

Reviewer	Page No. MASTER Doc	Start Line of Comment in MASTER Doc	Protocol Section	Comment	Author Response	Revision
INT 1	8	248	Element 1 - Objectives	Delete	None	None
INT 3	12	423	Element 1 - Sample Selection and Size	<p>“Common” and “relatively common” are used in this paragraph. These terms are subjective and could be interpreted differently by different users. In my experience, sites don’t manage for the “commons” anyway. Surveys are often earmarked to look at/for T&E species. How do the same estimates look for sampling those species?</p>	<p>MK: Agreed that the terms are subjective, however, the intent is to provide general guidance and to drive home the effort that would be required to detect a trend under different conditions of decline and species detection. Very few stations will want to sample 100-200 sites for 10-20 years to detect a trend. Text added to clarify that f the species had fewer than 25 detections per year, trend estimates will not be feasible. When we first started to develop the protocol, surveys indicated that trend estimates were the primary objective for most refuge stations monitoring landbirds. The literature indicates that under most conditions and certainly for rare species, local scale monitoring of trend is simply not practical.</p>	<p>Text added to clarify that f the species had fewer than 25 detections per year, trend estimates will not be feasible.</p>
LC	15	569	Element 3 - Establishment of sampling units	<p>Should there be direction to collect coordinates in WGS84? When locations are entered in AKN, they are assumed to be lat/long, WGS84.</p>	Edit made.	<p>Instructions to set GPS to WGS84, with explanation of why, inserted into text.</p>
INT 1	15	576	Element 3 - Establishment of sampling units	<p>FYI only - This all seems like it ought to be optional (or if desired) depending on whether a permanent marker is needed. There may be no need to have a permanent marker if the surveyor can consistently return to a point within 3-5 m using GPS. We don’t feel the need to have a marker with current technology. But, we also print our bulls-eye diagram on each datasheet superimposed over the current imagery; this works in our mosaic of woodlands, but would not be so useful in a contiguous forest.</p>	MK: Agreed. Text edited.	<p>Added: "If permanent markers are planned..."</p>

INT 2	15	579	Element 3 - Establishment of sampling units	Not practical in grasslands.	MK: Edit made.	Added:"Also in forests, it may be..."
LC	16	615	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.	Correct link inserted.
LC	16	625	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.	Correct link inserted.
INT 1	16	628	Element 4 - Data entry, verification, and editing	This is probably too specific for the main body of the protocol and should probably go in SOP 5.	MK: Moved to SOP5.	Moved to SOP5.
LC	16	628	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.	Correct link inserted.
INT 1	17	645	Element 4 - Analysis methods	Previous sentence too specific for main body of SOP. Links may change.	None	None
LC	17	645	Element 4 - Analysis methods	http://data.prbo.org/apps/analysts/	Edit made.	Correct link inserted.
INT 1	17	657	Element 4 - Population trend and habitat analyses	Not in lit cited	None	None
INT 1	17	657	Element 4 - Population trend and habitat analyses	Ditto	None	None

LC	20	774	Element 5 - Annual Reports	http://data.pointblue.org/science/biologists/	Edit made.	Correct link inserted.
LC	20	775	Element 5 - Annual Reports	http://data.prbo.org/apps/analysts/	Edit made.	Correct link inserted.
WP	27	1098	Element 8	Needs to follow Journal of Fish and Wildlife Management Guidelines. See examples in Survey Protocol Handbook and instructions in the Survey Protocol Template. Also needs to be checked for completeness following this round of editing. Because SOP references are linked to this section, check those in text citations to see if they are in this section, as well.	I use EndNote to format references. Final version will have Endnote markers added and the final reference list is found in Element 8.	I use EndNote to format references. Final version will have Endnote markers added and the final reference list is found in Element 8.
MK	27	1098	Element 8	Updated citations. Will need to check on details of formatting for JFWM. This can be done after reviews and final editing. This list does include all protocol content, including SOP's and SM's. If this addresses your comment, then delete to resolve.	Done.	Done.
INT 1	33	1372	SOP 1 - Example Sampling Designs	Several of the references in this SOP are not in lit cited.	None	None
INT 1	35	1451	SOP 1 - Sample selection and size	Not in lit cited	None	None
INT 2	45	1782	SOP 3 - Weather	What about landbirds?	MK: Edit made.	Edit: Changed 'marshbirds' to 'landbirds.'
INT 2	46	1823	SOP 3 - Digital Photos of Vegetative Structure and Composition (optional)	Citation for this isn't listed in references.	None	None

LC	46	1841	SOP 3 - Vegetation Class	This is not currently supported , in AKN. This is coming in Version 2.	Noted. Will leave in the protocol as update expected before June 2016.	None.
LC	47	1848	SOP 3 - Disturbance	This is not currently supported in AKN, for Landbird as I didn't notice it as part of the previous protocol. (Was it?) However, I will request this be added. What about "management actions"? These are both in the database for Marshbird.	Noted. Will leave in the protocol as update expected before June 2016. No need to add management actions..	None.
LC	49	1911	SOP 3 - Tide Conditions	This is not currently supported , in AKN, for Landbird as I didn't notice it as part of the previous protocol. (Was it?) However, I will request this be added.	Noted. Will leave in the protocol as update expected before June 2016.	None.
INT 2	50	1942	SOP 3 - Distance and Direction of Detections by Species	I've always been confused by this sentence. What if there's not a forest canopy to fly over? If birds are flying within the study area how should they be recorded? At the distance they were first seen, or where they land? What about swallows flying around foraging?	MK: Edits made.	Edits made.
INT 2	50	1962	SOP 3 - Additional Procedures	Why? What happens with this information?	None	None
INT 2	52	1979	SOP 4	While I see that this is a good first step, I wonder how useful this will be in the long run. It leaves out most of the important vegetation characteristics.	MK: Agreed. But, there is currently no standardized veg monitoring that would address forests, grasslands, or shrublands across all types of these habitats. At the national level, we are only interested in assigning bird observations to very general veg classes. More specific veg monitoring will need to be addressed in the site specific survey protocols and a separate database developed to capture the information.	None

INT 2	53	2019	SOP 4 - How Are Vegetation Classes Standardized and Mapped?	This is out of date and doesn't necessarily reflect the current vegetation. It wouldn't be very helpful at our location, where there have been a lot of changes in the last 15 years.	MK: That may be true, but it is the best, consistent, national coverage available. We are only interested in very general vegetation classes, enough to extract bird data associated with forests or grasslands, for example. This will mainly be useful for large-scale regional, ecoregional, or national summaries/analyses of the data. For most local scale applications, additional vegetation data will be desired. There is no way to standardize what these metrics might be, however. So, we leave it to the survey coordinator to determine what additional veg data they need for their specific objectives.	None
INT 2	54	2052	SOP 4 -Recording Disturbances	This is a good addition.	None	None
INT 2	54	2054	SOP 4 -Recording Disturbances	How much of the area needs to be affected to record it? What if there is just one tree down, or a strip of mowing?	MK: OK! I added some specifics.	Added: ..."over at least 10% of the survey circle."
INT 2	54	2060	SOP 4 -Recording Disturbances	Isn't it still a disturbance? In a herbaceous system, the mowing may be preventing woody vegetation from becoming established. Disturbances maintain the system, and a lack of disturbance changes the vegetation. I would think if you could tell it happened, it should be recorded.	MK: This is a gray area, but for simplicity, I have clarified the guidance. We are documenting only observable disturbance because we may not always have access to other records of management or disturbance. If disturbance is a big issue, then more specific guidance will go in the site specific survey protocol.	Added: ..."even if records indicate management took place; e.g. burning or grazing" ...

LC	57	2137	SOP 5 - The Avian Knowledge Network (AKN) Database	http://data.pointblue.org/partners/mwadc/	Edit made.	Correct link inserted.
LC	58	2187	SOP 5 - Identifying Information (Names)	Not sure if studies is what you meant.	Changed wording.	Changed wording.
LC	59	2197	Figure SOP-5.1	The scenario depicted in Figure SOP 5.1 does not exist within AKN. Figure SOP 5.2 does, accurately, portray the current hierarchy configuration within AKN. I spoke with Melinda and she will re-work this section.	Substantial revision of this section based on discussion with Lisa Carter and consultation of AKN website.	Substantial revision of this section based on discussion with Lisa Carter and consultation of AKN website.
LC	60	2241	SOP 5 - Enter the Data into the Database and Verify Accuracy	data.pointblue.org/science/biologists/	Edit made.	Correct link inserted.
LC	60	2251	SOP 5 - Enter the Data into the Database and Verify Accuracy	They can't do queries in AKN so I'm not sure if I misunderstood what you meant by this.	MK: Deleted.	Deleted.

Reviewer	Page No. MASTER Doc	Start Line of Comment in MASTER Doc	Protocol Section	General Comment	Author Response
INT 1	55	2073	SOP 4 - Workflow and Detailed Instructions for Documenting Vegetation Classes and Disturbances	SOP 4 ,Assigning Standardized Vegetation Classes to Sample Units, will be a valuable addition to this protocol. However,biologists may find it challenging to complete if they lack moderate GIS skills. Thus, I encourage the development of a recorded training session to show how steps 1-5 of the workflow on page 49 are implemented. As an example of a potential problem to overcome, I found 23 Ecological Systems described within the 80,000 acre acquisition area for Balcones Canyonlands NWR. However, five of these were development or cropland, several were errors, and only 5 or 6 would likely be expected at our survey points on the refuge. Figuring this out may take up to one or two days of work for a biologist who has never used the GAP Ecological Systems classification. All this being said, I do not have any suggestions to improve the actual SOP.	Good suggestion! I'll work with Lee O'Brien or his designee to develop a recorded training on how to identify the standardized veg classes for a given management area. I recognize that using these GIS tools may be challenging for some people. Regional refuge data managers can assist refuges, as needed. However, some non-FWS users may struggle. But, everyone has to record the GPS coordinates for their sample sites and so they must have some access to GIS tools to even accomplish this.
INT 1	57		SOP 5	SOP 5, Data Entry and Management Instructions, provides a start ing point for using AKN. However, it seems like this SOP ought to describe that there are other protocols that can be selected in the project set up. For example, the Lower Mississippi River JV forest bird protocol does not record the minute of first detection of each bird, but rather bins that into three bins. That is not a problem with this protocol, but it does raise the point that where it makes sense the non-conforming survey protocols might be adjusted to conform with the guidance in this protocol.	It is my understanding that I&M funding support to the AKN database is primarily focused on approved national protocol frameworks. However, AKN may host other protocols via support from other entities. I don't think it appropriate to discuss other available protocols, which will change over time, in this protocol. Also, my knowledge is limited about the nature and validity of other protocols.
INT 1			General Comment	Overall, the document was well written and very polished. I have included a few suggestions in the Word document using Track Changes.	Track changes reviewed and updates made.
INT 2			General Comment	The protocol, with current changes, clearly lays out the framework for establishing a landbird point count monitoring program to determine whether objectives are being met. I included a few minor changes in the document.	Track changes reviewed and updates made.
INT 2			General Comment	The data management and reporting sections are helpful, and the SOPs for vegetation, data management and entry are also clear.	No edit required.

INT 2	52		SOP 4	I realize it is not possible to create a SOP for more detailed vegetation monitoring that can apply in all sorts of situations, but it would be helpful to have some more examples of how the vegetation classification can be used with the bird data.	Reviewer is unspecific about what additional clarification is needed. I do not see that adding another example would help much.
INT 2	53	2018	SOP 4 - How Are Vegetation Classes Standardized and Mapped?	Current aerial photos may be more useful than GAP land cover, especially on fairly small study sites.	The survey coordinator can use additional, more detailed maps that meet their specific objectives. These can be detailed in the site-specific survey protocol. At a national level, we are only interested in associating each point with a broad veg class.
INT 2	54	2052	SOP 4 - Recording Disturbances	The section on recording of disturbances is especially practical, but it could be developed a little more.	Reviewer is unspecific about what additional clarification is needed. The disturbance categories are general by design. At a national level, we are only interested in broad categories of disturbance. If a survey coordinator needs more specific information, that can be specified in the site-specific survey protocol.
INT 2	52		SOP 4	Will there be a database to enter the vegetation and disturbance data where they can be associated with the bird data?	The AKN database will be updated to include all the fields identified in this protocol. Additional vegetation or disturbance data not specified in the national protocol framework can be defined in the site specific survey protocol and a companion database developed to archive this information. As a national, central database, it is not feasible to include additional vegetation data that will vary from site to site. We acknowledge that this is a tradeoff in convenience. Central databases capture data centrally in a standardized format, but are not as flexible as a decentralized database system.
INT 2			General Comment	Generally the protocol should be adaptable to most situations. I really can't think of much else to add to improve it.	No edit required.

INT 3			General Comment	<p>1) Will the quality and applicability of the procedures facilitate completion of the stated sampling objectives and support the stated types of management objectives?</p> <p>My main comment to (1) is really my only major concern for the entire document. The narrative states that this protocol can be used for effectiveness monitoring and adaptive management, but I would caution the use of ONLY this protocol for those types of monitoring. The scale at which most management occurs (often small patches nested within a refuge) only reflects a miniscule proportion of the life history of any landbird in both space and time. There are a multitude of factors influencing any metapopulation-level parameter of interest. For instance, survival outside of the breeding range may be dependent on weather, disturbance, disease, available habitat, predation, etc., which could in turn be dependent on politics, economics, interspecific relationships, evolution and adaptation, etc. To be able to support and defend a statement like “Management action A</p>	Document updated to add some caveats about limitations in inference about bird populations, based on local bird data. (Stahl and Oli 2006).
INT 3			General Comment	<p>2) Will the depth or detail of information facilitates easy production of a site-specific version of the protocol? If not, what other types of details could be provided that would apply across the extent of intended use of the protocol?</p> <p>Yes, I believe it would be easy to create site-specific versions of this protocol. The document is very thorough and well written.</p>	No edit required.
LC	15	569	Element 3 - Establishment of sampling units	Should there be direction to collect coordinates in WGS84? When locations are entered in AKN, they are assumed to be lat/long, WGS84.	Edit made.
LC	16	615	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.
LC	16	625	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.
LC	16	628	Element 4 - Data entry, verification, and editing	Correct link: data.pointblue.org/partners/mwadc	Edit made.
LC	17	645	Element 4 - Analysis methods	http://data.prbo.org/apps/analysts/	Edit made.

LC	20	774	Element 5 - Annual Reports	http://data.pointblue.org/science/biologists/	Edit made.
LC	20	775	Element 5 - Annual Reports	http://data.prbo.org/apps/analysts/	Edit made.
WP	27	1098	Element 8	Needs to follow Journal of Fish and Wildlife Management Guidelines. See examples in Survey Protocol Handbook and instructions in the Survey Protocol Template. Also needs to be checked for completeness following this round of editing. Because SOP references are linked to this section, check those in text citations to see if they are in this section, as well.	I use EndNote to format references. Final version will have Endnote markers added and the final reference list is found in Element 8.
MK	27	1098	Element 8	Updated citations. Will need to check on details of formatting for JFWM. This can be done after reviews and final editing. This list does include all protocol content, including SOP's and SM's. If this addresses your comment, then delete to resolve.	Done.
LC	46	1841	SOP 3 - Vegetation Class	This is not currently supported , in AKN. This is coming in Version 2.	Noted. Will leave in the protocol as update expected before June 2016.
LC	47	1848	SOP 3 - Disturbance	This is not currently supported in AKN, for Landbird as I didn't notice it as part of the previous protocol. (Was it?) However, I will request this be added. What about "management actions"? These are both in the database for Marshbird.	Noted. Will leave in the protocol as update expected before June 2016.
LC	49	1911	SOP 3 - Tide Conditions	This is not currently supported , in AKN, for Landbird as I didn't notice it as part of the previous protocol. (Was it?) However, I will request this be added.	Noted. Will leave in the protocol as update expected before June 2016.
LC	57	2137	SOP 5 - The Avian Knowledge Network (AKN) Database	http://data.pointblue.org/partners/mwadc/	Edit made.
LC	58	2187	SOP 5 - Identifying Information (Names)	Not sure if studies is what you meant.	Changed wording.
LC	59	2197	Figure SOP-5.1	The scenario depicted in Figure SOP 5.1 does not exist within AKN. Figure SOP 5.2 does, accurately, portray the current hierarchy configuration within AKN. I spoke with Melinda and she will re-work this section.	Substantial revision of this section based on discussion with Lisa Carter and consultation of AKN website.
LC	60	2241	SOP 5 - Enter the Data into the Database and Verify Accuracy	data.pointblue.org/science/biologists/	Edit made.

LC	60	2251	SOP 5 - Enter the Data into the Database and Verify Accuracy	They can't do queries in AKN so I'm not sure if I misunderstood what you meant by this.	Edit made.
----	----	------	--	---	------------