

## Appendix XI – Comments and Responses from the Draft Final Review period

## **Comments Received Regarding the Draft Final Lower Buffalo River Wildlife Survey Report**

**Comments are in BLACK and Responses are in BLUE**

**Comment 1** - indicate which birds are residents versus migrants, and perhaps some indication of habitat preferences (water, shore, upland, yadda yadda).

Response 1 – While this report is intended to provide an inventory of observed fauna within the study area, it is not intended to serve as a field guide nor a life history text of the observed species. Best efforts to provide general habitat distinctions are made, but note this is above and beyond the scope of work for this project

**Comment 2** - On Page 17, there is Figure 12. It does not have the X and Y axes labeled

Response 1 – X and Y axes have been labeled

**Comment 3** - I am wondering if Figures 12 and 13 would be better as bar graphs? It seems to me they are showing counts are discrete locations and the lines were a bit confusing to me at first. I understand if that was done to add some variety, since most of the graphs are bar graphs.

Response 1 – All graphs have been changed to bar graphs as to not suggest a correlative relationship.

**Comment 4** - In Figure 12, there are only 15 locations shown and I thought there were 20 total? I guess I was a bit confused by those images.

Response 1 – Figure 12 depicts the 15 study area sites (within the AOC) and excludes the 5 ‘reference area’ sites (located outside of the AOC). The revised graphs should be more explicit in this regard.

**Comment 5** - Is there a list in the report showing the names that each numbered location would correspond to? It might be helpful to have that in the report before the graphs start.

Response 1 – Yes, this list is located in Table 1 (pg 9). Due to confusion, all graphs will be changed to reflect the site ID # and name. Please reference Table 1 to understand the site #/name relationships.

**Comment 6** - In figures 12, 13, and 18, “Series 1” is on the side of the graphs. It seems unnecessary.

Response 1 – Agreed. This has been removed.

**Comment 7** - Around page 43 is Map 4 In the legend, “Time and Area Constrained Search” appears to be a yellow line. It was hard to see on my screen and might be better if it was shaded to look more like the yellow shaded areas on the map.

Response 1 – The color and intensity of the legend icon and the map polygons are identical.

**Comment 8** - I'm assuming that BNR will get copies of all of the raw field data sheets so you can refer to them in the future if needed.

Response 1 – The original/raw data sheets are within the final submission as Appendix VIII

**Comment 9** - Bats seem to given an unusual amount of attention compared to other species. More than 4 pages are devoted to bats. All other species are discussed in a few sentences or paragraphs. The report should explain if there is a reason for this special emphasis.

Response 1 – We had an AES bat biologist conduct the bat effort and they provided a supplemental report. Within the bat section we said we'd provide a habitat assessment, hence the added information. Effort was well distributed, however, between survey efforts. Within those 4 pages are sonogram results, something unique to bats which have no counterpart in other target mammal fauna.

Based upon this comment and the fact that bats do seem to get extra attention, I have added more general information where relevant regarding other mammal species in an attempt to offset your concern.

**Comment 10** - Mink, a key ecosystem indicator species, is only mentioned once in a table. The table notes burrows and tracks along naturalized shorelines. Mink are not mentioned in the conclusion's mammal discussion. The observation of mink tracks and burrows is an important one and should be expanded on.

Response 1 –Observation details regarding the mink tracks/burrow has been included in discussion and conclusion section

**Comment 11** - are there other lines of evidence such as reports of mink road kill and the need to control mink in certain areas through trapping that could be mentioned here?

Response 1 – DOR/road-killed mink were not observed. Additionally, no observations suggested an overpopulation of mink which would require considering trapping or other population control measures.

**Comment 12** - The presence of the spiny soft shell turtle in the AOC which appears to be a sensitive species should be discussed at bit more. Few specifics are provided.

Response 1 – Details are provided in the report about the species’ natural history, its local population declines, the exact location of observed individuals within the AOC, and the fact that NYSDEC is currently conducting radiotelemetry to further understand the current population dynamics. I’m not sure what additional detail you are requesting. This is a one year study using non-invasive, general methods to determine presence/absence of target fauna. The species was confirmed present in the AOC. Its presence denotes a certain level of water quality and may imply the presence of or need for suitable nesting and overwintering habitat. Any other information would require a more detailed analysis, such as the study currently ongoing by NYSDEC. Ken Roblee, NYSDEC Buffalo Office Herpetologist, could provide additional detail.

**Comment 13** – The presence of mink and the spiny soft shell turtle within the AOC is a very good sign. I'd suggest adding a more detailed focused discussions of mink, spiny soft shell turtle, any resident breeding birds that AES considers potential good AOC indicators, and any other candidate indicator species. This would greatly assist the RAP in defining a delisting process for the wildlife related BUIs.

Response 1 – Good suggestion. Additional detail has been added in the discussion section to better represent this fact. We have also added a table of suggested AOC indicator bird species.

**Comment 14** – The QAPP states that one reference location would be located. The report states that five locations outside the AOC were selected. Are all 5 of these locations reference sites, or is there only one reference site defined?

Response 1 – There is one reference location (Seneca Bluffs) with 4 sample points. An additional point was taken at coastal Lake Erie to document the immediately adjacent fauna to the west since we feel this data is important to have and may aid in future decisions regarding wildlife populations and/or habitat types to consider during restoration activity. Detail has been added in the Methods and Materials section to clarify.

**Comment 15** - The report does not seem to clearly address the issue of reference sites. The report should include a focused discussion on how reference locations were selected.

Response 1 – Detail was added in the Methods and materials section of the report

**Comment 16** - The discussion section should describe how AOC populations compare with the reference sites.

Response 1 – Detail regarding this was added to the Discussion section

**Comment 17** - Figures should compare AOC data to reference sites whenever possible.

Response 1 – A figure was added in the discussion section comparing comparably sized reference and study area habitat types. Another table (Table 7) was added to compare diversity

of breeding and migratory bird species within the AOC, reference area, and total potential for the region by habitat type.

**Comment 18** – Recommendations should consider any reference site issues related to their use in the delisting process.

Response 1 – Statements were added in the discussion and conclusion sections as to how recommendations may serve the delisting process.

**Comment 19** – The identification of appropriate reference sites that could be considered by the RAP would be a major achievement and contribute to the BUI delisting process.

Response 1 – This continues to be a difficult achievement. A true reference site should reflect pre-settlement ecological conditions and autogenic ecological processes. Stakeholders may want to clearly define the parameters of a reference area for the AOC which aligns with realistic goals. In this regard, the selected reference area (Seneca Bluffs) may be appropriate.

**Comment 20** – Suggest reconsidering the report recommendation with a focus on identifying AOC wildlife indicator species for delisting purposes, suggested improvements to monitoring approaches, and consideration of future monitoring approaches as it relates to planned GLLA work with an aim to document restoration progress.

Response 1 – A table of proposed AOC indicator species was included to be more specific regarding potential delisting criteria goals. All future restoration activities should be aligned with performance standards, of which faunal metrics are integral. The level of detail to project restoration projects for specific parcels within the AOC and then develop faunal benchmarks is above and beyond the scope of this project.

**Comment 21** – Most of the habitat restoration recommendations presented do not add any value above and beyond existing AOC habitat restoration plans.

Response 1 – All restoration recommendations were related directly to the observations of the survey team during data collection and the resultant analysis. Should these be redundant with existing plans, this is coincidental and reflects/encourages that current restoration plans are appropriate. A critical analysis of restoration opportunities is more aligned with a master plan, wildlife habitat management plan, or restoration planning project, all of which are outside of the scope of work for this project.

**Comment 22** – If specific habitat recommendations are included they should include a description of why it is needed and which species these actions would benefit.

Response 1 – Recommendations were offered outside the scope of this project which was to conduct a wildlife survey and provide a data report. However, we will add some general notes to address this comment.

**Comment 23** - Suggest replacing the terms "on site" and "off-site" with "study area" and "reference site". In places it can be unclear if the term "on site" is referring to a specific monitoring station or location or the entire AOC study area.

Response 1 – These changes have been made throughout the report

**Comment 24** – Does the term "outside the AOC" refer to the reference site when used in discussing sightings?

Response 1 – Yes. Per Comment 23, this has been clarified in the text by changing “outside the AOC” to “reference sites”

**Comment 25** – Tables and charts should use station names and common names rather than station numbers and Latin species names in order to make these displays more readily understandable.

Response 1 – These changes have been made in all tables and charts

**Comment 26** – Introduction, 2nd paragraph

a- The end of this paragraph could note that with the decline of industrial manufacturing in the AOC many industrial sites are now abandoned and are now available for recolonization by plants and animals to various degrees.

Response 1 – Proposed verbiage was included

b- The meaning of the last sentence is unclear. The word "pretense" does not seem to make sense in this context.

Response 1 – Agreed. It was changed to ‘conditions’ which should now read more clearly.

c- Suggest ending this section with a brief paragraph describing the signing of the amended GLWQA of 1987 that called for the establishment of the Buffalo River AOC.

Response 1 – The suggested verbiage was included

d- Reference could be made to the millions of dollars on habitat and green infrastructure projects currently underway that promise to greatly restore the AOC's ecosystem.

Response 1 – The above language was added into the report

e- Special mention should be made of the GLLA plans and related shoreline restoration project.

Response 1 – We added a brief reference in the Project background section. If you would like to share additional/suggested language which you feel is important to add, please do so and we will be happy to incorporate.

f- You could move and revise as needed the 2nd paragraph of the following section.

Response 1 – Changes were made to conform to new information from above comments

**Comment 27** – Page 4. Section 1.1, You could provide the delisting criteria for the mentioned BUIs.

Response 1 – We added the delisting criteria for the relevant BUI's as listed on the International Joint Commission's website.

**Comment 28** - Page 4. Section 1.1, 3rd paragraph

a- Suggest removing the first sentence. It seems a bit presumptuous to state that this is the first study to have collected scientifically valid data. You may unintentionally offend someone. Perhaps its true but its seems that you would have to present a fairly systematic review of all previous studies.

Response 1 – The intention is not to criticize nor suggest a critical review of existing studies, but to make clear that this is the first ever vertebrate inventory which has been intentionally aligned with the goals and efforts associated with the Buffalo River AOC as one unit. It's not commenting on other studies' scientific validity in general, just as they relate to the efforts within the AOC that are stated in the paragraphs above it framing the Project Background.

Since this is seemingly ambiguous in the text, I have slightly altered the verbiage to be clear about the fact that this current baseline study is necessary to generate any statistical validity for monitoring target wildlife (birds, herps, & mammals) populations in the AOC moving forward since nothing comparable currently exists.

b- No mention is made of some studies that appear to have used systematic, repeatable approaches such as the Bird Studies Canada Marsh Monitoring Program (MMP), [http://www.dec.ny.gov/docs/regions\\_pdf/marshassess.pdf](http://www.dec.ny.gov/docs/regions_pdf/marshassess.pdf)

Response 1 – There is reference to the MMP and NAAMP in the methods section. These are referenced in the survey methods since we decided to use the same methods for several reasons: 1) they have been previously implemented within the AOC (though not under an AOC-wide study design); 2) they are widely accepted (bi-nationally) for comparative capabilities and we have used these same methods for amphibian monitoring studies throughout the United States; and 3) they are systematic and repeatable.

c- This raises questions on how comprehensive a review of previous studies was made.

Response 1 – While we were not tasked to perform a comprehensive review of previous studies, we did review previous data during survey design. We reviewed what previous/existing faunal data were provided by BNR to learn about the existing natural areas in the AOC, define access, and to overlap survey points where possible as to potentially retroactively include these previous studies into the pool of comparable data moving forward.

It appears that Comments 28 a-c may reflect a misunderstanding about the intentions of the sentence referenced in Comment 28a. For clarification, at no time was there a comprehensive review of previous studies. This was not a part of the contracted project. Therefore, no statements were made regarding the performance of or methods used in these studies. The ‘scientific validity’ referenced in the report is in direct relation to the Buffalo River AOC baseline data pool. No previous data set may be considered for this qualification and therefore previous data sets offer little regarding future statistical data analysis of wildlife populations over time within the AOC moving forward. I have re-worded the section to avoid this confusion moving forward.

d- The bottom of Page 6 seems to contradict these statements saying that this project used the same protocols as the MMP.

Response 1 –After reading the above responses and reviewing the correlative changes made in the report, this should make more sense. If not, please contact me directly to discuss further (Michael McGraw @ 610-238-9088). Thanks.

e- Perhaps it would be best to drop the first two sentences

Response 1 – The report has been reworded to recognize previous survey efforts and credit the cited reports. In fact, The report also highlights the subtle, yet important distinction between the current study and previous efforts, which is that this current study directly aligns with future visioning for a systematic vertebrate monitoring program, allowing scientists, regulators, and policy makers to quantify changes in target fauna populations over time in response to changes in the AOC, specifically ecological restoration and enhancement projects under GLLA plans.

**Comment 29** – Section 1.3. First sentence - You could clarify that the purpose of the QAPP is to help ensure that the data collected would be well documented and scientifically valid.

Response 1 – I added this to Section 1.3

**Comment 30 - Do bats utilize abandoned industrial structures in the AOC?**

Response 1 – Due to property rights and trespassing laws, we were not able to access any abandoned buildings within the AOC for bat or other faunal surveys. It is a highly reasonable assumption that bats utilize abandoned buildings within the AOC. European studies have shown that some bat species regularly choose human constructions over available tree roosting sites (Mazurska and Ruczynski 2008). Several U.S. studies have also found that large, abandoned buildings taller than surrounding structures providing warm, stable internal temperatures create ideal day and night bat roosting areas (Mazurska and Ruczynski 2008; Rhodes and Johnson 2006; Entwistle et al. 1997; Mager and Nelson 2001; Neubaum et al. 2007; Vander Pol 2012). Whether day, night, maternal, migratory roosts, or all exist is uncertain without further investigation. In addition, local accounts claim that large bat roosts exist under broken concrete slabs along Coastal Lake Erie (outside of, but near the AOC).

Entwistle, A. C., Racey, P. A., and Speakman, J. R. 1997. Roost selection by the brown long-eared bat *Plecotus auritus*. *Journal of Applied Ecology* 34:399-408

Mager, K. J. and Nelson, T. A. 2001. Roost-site selection by eastern red bats (*Lasiurus borealis*). *The American Midland Naturalist* 145:120-126

Mazurska, K. and Ruczynski, I. 2008. Bats select buildings in clearings in Bialowieza Primeval Forest. *Acta Chiropterologica* 10:331-338

Neubaum, D. J., Wilson, K. R., and O'Shea, T. J. 2007. Urban maternity-roost selection by big brown bats in Colorado. *Journal of Wildlife Management* 71:728-736

Rhodes, M. and Wardel-Johnson, G. 2006. Roost tree characteristics determine use by the white-striped freetail bat (*Tadarida australis*, Chiroptera: Molossidae) in suburban subtropical Brisbane, Australia. *Austral Ecology* 31:228-239

Vander Pol, R. S. 2012. Characteristics of urban constructions occupied by bats. Thesis, Baylor University, TX.

**Comment 31** – Page 8. Section 3.1 - Habitat Descriptions

a- It might be helpful to provide a map that shows the approximate distribution of the various habitat types that are discussed.

Response 1 – Agreed. While we were not contracted to map distribution of habitat types we did decide to add an additional level of habitat information to aid understanding the AOC as a whole.

b- Can you provide an approximate acreage size of each of the specific stations described?

Response 1 – I’m not sure what you are asking for. I assume “specific stations” to mean survey points. A “specific station” may refer to a variety of survey method execution.

For example,

- An unlimited distance point count station can safely be considered a point with a minimum of a 500 foot radius in good conditions (buildings and other obstructions limit this as well as weather conditions and ambient noise).
- A transect search basically covers 10-20 feet on either side of a predetermined line.
- A Time Constrained Search uses spatial polygons, these can be quantified in acreage if needed
- A trap array is limited to the exact location where it may catch an animal

Since this comment is within the Habitat Descriptions section, perhaps you mean approximate acreage of each habitat type observed? This is not within the scope of the project. This would require a detailed ecological community mapping project.

**c- Do size differences make it difficult to compare diversity and abundance for some species?**

Response 1 – We would require clarification to fully answer this question. If we assume “size differences” means differences in patch size/acreage of different habitat types where the survey points are taken then the response is as follows.

Variation in abundance of some species can be directly affected by size difference of preferred habitats and adjacent habitat types. The ability to compare these is a function of a standardized method. Regardless of the variation in habitat size, species diversity, or species abundance if the data collection method is identical, the data are comparable. In fact, the goal of a survey like this is to identify abundance and diversity at different locations which, naturally, will consist of different sized habitats.

The purpose of this study was to generate a baseline data set. There are limited comparative capabilities with only the first year of data. These are observed facts which can be later compared to repeated survey efforts over time.

If there were tracts of forest or land which we couldn’t visit comprehensively then documenting and comparing diversity would be an issue. Total AOC documented vertebrate fauna diversity may be impacted by lack of access to CSX and other sites within the AOC (potential to increase the diversity of documented fauna). When comparing study area sites to reference site, yes, the patch size of a particular reference habitat should be as close to the size and shape of your intended goals for the study area to best reflect realistic target faunal diversity and abundance goals. This is a very difficult feat. Comparable size and habitat type between reference and study area floodplain forests is available in this report.

For point count surveys, we collect a representative sample of bird populations (diversity and abundance) within an area. Therefore, when you view a bar graph showing the “species richness per location”, this reflects the point, not the space in its entirety. “Size difference” does impact both abundance and diversity within compared locations, but this variable should be reflected in the standardized data collection method. For example, if we have two identical grasslands (same soils, floral species composition, adjacent habitat types, aspect, topography, etc) but one is 10 acres and the other is 100 acres, it is likely that point count results from concurrent survey efforts will result in different results regarding species richness and overall abundance. However, the responses to size may be greatly different depending upon the species.

Here are just a few of the potential responses by birds which may affect changes in abundance and diversity at a site from a change in size:

- Some grassland birds will simply not breed in patches smaller than a certain acreage.
- In response to a smaller available habitat type, some species will defend smaller/tighter home ranges, provided there is adequate food and nesting structure (resulting in a sample which reflects a higher abundance)
- Edge effect will greatly affect diversity documented. In the center of a 100 acre grassland you are less likely to observe birds which inhabit other habitats. In a 10 acre grassland parcel, you may document representatives from a pool of grassland-breeding bird species, but also document forest edge and some interior forest species (depending on acoustic conditions)
- Predation is affected by “size differences” and may alter the diversity and abundance of species

The abundance data in this report is comparable because it is gathered using the same method at sampling station/point, regardless of the difference in size of the habitat types surrounding it. For survey repeatability purposes, this is why it is important to note secondary habitat types (see Table 1) as to account for patch size to some extent and (more so) to ensure that habitat heterogeneity at a point is standardized when considering both abundance and diversity.

**d- Species presence and abundance can be related to the size of a habitat. Even rough size approximations would be useful.**

Response 1 – General approximations of overall acreages are now provided in the discussion section as well as some example comparative analyses between similarly sized reference and study area floodplain forest and old field habitats.

The survey methods standardize the size of the sampled area. Any changes in bird abundance or diversity as a result of habitat size will be reflective in the data. While we did not have the budget or scope to develop habitat community maps, the maps provided have scale bars and this level of analysis will be possible by those interested in doing so.

**Comment 32** - Page 8, 3rd paragraph, last sentence - The wording is not quite right and could be reconsidered. "find true value" and "serve as a catalyst" in particular don't quite seem to work. I think it is trying to say that Only experienced biologists are able, or should, conduct opportunistic searches. Maybe try and state this in a more straightforward way.

Response 1 – Changes were made to this statement

**Comment 33** – Page 9, Section 3.1, Habitat Descriptions

- Table 1 should distinguish between "onsite" and "offsite" locations.

Response 1 – We color-coded them to reflect this

- Clarify if the 5 "offsite" locations be considered to be "reference" or "control" sites?

Response 1 – All “offsite” descriptions were changed to “reference” to clarify

**Comment 34** – Page 14 Suggest removing the first two sentences

Response 1 – Not quite sure why these should be removed... The intention is to inform readers that these wetlands are emerging from non-natural conditions and are primarily fed by precipitation but may have some groundwater connections (difficult to assess in non-natural settings, especially when an ecological assessment is above and beyond the scope of the project).

**Comment 35** – Page 15, Figures 12 through 14 –

- Should use bars to show numbers from site to site not a connecting line. The connecting line suggests that there is some connection between points.

Response 1 – This has been changed.

- differences in habitat types may explain differences.

Response 1 – Yes. This statement is true, but vague. We are not sure what exactly is being commented on.

- Rather than station numbers use place names to make it easier for the reader to follow.

Response 1 – This has been changed (see all relevant Graphs)

- Stations could be grouped by habitat type to make comparisons easier

Response 1 – We do not feel as if the level of effort to re-group the survey points will provide additional value. The raw data and basic summaries are present in the report and can provide an interested reader (or future surveyor) with the tools to make such a comparison.

**Comment 36** – Page 16, Table 2 -

- Should clarify how "Breeding?" was evaluated.

Response 1 – A link was provided in the Methods section to the NYSDEC NYBBS Observation Codes. On this page it describes how to classify behavioral observations.

- The QAPP did not describe a process for how breeding would be identified.

Response 1 – This is a standardized method which has been implemented nationally by USGS, with modifications made per state for respective Breeding Bird Surveys. This methodology was referenced within the QAPP. We used the NY state-modified version for this report, as detailed in the methods section of the report.

- Need to be careful that this is not interpreted by some readers to mean that breeding is definitely not occurring within the AOC due to some environmental factors.

Response 1 – Agreed. We cannot state that some birds are not breeding within the AOC due to “some environmental factors”. In fact, the very nature of site selection by animals for breeding and other critical life history activity is driven by environmental factors within a given area (biotic and abiotic). To make a claim such as this, a significantly more detailed study would be required and would likely be irrelevant to the goal of this project. By documenting what is currently present and what those animals are doing (migrating, breeding, wintering, etc), we can paint a picture over time as to how the animals are responding to onsite conditions, rather than attempt to correlate very specific interactions between a particular species/individuals and its/their response to the myriad environmental factors within an ecosystem.

- I would guess this is based on observed mating behaviors?

Response 1 – Yes. There is a temporal and behavioral codification system for every species in the continental United States. It takes considerable field experience and a depth of knowledge regarding geographic location and life history information of ALL bird species within a given geographic location. For example, if we observed a male common yellowthroat singing from a territory within suitable habitat on repeated site visits from May through to July, this is considered ‘probable breeding’ (this animal has deemed it worthwhile to defend this territory through the breeding season, suggesting that he likely has a mate, has engaged in copulation and nesting behavior, and is defending an area with adequate nesting structure and foraging

resources). If we observe a female indigo bunting carrying a fecal sack in late June, this is 'confirmed breeding' behavior (this mother must have young chicks in the nest nearby).

- Do the on-site/offsite terms mean the same as study area/reference site?

Response 1 – Yes, clarifications have been made regarding this.

**Comment 37** – Page 16 bottom of page –

- comparative bird assessment - Doesn't the habitat type need to be considered when comparing results from these locations.

Response 1 – Not when comparing the data collected per survey point to observe overall richness and abundance. This is an issue when comparing to any “reference” conditions and if it is decided to compare the performance of one tract of a certain habitat within the AOC to another tract of the same habitat type within the AOC. The comparative assessment in the report is simply the observed diversity and abundance at each survey point (where identical methods were employed). This is a means to assess where current biodiversity and general distribution of animals within the AOC are. Once post-baseline data is gathered, the data will then be afforded a more critical analysis where habitat type will be an important variable. If one was really interested in the diversity and abundance of animals observed within two different locations which share the same habitat classifications, they may do so in a rudimentary fashion with the provided data. This is not only outside of the scope of work for this preliminary data collection effort, but will provide minimal value until the factor of time is included and restoration goals are aligned for specific locations.

- Would it make sense to group them by habitat type, color coded?

Response 1 – Lumping species by habitat types may provide insight for very selective species. It is assumptive for most other species including adaptive/generalist species.

**Comment 38** - Page 17 - bottom of page - Use of the word "speciose" may not be reader friendly.

Response 1 – “Speciose” is the most appropriate word to use here to specify the biological “richness”, or diversity of species within a location (Hart 2008). If you feel strongly against using this word we can provide a synonym, but prefer to keep it in.

Hart, Michael W. 2008. Speciose versus species-rich. *Trends in Ecology & Evolution*, **23 (12)**:660-661  
[doi:10.1016/j.tree.2008.09.001](https://doi.org/10.1016/j.tree.2008.09.001)

**Comment 39** – Section 4.1, 1st paragraph, last sentence - Should acknowledge the beneficial impact that planned GLLA dredging and restoration projects will have on the ecosystem.

Response 1 – Agreed. We have added a sentence to reflect this.

**Comment 40** – Section 4.2 - Avia –

- The discussion would be more helpful for AOC BUI purposes if it described resident birds that reproduce in the AOC.

Response 1 – I have added a section and two additional Tables (7&8) to address this comment.

- Transients migrating through the AOC, although of interest, do not necessarily reflect AOC conditions.

Response 1 – We agree that transients do not tell us much. Therefore, we have added additional detail in the discussion section as to not over-emphasize transient observations.

To be clear, we do know that migrants reflect AOC conditions and are an important part of this study. Transients are defined differently and tell us less about the conditions of the site, but rather raise questions about how and why the animal is there. Migration has been widely (globally) accepted as a critical phase of literally billions of birds every year, twice a year. Without adequate stopover habitat which provides adequate food, shelter, and clean water entire populations can be decimated. The red knot migration stopover in the Delaware Bayshore area of southwestern New Jersey is a fine example (this species almost went extinct due to the habitat/ecological conditions at migratory stopover sites). Although the fall-out/results of poor migratory habitat conditions typically do not play out at the site (birds die elsewhere as they move on in poor physical condition), population trends over subsequent years tell the story. It is critical to the BUI delisting process to provide adequate migratory stopover habitat for neo-tropical and temporal migrant songbirds, raptors, and waterfowl. Additionally, a great potential exists to improve conditions for migrant waterfowl and shorebirds as shoreline restoration, submergent aquatic vegetation, shallow water wetland restoration/creation, and emergent marsh wetland restoration activities are planned and implemented. The site's geographic location deems it in an important migratory pathway for breeding birds of central, eastern, and to some extent, western Canada.

Lastly, a good number of migrants have the potential to breed within the AOC once conditions improve (habitat which is currently not present is created or ecosystem function of existing habitats is restored), offering a window of potential for restoration planning (very helpful for maximizing the effective use/positive results of a restoration project).

**Comment 41** – Section 5 - Recommendations - 2nd sentence - Unclear what "occurrence" is being referred to here.

Response 1 – Agreed. I have made clarifications in the report.