



Standard Operating Procedure (SOP) 11:

Revising the Protocol V1.1

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Revision History Log

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	June 2009	T. Gardali, M. Koenen	Added May 2007 peer review comments	To document rational for changes to protocol	1.1

This Standard Operating Procedure is available in digital format from [San Francisco Bay Area Network website](#) and the [NPS Data Store](#).

Scope and Application

This Standard Operating Procedure explains how to make changes to the Riparian Landbird Monitoring Protocol and accompanying SOPs, and explains procedures for tracking these changes. SFAN or park staff editing the Protocol Narrative or any SOP need to follow this procedure to eliminate confusion in data collection and analysis methods. All SFAN landbird monitoring staff should be familiar with this SOP in order to identify and use the most current methodologies.

This SOP also contains a table listing the most current version of the protocol narrative and each of the SOP's (Table 1). This will provide a single reference for ensuring that the most current documents are being used. Also included is a section containing comments from protocol review, responses to those comments and approvals.

Protocol Revision Procedures

1. The Riparian Landbird Monitoring Protocol Narrative and accompanying SOP's are a living document, designed to capture current best-laid plans in a readily disseminated and followed format. Changes and revisions will inevitably be made, and documented as soon as they are deemed necessary and appropriate reviews conducted.
2. All edits will be reviewed for grammatical and technical accuracy and overall clarity. Minor changes or additions to existing methods will be reviewed "in-house" by the GOGA wildlife ecologist, PORE Science Advisor, or other appropriate network staff. However, if a complete change in methods is anticipated, then an outside review is required. Subject matter experts familiar with landbirds monitoring and data analysis will be utilized as reviewers.
3. Edits and protocol revisions will be documented in the Revision History Log that accompanies the Protocol Narrative and each SOP. Only changes in the Protocol Narrative or specific SOP that has been edited will be logged. Minor changes, such as an alteration of species lists, will be recorded as decimal increases in version number (*e.g.*, Version 1.1 to 1.2). Major changes, such as an alteration in objectives or update after five-year analysis, will be recorded as integer increases in version number (*e.g.*, Version 1.2 to 2.0). "Record the previous version number, date of revision, author of the revision, identify paragraphs and pages where changes are made, and the reason for making the changes along with the new version number" (Peitz *et al.* 2002). Changes to conform to the most recent formatting required by NPS "Instructions to Authors" (see <https://www.nps.gov/im/publication-series.htm>) are generally done as part of protocol revision and not noted separately as changes.
4. Notify the SFAN Lead Data Manager or Project Manager of any changes to the Protocol Narrative or SOP so that the new version number can be incorporated in the Metadata. The Data Manager or Project Manager will then edit the database per any changes to the Protocol Narrative and SOPs.

5. Post new versions on the internet and notify all individuals known to have a previous version of the Protocol Narrative or SOP.
6. When any significant changes in the data collection protocols occur, such as changes in sample collection techniques or equipment, a change in database, or changes in staff, there should be an “overlap” of methods and personnel (Oakley *et al.* 2003). This requires using both the old and new techniques on a given survey as well as having both the outgoing and new staff survey concurrently.

Table 1. SFAN Riparian Landbird Monitoring Protocol documents.

Document Name	Current Version	Version Date	Author
San Francisco Bay Area Network Riparian Landbird Monitoring Protocol	4.6	3/1/10	T. Gardali et al.
Standard Operating Procedure (SOP) 1: Preparations and Equipment Set up	2.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 2: Site Visits and Field Safety	1.1	6/2009	T. Gardali et al.
Standard Operating Procedure (SOP) 3: Training Observers	2.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 4: Marking and Relocating Sampling Plots	2.3	12/2017	T. Gardali et al.
Standard Operating Procedure (SOP) 5: Using the GPS Unit	1.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 6: Conducting Variable Circular Plot (VCP) Point Count Surveys	1.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 7: Conducting Mist-netting and Banding	2.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 8: Data Management	3.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 9: Data Analysis	2.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 10: Data Reporting	2.0	6/22/09	T. Gardali et al.
Standard Operating Procedure (SOP) 11: Revising the Protocol	1.1	6/22/09	T. Gardali et al.

Protocol Review

Peer reviewers provided comments to the draft protocol using a template developed for the NPS protocol peer review process in the Pacific West Region (Table 2).

Table 2. Template used by protocol reviewers

Section	Section Content
Section 1	Overall Organization and Presentation of Protocol Narrative
	1. Is the overall monitoring protocol well-organized with sections clearly delineated?

Section	Section Content
	2. Does the protocol have a title page with authors' names, protocol version number and date? (Protocol version numbers should be constructed to allow for both major and minor changes.) Is there a Table of Contents, abstract, and the three basic sections: 1-Narrative, 2-Standard Operating Procedures (SOPs), and 3-Supplementary Materials or Appendices recommended in the NPS standards published by Oakley et al. 2003 (https://irma.nps.gov/DataStore/Reference/Profile/625255). 3. Is there a complete and accurate table of contents with page numbers? (Chapters should be paginated consecutively, i.e. Chap. 1 (pp. 1-20), Chap. 2 (pp. 21-28), Chap. 3 (pp. 29-44), etc. to allow for modular updates.) 4. Are the tables and figures clearly labeled and understandable? 5. Is the protocol bound so that it lies flat, preferably in a 3-ring binder?
Section 2	A. Background and Objectives (Chapter 1) 1. Does the protocol narrative provide a rationale or justification for why a particular resource or resource issue was selected for monitoring? Is the history and background for this resource issue well-referenced with supporting literature cited? 2. Does the protocol narrative discuss the linkages between this and other monitoring projects? 3. Does the protocol narrative describe how monitoring results will inform management decisions? 4. Does the protocol narrative contain careful documentation of the monitoring objectives or monitoring questions being asked? 5. Does the protocol narrative identify specific measurable objectives such as thresholds or trigger points for management actions?
Section 3	B. Sampling Design (Chapter 2) 1. Is there a clear and logical rationale for selecting the sampling design over others? 2a. Were the criteria for site selection clearly discussed including stratification, spatial design, and whether this monitoring will be co-located and/or integrated with other VS monitoring protocols? (See Checklist, Section 1A2.) 2b. Has the target population or "sampling frame", and the sampling units, been identified? In other words, is the desired level of inference clear? 3. Is the sampling frequency and replication identified? 4. Is the timing of sampling defined? 5. Are the location of sampling sites clearly identified? 6. Is the level of change that can be detected for the amount or type of sampling being instituted identified? (See Checklist, Section 1A5.)
Section 4	C. Field Methods (Chapter 3) 1. Are preparations for the field season and equipment setup included? Are requirements for permitting and compliance discussed? 2. Does the protocol include clear and detailed information on taking measurements with example survey forms included? (Protocol variables and measurements may be discussed in detail in a SOP. A complete set of forms should be included in either the supplementary materials or a SOP.) 3. Is the method of access for sampling sites provided? 4. Is there an overview of procedures for establishing, monumenting, and maintenance of plots discussed in one or more SOPs?

Section	Section Content
	5. Does the protocol include details for the post-collection processing of samples or vouchers? 6. Does the protocol include procedures to be followed at the end of the field season?
Section 5	D. Data Handling, Analysis and Reporting (Chapter 4) 1. Does the protocol provide an overview of the process for entering, editing, and storing data, identification of database software, and whether the database is consistent with the recommended I&M database template structure? (For water quality protocols, see specific water quality guidance in Part B or WRD's General Comments 15, and checklist items in Section 2, items 8-10, below.) 2. Are quality assurance (QA) and quality control (QC) procedures presented for the various levels of data collection and analysis? (See water quality Part B guidance or General Comments 15 as appropriate.) 3. Is the data structure clearly presented and sufficient to capture the required information to meet the stated goal? Is there an overview of the database design? 4. Are there recommendations for routine data summaries and statistical analysis to detect change? 5. Is there a recommended reporting schedule? 6. Is there a recommended report format with examples of summary tables and figures? 7. Is there a recommendation for long-term trend analysis (e.g. every 5 or 10 years)? 8. Does the protocol narrative include an adequate description of metadata and data archival procedures? 9. Does the protocol narrative describe the frequency of testing and review of protocol effectiveness?
Section 6	E. Personnel Requirements and Training (Chapter 5) 1. Does the narrative include a listing of the personnel and describe their roles and responsibilities, and qualifications? 2. Does the protocol include a discussion of training procedures for personnel?
Section 7	F. Operational Requirements (Chapter 6) 1. Are facility, vehicle and equipment needs identified? 2. Is there a summary of key partnerships with agencies, organizations and individuals that are part of the monitoring program and a description of their contribution? Is there a list of relevant cooperative agreements and other partnership agreements, if applicable? 3. Is a schedule for the annual fieldwork and administrative needs required to implement this protocol included? 4. Is there an overall budget that summarizes the annual and periodic costs of implementation of the protocol? Does it seem reasonable? 5. Does the staffing plan and budget demonstrate that adequate resources have been allocated to data management, analysis, and reporting activities (ca. 30% are recommended)?
Section 8	G. Literature Cited (Chapter 7) 1. Are the literature citations relevant, sufficient and consistently formatted?
Section 9	Standard Operating Procedures (Selected essential SOPs in addition to those mentioned in the narrative outline are identified in the checklist below. For Water Quality protocols, Part B Guidance or WRD's General Comments 15 should be consulted when developing SOPs.) 1. Is there a table of contents for the SOPs?

Section	Section Content
	2. Are changes to each SOP clearly identified with a title, version number or revision date, and page numbers? Changes to protocol modules (Chapters or SOPs) should be reflected in the overall protocol version number and protocol revision history log either through a minor or major revision; however, you may also wish to develop a numbering scheme for SOPs, e.g. SOP 1.00, 1.01... 3. Is there a SOP with instructions for revising the protocol and a revision history log? 4. Is there a SOP with instructions for preparation before the field season? Is there a SOP with instructions for procedures and equipment storage during and after the field season? (Also see numbers 10 and 11 below.) 5. Is there a SOP for training field personnel? 6. Is there a SOP that clearly defines protocol variables and how to measure them? (See Checklist, Section 1C2.) 7. Are there clear and detailed driving and other navigational instructions to sampling sites? 8. Are the details of Data Management identified in one or more SOPs? Topics to be included are at minimum identified in Section 1D and may include customized data management routines. Specifically for water quality monitoring data, does the SOP specify how data will be reported to WRD for entry into the Environmental Protection Agency's STORET database?
NA	9. For water quality monitoring and other monitoring as appropriate, is there a quality control SOP associated with each protocol that adequately documents QC objectives for measurement sensitivity (detection limits), measurement precision, measurement systematic error (bias as percent recovery), data completeness (including adequacy of planned sample sizes and statistical power – this topic may be in the SOP on Sampling Design), and (if applicable for lab measurements only) blank control? Are instrument calibration details included either in the QC SOP or in a separate calibration SOP?
NA	10. For water quality protocols, is there a SOP that includes an explanation of how data comparability (a quality assurance basic) was considered in choosing which protocols and chemical labs to utilize? Do protocol SOPs contain enough field and lab method details to allow others to determine if data produced is comparable enough to other regional data sets to be considered credible by regulatory agencies interested in the data?
NA	11. Do aquatic protocol SOPs adequately describe the details of all Sampling Protocols (Field and Laboratory), as well as equipment needs and operation, sampling techniques, sample preservation and handling and logistics?
NA	12. Are all major procedures required for the protocol sufficiently explained? Are any SOPs missing?
NA	13. Are the literature citations with the SOP relevant, sufficient and consistently formatted?
Section 10	Supplementary Materials or Appendices 1. Is there a table of contents with Section 3 – Supplementary Materials that clearly identifies the materials provided in this section of the protocol? 2. Are the supplementary materials relevant, sufficient and consistently presented? Consistent formatting is desirable, but not always possible. 3. Are data collection forms provided either in this section or in an SOP? 4. Is there a section for the Administrative Record that provides the history of protocol development and refinement? (The published protocol may be presented either in Section 2 or Section 3 depending upon its contribution to the current protocol.)

Reviewer Comments

Below are the consolidated comments and responses from the writing team from the round of reviews in May 2007.

Review Approval and Distribution

Key personnel involved with the initial development, implementation, and review of this monitoring protocol included:

- | | |
|---|--------------------------------------|
| • Tom Gardali, Lead Investigator | PRBO Conservation Science |
| • Diana Humple, Co-Investigator | PRBO Conservation Science |
| • Mark Herzog, Informatics Specialist | PRBO Conservation Science |
| • Marcus Koenen, I&M Program Manager | San Francisco Bay Area Network |
| • Dave Press, I&M Data Manager | San Francisco Bay Area Network |
| • Bill Merkle, Wildlife Ecologist | Golden Gate National Recreation Area |
| • Daphne Hatch, Chief of Natural Resources | Golden Gate National Recreation Area |
| • Sarah Allen, PWR and PORE Science Advisor | Point Reyes National Seashore |

As of 2018, key personnel involved in the implementation and review of this protocol include:

- | | |
|--------------------------------------|---------------------------------|
| • Mark Dettling, Avian Ecologist | Point Blue Conservation Science |
| • Diana Humple, Avian Ecologist | Point Blue Conservation Science |
| • Daniel George, I&M Program Manager | San Francisco Bay Area Network |

PWR Protocol Review

Peer reviewers used a standard template to review this protocol and standard operating procedures before its initial publication in 2009. In addition, reviewers provided narrative comments.

Response to Peer Review Comments Received May 2007.

Penelope Latham comments with Tom Gardali (TG) and Marcus Koenen (MK) responses and clarifications:

General:

- “Unable to locate an updated PDS. (This should have been submitted prior to submitting the protocol.) It would be helpful to provide one prior to re-review.” **MK:** *The PDS has been updated based on the changes in this revised protocol.*
- “See NRTR guidance for formatting of text and tables. Substitute “Tables” and “Figures” for “list of Tables”, etc.” **MK:** *The protocol has been updated to meet the most recent NRTR guidelines.*

- “Pg. 5 refers to Natural Resource Reports. The paragraph to be retained on this page should reference the technical report series for protocols.” **MK:** *The most recent guidance has been that protocols follow the NRR formatting. Annual reports follow the NRTR guidelines.*
- Changing order of SOPs. **TG:** *good suggestion; order revised.*
- “It would be more helpful to the reader if the SOPs were listed in the TOC rather than the Executive Summary. The TOC should provide an overview of everything that is in the document. You will need to figure out a way to identify your standard SOPs, e.g. Site Visits (well done) and Field Safety. While these are standard SOPs I can’t think of any reason why you can’t also assign them an appropriate number for this protocol.” **TG:** *I added all SOPs to the document instead of as separate files – this makes the document massive but that is the only way to address this. I made Site Visits an SOP with an assigned number.* **MK:** *The formatting for the document including the SOP follows the most recent guidance. Also, a field safety SOP was added.*
- “Executive Summary, pg. 10: the first sentence says the purpose of this document is to describe the National Park Service’s monitoring program for landbirds of the SFAN... That suggests there is a national protocol that is being used in SFAN but that isn’t the case. This Protocol is specific to SFAN. I’d change this wording and look for other places where this occurs. There are at least a few if not several.” **TG:** *Changed in the executive summary and throughout.*
- “Protocol presented in very draft form; however, it is modular and can be bound to make it easy to use.” **MK:** *Formatting will be finalized after peer review is approved.*
- No schedule. **MK:** *There is a schedule in the narrative.*
- No SOP for after the field season. **TG:** *That is correct. There is no end of the season for mist netting since we band year-round. And there are already SOPs for data management, reporting, etc. It does not seem necessary then to provide an SOP for cleaning and inventorying the minimal gear etc.*
- Capture a copy of the MAPS protocol on CD. **TG:** *The MAPS manual is now provided.*

SECTION 1. Narrative.

Section 1A. Background and Objectives:

Q2. The discussion regarding the use of data from the Palomarin Field Station is very confusing, both here and in subsequent parts of this protocol. You state in several places that the field station data is not part of this protocol, yet it is fairly clear that the data will be integrated during analysis with data collected as part of this protocol and that other monitoring at the FS will complement the monitoring proposed here. I think it would be a lot clearer if you took the approach that you are integrating with other existing monitoring rather than trying to draw lines between them that don’t seem accurate.

This adds value to the protocol not detracts from it. **TG:** *We acknowledge that we unnecessarily overstated that Palomarin would not be part of this protocol and that this distracted from the clear “value added” Palomarin provides. We have now made an attempt to acknowledge the linkages between Palo and the protocol without going into the actual details. We do not wish to fully develop how the two monitoring programs could be integrated because (1) we want this protocol to stand on its own (2) we cannot promise the integration will happen due to funding constraints, etc. and (3) doing so would add a level of complexity and hence general confusion to the protocol. Regarding the full question here: Does the protocol discuss linkages between this and other monitoring projects? We think we have done a great job pointing out how our data will become part of and can be informed by several other monitoring programs.*

Q3. Objectives say that the protocol is designed to evaluate ecosystem health not management actions. Agree that this seems particularly appropriate for landbirds, but if you find a decline in landbirds, what will you do? Are there management implications? The discussion of pg. 19-20 seems to partly address this question. On the other hand, it is somewhat contradictory as pg. 20 says that monitoring focuses primarily on the local scale of a park or network in order to inform park managers to (replace with “about”) park-specific changes. **TG:** *It is true that we won’t be evaluating management actions; that would be an entirely different beast and assumes there are management actions in place to evaluate. We made it very clear that a decline in riparian landbirds will “inform managers when management actions are warranted and research is needed” – this in our mind is the management implication. What those management actions will be will depend on what we find and hence we know of no way of answering “what will you do?” within this protocol. Finally, we searched the approved NCCN protocol and could not locate anything that answers the question “what will you do?”*

Section 1C. Field Methods:

Q1. There is no reference to equipment needed or field season preparations in the narrative although there is an SOP (1). There should at least be some statement directing the reader to this section. Permitting and compliance is mentioned in the generic Site Visit SOP but not in the narrative. Readers should also be directed to this SOP. **TG:** *We made reference to these and all SOPs in the narrative. We added info on permitting and compliance to the narrative.*

SOP 3: While there is an SOP titled Establishing, Marking and Relocating Sampling Plots, the SOP only describes how to relocate pre-existing stations not how to establish new stations. **TG:** *We are not going to be establishing new stations and changed the SOP title to reflect this. Note that this is now SOP 4.*

Section 1D. Data Handling, Analysis and Reporting:

Q5. Table 4 in the narrative shows that analysis and synthesis will occur every 4 years. However, the analysis proposed occurs in the middle of the three yr. sequence of data collection for point counts. Seems like it would be more effective if you got through an entire sequence rather than always analyzing your data mid-stream. **TG:** *Good point. We have now modified this by doing analyses once*

every 6th year during the year following the point count surveys. While six years seems like a long time between analysis reports, we point out that for long-term data collection, it is not (NCCN is every 5 years for example). Further, this frees up funds that can be used for other monitoring projects in SFAN.

SOP 11: It is not clear whether the format described in the data management plan is different than that described for the NRR series. I suspect it is as the DM plan was written prior to the development of guidance for the series. It is now recommended that all reports written for protocols (annual or otherwise) be formatted and published in the NRR series either as a NRR report or a NRTR report. The checklist is a good tool. **TG:** *We have now modified SOP 10: Data Reporting to reflect that we will follow the NRR series format guidelines.*

The final responsibility for review approval of these reports lies with the Regional I&M Coordinator who is the Key Official. Guidance is provided on the NRPM website and approval submittal forms are available there to submit documents for approval before obtaining series numbers, constructing metadata records, and uploading the documents to NRBib and TIC. Review procedures for protocol reports are currently under development at the regional level but will at a minimum include thorough internal network and park review. **MK:** *These steps will be followed to publish the final protocol.*

Q6. There is a good example in the SOP of what a report format should like although it is not clear which guidance is followed for the format presented (Data Management plan or NRTR). There does not seem to have been much consideration of the content that would go into the report and more attention should be directed to this topic. **TG:** *We have fully revised the reporting SOP to more clearly define content for the Progress Report and the Analysis and Synthesis Report. And we have clarified that we will use the NRR format.*

Section 1E. Personnel Requirements and Training:

Q1. Who is responsible for internal oversight of the review process and coordinating with the Regional Key Official (Regional I&M Coordinator) for review procedures, submission of the report review approval form, constructing the metadata record, obtaining a TIC number and uploading the report?

The Network Coordinator and probably the Data Manager should also be key contacts in ensuring the quality of reports and completion of the process for publication and distribution of reports. **TG:** *These responsibilities have now been added to this section.*

Section 1F. Operational Requirements:

Q1. There is very little discussion of field needs, schedules, vehicles, equipment or other operational details at PINN. **TG:** *PINN is no longer included.*

Q3. The information provided on field and product deliverable scheduling is minimal. I would suggest reviewing a copy of the NCCN Landbird protocol and SOPs for some good examples. **TG:** *We reviewed Appendix 2 of the NCCN proposal and judged that that level of detail would be difficult*

to attain for the year-round mist-netting part of the protocol. Much of the general information on scheduling is already present throughout the document.

Q5. Several different tables are provided that present different views of the budget and are all useful information. However, it is still very difficult to tell how much actual attention is being paid to management of data. The figures presented suggest that around \$6,000 is dedicated to data management in annual budgets that range from \$93,000 to \$158,000. This hardly seems adequate.

TG: *These budgets don't entirely tell the whole data management story. In other words, data management is done at several levels and at PRBO most staff are involved in some aspect. For example the project field leader has responsibilities to make sure data are managed on the day to day level as well as with daily, monthly, and annual proofing. PRBO's data management is somewhat automated by the California Avian Data Center. Finally, the NPS Data Manager's time is not accounted for in any of the budgets. In sum, you are correct, \$6k is hardly adequate but the real number – difficult to assess – is much higher. We made notes within each budget that the responsibilities of data management also fall under project leaders, etc.* **MK:** *We also added some language showing that between the different people working on the program including project leaders, supervisory bander, Lead Field Biologist, statistician, data manager, intern, and field staff, about 1/3 of the budget goes to data management and reporting.*

OTHER Comments:

Sampling Design and Field Methods:

Pg. 18. You state that you will collect data for all birds encountered not just the target species (not identified) but that you will exclude non-target species from analyses because they are not appropriately sampled by the methods employed. What will happen to these data? How will you be able to use it in the future if it wasn't collected with an appropriate method? Is it worth the time and money to collect unusable data? **TG:** *First, to be clear, it does not cost any more money to collect these data. During point counts, every bird detected is simply recorded. All of these data will be entered. They are not useless data as they let us know that a species was present/absent at a general location on a particular date. These types of data can be quite useful over the long term. However, these data are not useful within the confines of this protocol.*

Sampling design, stratification, judgmental vs. probabilistic designs, “n” for various combinations of data is unclear. Additional tables would help. **TG:** *I am not sure what is specifically being requested here.*

Pg. 21. You provide justification for not using a probabilistic design on pg. 21 and state that replicating sites is more important than if they are chosen randomly. You then state that productivity indices from the judgmentally selected mist-net stations provide a landscape-level measure of productivity. Given that there are only six stations listed in Table 2, only three are in the parks and they are judgmentally selected, I'm not sure how you can make that statement. **TG:** *All mist-net stations are relevant to the parks. Only one is outside of the park boundary. That statement (landscape-level measure) is based on the fact that mist-nets tend to sample from a much larger area*

than the area immediately surrounding the nets. We have shown this directly and indirectly from several of our validation studies cited in the narrative.

Pg. 27. Last paragraph. Table 1 is a species list. Is this the table you mean? Also you state that the monitoring program is not only for breeders but also for other wildlife using the park. What other wildlife? This seems too broad a term when the focus is on birds. **TG:** *We fixed the mislabeled table. We corrected this statement to by deleting wildlife and inserting “other landbirds species” which was our original intent.*

EDITORIAL (Typos or words that need adding or deleted):

Please cite websites with date last accessed. **TG:** *All websites cited in the narrative, SOPs, and Appendices now have last date accessed.*

Literature Cited section needs editing. There are several small typos. **TG:** *I believe I found all of these.*

The entire document could use another editing as there are many places where the sentence structure doesn't work well or words are left out or sentences are awkward. **MK:** *We worked with a technical editor and hope that all issues have been remedied.*

Pg.10: (add “the” after summarizes”, lowercase for Parks in 2nd paragraph, PRBO not identified) **TG:** *We made these changes.*

Pg. 16: Sentence about monitoring with GOGA is repetitious. Discussion in 2nd paragraph could be tightened up. Insert “conducting” before point counts in second paragraph, sentence starting with PRBO. **TG:** *We made these changes and this section has been slightly modified.*

Pg. 27: Line 3 typos. **TG:** *I believe we took care of all of these.*

Pg. 29: Replace “forth” with “fourth”. **TG:** *No longer relevant since we are on 6-year cycles.*

Pg. 32. There is a font change in the right hand column. There may be other areas of the document where this also occurs. **TG:** *We corrected this and attempted to find and correct similar problems elsewhere in the document.*

Pg. 35. Blank page. **TG:** *Blank page removed.*

Figures 2 and 3. It is not easy to go from the table that describes the various sites to the figures that presumably portray them. I couldn't come up with the correct number of monitoring sites in most instances. It would help to label them or identify them more clearly in some other way. Identify which is PORE and which is GOGA. **TG:** *The table and the figure have now been completely revised.*

SECTION 2. SOPs

1. No. Not required but useful for larger SOPs. **TG:** *We opted not to add a table of contents for any of the SOPs. This is consistent with NCCN protocol and NRR formatting.*

4. There is no SOP with instructions for procedures and equipment storage after the field season. Probably most of this is handled by PRBO but what happens at PINN. **TG:** *PINN is no longer part of this protocol. See second to last bullet under General above for discussion of end of season equipment storage, etc.*

7. The directions for access to sites is missing. I presume this is what is under development in Appendix A. of SOP 3. Please complete. **TG:** *We have added an entirely new section that provides not only directions to sites but also directions to individual survey points, lat/longs, etc. However, for several sites, the information is incomplete. This is unavoidable but will be completed during the 2010 field season – i.e., impossible to write narratives without visiting the survey points.*

SUPPLEMENTAL MATERIALS

All supplemental documents, e.g. MAPS manuals and other PRBO SOPs used for this protocol should be captured and archived on a CD. **TG:** *Supplementary materials are now provided.*

James Agee comments with Tom Gardali's (TG) responses and clarifications:

Major Concerns:

There are no study sites identified by park. **TG:** *This concern is unclear to me. Table 2 shows study sites by park unit.*

The target species to be considered are not identified. **TG:** *In considering the idea of target species more fully, we decided not to pursue developing them, and instead followed the lead of the NCCN protocol: “ . . . detect trends for as many species as possible.”*

No sample sizes are identified and linked to a power analysis. **TG:** *We have now provided a power analysis for a subset of species at all sites where we had sufficient data. It is likely that power will be improved beyond what we report through the addition of more study sites as is now recommended.*

Long-term analysis is not included. **TG:** *We have added a relatively detailed analysis plan that is complemented by the fully revised Data Reporting SOP.*

No habitat measurements are included. **TG:** *It is true that a lack of habitat measurements will make it difficult to interpret abundance patterns over time. There are several factors beyond habitat that could also influence landbird abundance patterns the most notable of which are weather, climate, and landscape. Hence we did not include protocols for habitat, weather, etc. We will explore developing protocols for veg change, weather, etc. in future versions of the protocol. We anticipate that doing so will add substantially to this protocol – not so much in terms of cost – but in analyses protocols for example. Further, we judged it wise to test drive the bird survey only protocol, and especially the reporting demands, before we committed to anything more. We will of course use all*

available information for interpreting our results. **MK:** *The network is also developing vegetation monitoring protocols that can support future analyses.*

Other comments:

I did not find it easy to tease out which of the “legacy” sites at each park are to be part of the continuing protocol. **TG:** *We have now made it clear in Table 2 and Figure one – all sites listed will be surveyed with point counts, mist-nets, or both.*

What is the difference between a “legacy” transect and an existing transect. **TG:** *There is no difference and we added a sentence to make this clear.*

At PINN, it appears that nine “legacy” transects will be the sample to be measured annually, with no “random” transects used at all. At PORE and GOGA, “legacy” transects (all of those in Table 1?) will be mixed with “random” transects (which for riparian areas really aren’t random anyway, are they?). In figure 2, a number of “random” transects are identified - are these (a) past transects, (b) the ones to be used the first year of the this new protocol, or (c) the entire set of transects, some of which may be measured each year? As suggested by R1, a table would be useful indicating for all points where, in what type, and by season. **TG:** *No longer relevant as we are not sampling PINN and have dropped the random component and instead opted to cover a significant amount of all riparian habitat in PORE and GOGA. We believe our new Table 2 makes our site information more clear.*

With the long history of monitoring and the extensive databases available, the lack of any power analysis (page 19 and R2) in this protocol is puzzling. There are protocols that have been approved without an a priori power analysis, because no data yet existed on the vital sign being monitored. In those cases there was no choice, and a commitment to conduct a power analysis was made. In this case it was very feasible to do a power analysis prior to submitting the protocol. **TG:** *As stated above, we now include a power analysis.*

Additionally, longer-term analysis (SOP #10, p. 3) procedures “will be developed during FY07-FY08” - this should have been completed before the protocol was submitted. **TG:** *As stated above, analysis procedure are now included.*

SOP #3 (Site Descriptions) is listed as “under development”. This makes the protocol incomplete. There is very detailed description of the history of landbird monitoring at SFAN parks, but it is not clear how these data will be integrated into the protocol under review here. **TG:** *I addressed this above and my comments are repeated here: We have added an entirely new section that provides not only directions to sites but also directions to individual survey points, lat/longs, etc. However, for several sites, the information is incomplete. This is unavoidable but will be completed during the 2010 field season – i.e., impossible to write narratives without visiting the survey points.*

Target species (page 45) have not yet been identified, and “future analyses” will determine them. Aren’t all the species potential target species? If not, what criteria will be used to identify them? Surely this is known now. **TG:** *As stated above, we are no longer taking the target species approach.*

The lack of any habitat measurement will make it impossible to associate landbird trends with habitat. On page 20, the last paragraph states “All of our sites were ground-truthed long ago”, implying but not fully stating that vegetation parameters are known. What if a fire or flood hits either scrub or riparian area in the future? Some attention to habitat measurement, particularly if disturbance occurs, would appear essential to analyzing trend. **TG:** *See above.*

Within the text, there are numerous references to “attached SOP” (e.g., p 27 par. 1, 2, and 3). Please identify the specific SOP at each reference. **TG:** *We have attempted to identify specific SOPs at each reference.*

P 10. Please identify PRBO Conservation Science at first mention. **TG:** *done.*

P 18, l. 10. Bart et al. (2004) is not in the literature cited. **TG:** *done*

P 27, l 3. A typo? “..within the interior eight ha 8of a 20-ha....” **TG:** *It was a typo.*

P 28 (R1): Are the “X”s in Table 3 showing a range of time rather than a specific action to be taken in a given month? The text says two point counts per year, but the table (with four X’s) implies four. Maybe just a line (-----) across those months would be clearer. **TG:** *We attempted to clarify by using shaded cells and adding some more text.*

SOP #2 (R1). Training for rangefinder use (and what kind) needs to be specified. **TG:** *We opted not to add training for rangefinders because we currently have 3 different kinds of rangefinders and they are all extremely easy to use and hence require almost no training – can be “trained” in less than one minute!*

A SOP for “End of Season” procedures is required. **TG:** *See discussion above with respect to why we opted not to develop an end of season SOP.*