated Sandpiper, Short-billed Dowitcher, Lesser Yellowlegs, Least Tern, Yellow and Black Rails, Dunlin, and Herring Gull.

Landbird Strategy – Greg. Provided an overview presentation for how the strategy was developed and unique aspects of the landbird document vs. other JV bird-group strategies. This document was emailed to all JV Science Team members in early January. Key points:

- Guided by 2019 Landbird Stakeholder Survey (n = 28 interviews; see figure below for strategy components requested)
- Extensive detail on past land cover change and consideration for projected developed land cover out to year 2100
- Expert-based Open Standards threat assessment for grasslands and forests
- Emphasis on Full Annual Cycle Conservation, Airspace, and Human Dimensions
- Habitat objectives based on grassland and forest losses (2001-2016) and restoring quality/suitability for focal species (used this approach due to lack of focal species breeding density estimates, which can be quite variable across the region, and an appropriate means to translate BPOP objectives into habitat objectives)
- Chapter for Urban Birds / Developed Lands, the first ever for a JV bird habitat strategy



Audubon Projects – Sarah. Presented Black Tern nano-tagging project results, 2019 and 2020, including 15 tags at St. Clair Flats MI and 0 at Tiny Marsh Ont. (failed colony). Very limited data on fledging, but some detections at towers locally placed and at migration/winter sites. Bird with most detections left St. Clair Flats, moved to OH, then to SC, eventually departing SC in October with no subsequent detections. Based on very limited data, 20% of marked birds fledged, all moving through OH. Also reviewed marshbird monitoring project in Calumet IL/IN, marsh bird monitoring surveys across IN, and marsh bird response to cattail management at Wigwam Bay MI. Audubon received a National Fish and Wildlife (NFWF) Great Lakes grant to measure marsh bird response to NFWF-funded (impacted) sites.

INHS Research – Auriel. Reviewed breeding Least Bittern and Common Gallinule graduate-student project at the Emiquon Preserve, a large impounded wetland on the Illinois River. During drawdown, the waterbird predator community changed, from fox snakes with moderate water levels to raccoons with lower water and dewatered conditions. Second student working on Sora/Virginia Rail spring migration project, focusing on stopover timing and stopover duration. They are employing Motus towers and tagging, with nine towers now in the Illinois River Valley. Also assessing diet/body condition indices, including euthanizing some birds. A sister project is being led by INHS staff but with a fall focus: timing, stopover duration, and stopover “home range” size. Also planning to use isotopes from migrant rails in central IL and northwest OH to determine how far north these stopping-over birds eventually move. Also conducting some simulation work to examine the proportion of breeders vs. migrants at survey sites. Finally, planning to build a Sora/Virginia Rail Integrated Population Model, hopefully to determine the most critical demographic parameters to further study. Mentioned potential to participate in a Black Rail eDNA project in the Gulf states, which may have application in JV region.

Winous Point Work – Brendan. Reviewed some similar rail-stopover interests to the INHS projects, especially two projects on Sora and Virginia Rails. At Winous, over 100 birds were marked during past two summers. Planned breeding study did not work out as most birds detected / marked during spring surveys moved out of area before breeding. However, there appears to be many weird (unexpected) movements going on with late spring birds moving out and sometimes coming back after being gone for weeks. The other (MS student) project developing correction factors for rail responses to spring survey should be done this spring. The King Rail (PhD student) project is ongoing, reviewing habitat work and similar aspects to the Sora/Virginia Rail project, including correction factor for spring survey. In addition, five King Rails captured and marked with transmitters in 2020, but work was limited to OH due to Covid. Plan is to expand this project work into MI in 2021.

MNFI Projects – Mike. Reviewed invasive plant studies, including Phragmites on Saginaw Bay MI, where bird use in different plant communities is being compared -- reference / mostly native plant wetlands vs. Phrag stands. Also monitored birds and plants in treated Phrag sites compared to unmanaged sites in a 2017-2022 study. One more recent focus has been on European Frogbit, evaluating effects of this exotic on biota and ecosystem functioning. Study sites are Saginaw Bay and Munuscong Bay / St. Mary's River MI. Assessing influence on plant communities, bird use, herps, etc.

Comments from Other Committee Members

- Brian updated group on some of the FWS refuge inventory and monitoring efforts. Completing the spring marsh bird surveys has been a challenge due to personnel limitations.
- Rich mentioned that Kansas is one of the few interior states with a Black Rail breeding population, requiring some work associated with the recent listing process. The state planned to conduct some Black Rail management projects, but the proposed ruling paused that work. As a general note, there is a push to increase the number of Motus towers in Kansas, especially at Cheyenne Bottoms and the Flint Hills. Much of Rich's work is related to game species regulations. Balancing the interests of Kansas crane hunters and concerns over whooping Cranes has been a focus.
- Frank reminded the group that *World Wetlands Day* and *Ground Hog* day fall on the same calendar date and perhaps there may be opportunity to promote one of these less and the other more in the future. He has also been working on a communication effort to help MO private landowners better understand the value of water-level management.
- Anna mentioned the new federal Grants Management system is quite challenging, and that the JV will soon announce a 2021 *Notice of Funding Opportunity* (NOFO) related to research and monitoring needs.
- Dan is working toward meeting IL monitoring goals for marsh birds, which were stepped-down from the JV plan.

Day 2: Friday, 5 February

Before the meeting, Greg sent the following email note regarding discussion on waterbird research and monitoring objectives: *I wanted to suggest we focus on column three of the research- and monitoring-needs spreadsheets as we prepare for our discussion tomorrow. The contents of cells in column one (the objectives) are straight from our 2018 JV Waterbird Strategy. They encompass information gaps identified during planning as well as testing key planning assumptions. They cover breeding, non-breeding, landscape change, HD topics, and more. Column 3 (specific project ideas to achieve objectives in column one) is most important to guide grant applicants. Column 2 (prioritizing potential projects) would also be helpful if we have time. See the waterfowl tab of the spreadsheet for an example.*

I fear revising our objectives (column one of both spreadsheets) could be confusing to potential grant applicants considering we just published these in our 2018 strategy. We can certainly change objectives if the committee feels strongly about it, but I believe focusing our efforts on column three (and 2 if possible) will be better use of our time.

Discussion on what committee priorities should look like

Before covering research and monitoring needs, we discussed overlapping tasks and evaluation interests of JV wetland bird groups (waterbirds, waterfowl, and shorebirds). Highlights included:

- There may be a need to take a closer look at our highest ranked priorities, such as habitat-use assessment, and see how we can work to move the needle on these types of projects.
- We need to deliberate and identify highest priorities, but also build synergy across states, increasing the value of projects due to their regional application.
- Waterbirds may be the best group to measure habitat delivery response. Maybe our approach should be selling habitats (not focal species) to society, as there is a challenge of conveying the value of birds vs. habitats, especially secretive birds unfamiliar to most people.
- How can our future work benefit multiple bird groups, waterfowl and waterbirds (and shorebirds) for example? We need to communicate down to the management level, with a focus on multiple species, maybe even folding in shorebirds into the waterbird group. This combination might help build momentum.
- The Mid-continent Shorebird Plan should have primary strategies laid out for our JV, potentially reducing the need for a JV shorebird strategy revision. We discussed potential advantages to combining the waterbird and shorebirds committees, but for now decided to be inclusive with our wording about wetland bird conservation. Combining committees may be discussed again in the future.

We spent the remainder of the afternoon reviewing and discussing our lists of waterbird research and monitoring needs. Although we wished we had more time to deliberate, we were able to refine the lists, which will be placed on the JV website before the coming NOFO announcement.

Action Items (Waterbird Committee):

1. Greg will send meeting notes plus research and monitoring lists with comments to Rachael and Mike by end of the day, **5 February**. *Done*
2. Rachael will add entries to the research and monitoring spreadsheets from committee members during the next week and return the lists to Greg for refinement and formatting by **8 February**. *Done*
3. Committee will review the revised lists of evaluation priorities; create a new column with your name at the top and include any notes and/or edits for each of the projects ideas listed under both research and monitoring. Committee members will send comments to Rachael by **10 February**. *Done*
4. Rachael will incorporate everyone's comments/edits into the priority spreadsheet and send to Greg by **15 February** to be posted on the JV website via Anna. *Done*
5. Mike and Rachael will send out the updated lists to all committee members and we will all prioritize research and monitoring needs by importance (e.g., H = should be initiated within 3 years, M = should be initiated within 6 years, L = should be completed if resources available after funding more pressing needs). Priorities will be ranked by **March 26**. More detailed information about ranking will be sent with the updated lists.

Waterfowl Committee (Chairs = John Simpson and John Coluccy)

Meeting date: 26 February (12:15 – 4:30 ET; held via Zoom Call)

Following some minor technical difficulties, John S opened our meeting with a welcome and introductions. Greg briefly reviewed the email sent to committee members earlier in the week regarding the history of the JV Science Team and relationship to the JV Technical Committee. Agenda topics / discussion summaries for our ½-day Zoom gathering are below.

Committee attendance: Greg Soulliere, John Coluccy, John Simpson, Dave Luukkonen, Heath Hagy, Auriel Fournier, Drew Fowler, Jake Straub, Mike Eichholz, Randy Knapik, Bob Gates, Adam Janke, Mohammed Al-Saffar, and Mitch Weegman. **Guests:** Doug Gorby and Anna Sidie-Slettedahl (JV staff), Ben Luukkonen (MSU PhD student), Brendan Shirkey (WPMC), and Kali Rush (DU).

Black Duck JV update (John C). Highlights of the virtual BDJV meeting held in November were provided. John reviewed a reward banding study, and ongoing research to evaluate bottlenecks in population growth during the full annual cycle. John and Mitch also reviewed the project Mitch is coordinating with a Post Doc and a PhD student, which includes a planned 4-year deployment of transmitters. Mitch will soon be working from a new location as he has accepted a position at the U of Saskatchewan. The study will be targeting birds nesting in the eastern Boreal region, marking Black Ducks as far west as PA during the breeding and non-breeding periods. Another project mentioned was assessment of demographics for a Black Duck breeding population in NC, where researchers will be marking broods. Finally, John reminded our committee that the BDJV is also involved in annual banding and harvest regulations for this species.

Sea Duck JV update (Greg). The Sea Duck JV is one of the other NAWMP species JVs. Much like the BDJV, and unlike the habitat JVs, the SDJV is focused on research, monitoring, and information sharing to inform management. The vision of the SDJV is to maintain sustainable populations of North American sea ducks throughout their ranges. The JV promotes the conservation of sea ducks by: 1) working with partners to generate and disseminate knowledge that will inform management decisions and sea duck conservation, and 2) increasing awareness of sea ducks within the conservation, industrial, and scientific communities. Greg has served on the JV Management Board for about two years, representing the US portion of the Great Lakes region. Margaret Campbell (CWS) and Kate Martin (FWS) are the Coordinators; Kate is new, taking over from recently retired Tim Bowman. The SDJV has a very active CTT (Continental Technical Team) which has meeting dates aligning with the Board and a portion of each multi-day meeting includes the Management Board and the CTT meeting together. On 15 March, the Board and CTT will meet together to review and approve a 2021 work plan, budget, and RFP (grant) recommendations.

Brief Project Updates by Committee members

- **Aerial Survey Pilot Project** -- Heath provided a presentation about monitoring waterfowl on southern NWRs. Past survey efforts have been quite variable, with different protocols, resulting in mostly unusable data. Increasingly, monitoring information is needed to help defend management actions at NWRs. Heath presented with “the Good, the Bad, and the Ugly” analogy for past monitoring. The FWS needed a plan for the SE refuges, as effort has been mostly wasted due to the bad and ugly approached used and often inaccessible results. First step was developing appropriate objectives – Population and waterfowl-energy-day objectives (e.g., simple approach using 300kcal/day). Aerial surveys planned to assess non-breeding abundances, but delayed due to government shutdown (2019) and Covid (2020). Heath thoroughly reviewed methods for generating abundance estimates with survey data. In addition to distribution and abundance, he presented the surprisingly low costs for

airplane time and travel, about \$600 / NWR. Aerial surveys were most important on the larger refuges, where most birds can only be observed from the air. Use day estimates ranged from 2M to 14M based on based on an “areas under the curve” estimating technique. This monitoring effort will likely expand but with a move to more private contractors (vs government pilots). This effort (especially with collaboration across states and fed) may also provide a foundation to investigate costs to conduct JV-wide surveys or even a MS-Flyway scale.

- ***Great Lakes Mallard GPS / GSM Transmitter Project*** -- Ben Luukkonen provided a presentation, following Dave’s opening comments about the project and many funding partners. Ben reviewed the four study objectives, research hypotheses, and methods. Focus will be on breeding mallards from MI, WI, OH, IL, and IN, as the Great Lakes mallard population has been in decline for 20 years. Expect to deploy about 450 transmitters over three years, 2021-2023, with emphasis on examining survival and productivity while also comparing habitat use to the LSI categories using in the 2017 JV waterfowl strategy. One success already has been the many agencies and organizations collaborating on this important project. Spent a fair bit of time discussing the raised-panel transmitters and potential trade-offs in solar capture vs. reduced aerodynamics.
- ***Wisconsin Waterfowl Habitat Conservation Strategy*** – Jake reviewed the latest information regarding this effort, including the WI DNR developing an on-line platform to share all the spatial data used in the 2020 WI strategy. There is evidence that information in the WI Strategy is already being used for wetland grant applications. Moreover, those who were involved in planning are now leading in implementation – this plan is expected to be the primary driver for wetland-bird habitat delivery in WI. There may be some tactical delivery groups forming to steer implementation. Moreover, Doug mentioned the JV Management Board wants to better focus on habitat actions to achieve objectives in our JV strategies.
- ***Michigan Waterfowl Step-down Planning*** – Randy reviewed status of this effort. After a pandemic-related delay, MI partners are ready to get back on track, and kick off the revision of the 1998-2013 MI strategy. MI partners met in 2020 to identify steps forward, and a follow-up meeting is planned for March 2021. Committee discussion covered different planning approaches used, and why the approach in WI will almost surely lead to effective on-the-ground conservation. Randy also mentioned the MI Voluntary Wetland Restoration Program, working with conservation partners especially through the regulatory program. JV planning material has been helpful. Finally, Randy briefly described a phosphorus-load reduction project occurring in southern MI. Water quality monitoring and modeling is taking place in OH too, to help assure habitat-conservation targeting will achieve multiple benefits.
- ***American Black Duck Decision Support Tool*** – John C. described how Black Duck and Atlantic Coast JV partners are expanding their model using the most recent stepped down NAWMP population objectives. They are estimating black duck and other dabbling duck energy demand and estimating energy supply based on the most recent NWI data augmented with regional spatial wetland data and JV energy density assumptions to identify energy deficits at the HUC12 scale. Modeling was completed for the South Atlantic Region and the North Atlantic is now underway. Once complete, the effort will move to include the CHJV and UM/GL JV regions. Web application will include the ability to display habitat restoration and protection objectives and inputs at the HUC12 scale including total and species specific NAWMP objectives, DUDs and energy demand as well as NWI wetlands and energy supply by wetland type. John would like to convene our committee to spend some time looking “under the hood” and collecting feedback. Discussion went in many

directions, including conservation near urban areas and HD objectives plus opportunities to improve integration across bird groups.

- **Other Project Updates** – Dave reviewed ongoing research with MSU to evaluate historic DNR floodings and their wildlife use and people-related values relative to their maintenance cost. Post Doc leading effort to help answer questions about maintaining / retaining floodings. Dave also mentioned that another MI project reviewing the intensively managed areas is ending, but a Post Doc may pick this up using similar methods for additional assessment. Drew – updated the committee on a UWSP wood duck graduate project evaluating survival at different scales across the JV region, and finding best precision at the JV (largest) scale. Survival and abundance estimates are very good, and should lead to development of an annual cycle population model. Auriel – mentioned a sea duck project she is collaborating on (funded by SDJV), simulating potential survey designs and developing monitoring approaches for the lower Great Lakes.

Succession of Committee Chairs / Members

Although the Waterfowl Committee is considered an ad hoc workgroup of the JV, in 2019 we established a 3-year term of service for chairs. John S took over from Greg as co-chair in November of 2019. John C, also an original co-chair of the committee, offered the opportunity at this meeting, and Mike volunteered to co-chair the committee for next three years. His offer was immediately seconded and approved by the group. With Mitch moving to Saskatchewan later this year, we expect he will have less ability to stay involved with our committee, but he will remain a member for now. Heath and Jake have also moved to positions outside the JV region in recent years, but they have continued to participate in committee meetings and have been able to add value to the group. We then discussed the evolution of JV planning and science needs since our committee was established in 2005, particularly with regard to new (2012 and 2018) NAWMP goals and their social implications. There is a growing need to diversify our committee expertise, especially related to integration of social objectives (full gambit of HD considerations) and perhaps better understanding of economic aspects to help drive waterfowl habitat delivery. John C mentioned that DU might be adding a specialist in EGS and Ag. sustainability to the Great Lakes Office staff. Mike reviewed ideas for building our committee expertise to meet some of these new priorities, and he offered to develop a list of subject areas for which we should attempt to recruit people to help. Auriel Fournier also expressed willingness to reach out to faculty members and colleagues she knows with HD expertise.

Research and Monitoring Prioritization

The need to collectively review and refine current lists of JV waterfowl research and monitoring priorities was identified. (These lists are posted on the JV website to provide guidance to those interested in JV support for evaluation projects.) We decided this review and deliberation requires at least a 1-day session, and we should meet in person. We also discussed the National Fish and Wildlife Foundation's (NFWF) monitoring project to measure bird response at NFWF-funded habitat projects. Great Lakes Audubon received the NFWF grant to complete the work, but Bob suggested we contact Audubon staff and remind them of the similar evaluation needs identified by the JV Waterfowl Committee to explore collaboration opportunities. Sarah Sanders (member of JV Waterbird Committee member) was the recommended initial contact.

Action items (Waterfowl Committee):

1. Following this meeting, Mike Eichholz will co-chair the JV Waterfowl Committee for three years. Thank you Mike and **Thank You John Colucy** for co-chairing since this committee was established. *Done*
2. By **15 March**, Mike will explore ideas for how we might expand JV expertise (Science Team and or Management Board), especially for HD/social sciences to help with outreach, understanding

- social behaviors and drivers, and actively implementing JV habitat conservation objectives. He will develop a list of subjects (and skill sets), providing a basis for future committee discussion.
- By **5 March**, Greg will forward current lists of waterfowl research and monitoring priorities to assistant JVC Anna Sidie-Slittedahl to be included on the JV web site, letting her know that current prioritization (H, M, L) on waterfowl lists is adequate for now. **Done**
 - By **1 April**, Greg and Bob will composed an email to let Great Lakes Audubon know (via Sarah) about Waterfowl Committee interest in the NFWF monitoring project and the potential for multiple committee members to collaborate if Audubon is also interested in this type of partnering opportunity. We would be especially interested in work related to testing planning assumptions in the JV Waterfowl (and waterbird) Habitat Conservation Strategy. **Done**
 - By **mid-August**, co-chairs John and Mike will determine whether an in-person fall meeting will be possible (travel-approval wise) for at least most of the committee. We determined an in-person meeting is required to effectively review, deliberate, refine, and rank lists of waterfowl research and monitoring needs. From those lists, the group will also determine how best to move one or more of the collective high-priority research efforts forward in 2022. *Note:* The next meeting of the Waterfowl Committee (and full Science Team) will likely occur at the next planned Midwest Fish and Wildlife Conference, currently scheduled for Des Moines IA in February 2022, and Adam has offered to assist with JV meeting planning.

