

MEETING SUMMARY: REFINING THE ALASKA OFF-ROAD POINT COUNT PROGRAM, PART I

December 13, 2002

Gordon Watson Conference Room, USFWS Regional Headquarters, 1011 East Tudor Road, Anchorage, Alaska.

INTRODUCTION AND GENERAL SUMMARY OF THE MEETING

On December 13, 2002, *Boreal Partners in Flight* convened to discuss refining the Alaska Off-road Point Count Program. Members from throughout the state were in attendance. The overall goal of the meeting was to identify what steps need to be taken in order to implement a broader and more statistically robust monitoring program for landbirds in Alaska. We discussed several topics including:

- Goals, methods, and latest updates on the Alaska Off-road Point Count Program.
- Addressing agency needs, covering costs, and developing a sound statistical design.
- Issues of scale and inference of the survey.
- The need for a formal training program.
- Important issues that need to be addressed during the follow up meeting in Fairbanks on January 14, 2003.

In addition, we were fortunate to have on hand administrative representatives from Alaska Department of Fish and Game, Bureau of Land Management, USDA Forest Service, and U.S. Fish and Wildlife Service who provided us with insight into how we could better meet resource agency needs in Alaska through this program.

The information that follows is a general summary of what was discussed during the meeting. The presentations by Colleen Handel, Karen Oakley, and Michelle Kissling and Deb Nigro (see agenda below) are presented on the Boreal Partners in Flight website (www.absc.usgs.gov/research/bpif/bpif.html) under recent meetings. Summaries of these talks are therefore not included below. Also available on the website is an ArcView project available for downloading that contains coverages with the locations of the proposed sampling blocks and survey point throughout the state. If you have questions about any of the topics discussed during the meeting, please feel free to contact me.

Sincerely,

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AGENDA

Introductions and program overviews

- 8:30 Introductions and goals of the meeting.—*Steve Matsuoka, USFWS Migratory Bird Management.*
- 8:45 Alaska Off-road Point Count Program: program goals, methods, and recent developments.—*Colleen Handel, USGS Alaska Science Center.*
- 9:15 Rules of thumb for developing a successful program for long-term monitoring.—*Karen Oakley, USGS Alaska Science Center*

Meeting agency needs

- 9:35 Agency needs, how monitoring can help, and existing support for monitoring programs: a manager's perspective.
U.S. Fish and Wildlife Service Refuges.—*Mike Boylan, Danielle Jerry, and Jerry Stroebele, USFWS Refuges Alaska.*
Bureau of Land Management.—*John Payne, BLM Alaska.*
USDA Forest Service.—*Jerry Mastel, Chugach National Forest, Linn Shipley, Tongass National Forest; Ellen Campbell, Forest Service Alaska.*
Alaska Department of Fish and Game.—*Mary Rabe, ADF&G Nongame Program.*
- 10:35 Break

Shaping a monitoring program for long-term success

- 10:50 Developments on mapping state-wide land cover using remotely sensed data: a basis for projecting bird/habitat models across the state.—*Mike Fleming, USGS Alaska Science Center.*
- 11:05 Discussion: Issues of scale and inference—conservation units, Bird Conservation Regions, and the state. Topics include 1) selecting the appropriate spatial scale for long-term monitoring; 2) what information is gained for the individual land units; and 3) scaling effort to meet land unit, regional, and state-wide needs for inventory and monitoring.
- 12:00 Lunch
- 1:30 Examples of programs for training observers in field methods for landbird surveys.—*Michelle Kissling, USFWS Juneau and Deb Nigro, NPS Yukon Charley Rivers National Preserve.*
- 2:00 Discussion: Developing a comprehensive training program for observers participating in the Alaska Off-road Point Count Program.
- 3:00 Break
- 3:20 Discussion: Meeting agency needs, refining statistical design, and covering costs—what steps do we need to take in order to implement the Alaska Off-road Point Count Program? Topics include 1) outlining high priority issues that need to be addressed in order to move the program forward, 2) developing a steering committee to develop strategies for addressing high priority needs, 3) agenda items for Fairbanks meeting on January 14th, and 4) nominations for a new name for the program.
- 4:45 Adjourn

MEETING AGENCY NEEDS

Several representatives from a variety of resource land agencies were invited to speak to our group to provide us with insight into 1) the important agency mandates for conserving wildlife populations, 2) how monitoring is used to meet the requirements of these mandates, and 3) what mechanisms exist to support monitoring within the agencies.

Alaska Department of Fish and Game.—Mary Rabe, ADF&G Division of Wildlife Conservation.

The Division of Wildlife Conservation mission is to “conserve and enhance Alaska’s wildlife and habitats and provide for the wide range of public uses and benefits”. This new mission is a clear departure from a focus on game management and recognizes multiple use of wildlife such as wildlife viewing, nongame management and research, and environmental education. However, the mission statement is new and the Division is currently developing a strategic plan for its program.

Mandates and activities within ADF&G that require information from the inventory and monitoring of wildlife populations include:

- State Endangered Species Law established to protect species threatened with extinction. There are no landbirds on the current state list.
- Species of Concern which includes species or subspecies that have suffered a long term decline in abundance or are vulnerable to a significant decline due to low numbers, restricted distribution, dependence on limited habitat resources, or sensitivity to environmental disturbance. Landbirds currently on the list include American and Arctic Peregrine falcons, Queen Charlotte Goshawk, Olive-sided Flycatcher, Grey-cheeked Thrush, Townsend’s Warbler, and Blackpoll Warbler.
- Permitting and Project Reviews including proposed transfers of state lands to the private sector and evaluations of land management practices.

Specific information needs by ADF&G related to inventory and monitoring include:

- Baseline information on distribution and abundance.
- Information on the status of population to provide information for the state and federal listing processes. Priority is on endangered species and species of concern.
- Identification of rare or unique communities.
- Evaluation of management practices.

Mary Rabe is the only current staff member dedicated to nongame issues in Alaska; however, 3 regional nongame biologist positions will soon be filled.

The State Wildlife Grants (SWG) program currently has \$400,000 available in annual funds directed towards nongame management and research, school and community education, and wildlife viewing. Because SWG money is federal in origination, the program requires that every \$3 of SWG funds requested be matched with \$1 from a non-federal source.

Current process of moving forward with the state’s new nongame program:

- Mary will work closely with the ADF&G regions to hire staff, determine programmatic priorities, and identify projects.
- The focus and efforts will vary among regions depending on needs, threats to resources, and staff expertise.
- Intend to integrate program into regions.

ADF&G is currently developing a Statewide Conservation Strategy which will benefit nongame species by identifying 1) concerns for our nongame resources, 2) priorities for species and habitats, and 3) strategies for conservation of nongame species. The Conservation Strategy is required by the enabling legislation, will follow the guidelines of the International Association of Fish and Wildlife Agencies, and is planned for completion in Oct. 2005. ADF&G will work closely with other agencies and groups (i.e. PIF) throughout this process.

How will the state participate in nongame management and research in the future? Focus will likely be placed on 1) identifying and managing key areas for endangered species and species of concern, 2) gathering information in regions not well covered by federal lands, and 3) using methods that are compatible with other programs in the state collecting similar data.

Bureau of Land Management.—John Payne, BLM Alaska.

The Bureau of Land Management has specific mandates to restore and maintain lands and to support multiple uses of their lands. However, the land use practices that gain the greatest attention by BLM tends to change with changes in presidential administrations. Currently the priorities in BLM Alaska as directed by the current administration include in order:

1. energy resource extraction,
2. conveyance of lands from BLM to the state and private sector,
3. subsistence use of fish and wildlife,
4. recreation, and
5. other, which include things like landbird monitoring.

One of the big questions with supporting landbird monitoring within BLM is how to do this within the current personnel and budgeting constraints. For example, BLM has eight regional biologists in Alaska to cover 90 million acres of land and does not have the ability to take on large numbers of seasonal technicians. Also the current budgeting process (which may be DOI wide in the future) requires that budgets be set 2-years in advance. Although there are obstacles on how BLM can participate in landbird monitoring, biologists in the agency have continued to participate in the BBS and Alaska Off-road Breeding Bird Survey over the last 10 years.

Some other monitoring efforts that BLM currently participates in include Dusky Canada Goose research, Tule Goose research, subsistence monitoring, Yukon salmon monitoring.

Some funding opportunities include *Challenge Cost Share* which has had \$486,000 available annually up to this year. This is similar to the Refuges CCS program that requires a non-federal match. *National Fish and Wildlife Foundation Grants* are available as one and sometimes two year funds. Also funding in some special cases can be requested directly through Congress. Currently the \$5 million available for addressing issues on the National Petroleum Reserve-Alaska are controlled by Gail Norton and are directed mostly toward mineral management.

USDA Forest Service.—Ellen Campbell, Forest Service Alaska; Jerry Mastel, Chugach National Forest; and Melissa Cady and Linn Shipley, Tongass National Forest.

Mandates for managing wildlife populations:

- The Forest Service should prepare “specific guidelines that provide for diversity of plant and animal communities based on the suitability and capability of the specific land area...” National Forest Management Act 1976
- “Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.” Forest Service Planning Regulations 1982.

To evaluate the effects of management activities and to meet the requirements of agency mandates, the Forest Service identifies on each National Forest Management Indicator Species (MIS). These species are used to estimate and predict effects of alternative management actions, monitor trends in ecosystem components, and determine relationships to habitat change. These species require monitoring by law.

The Forest Service also supports landbird monitoring and interagency partnerships to conduct monitoring of wildlife populations.

- The Landbird Strategic Plan by the Forest Service states that “a significant monitoring component is essential for understanding the trends and conditions of landbirds and their habitats. We must ensure the quality of monitoring approaches and link them to monitoring conducted at different locations and scales.”
- The Forest Service in 2001 signed a MOU with the U.S. Fish and Wildlife Service that ...”Promot(es) collaborative inventory, monitoring, management studies, research and information exchange related to the conservation of migratory birds and management of their habitats.”
- Biologists in the Forest Service are clearly interested in participating in landbird monitoring in Alaska.

Up to 2001, \$150,000-\$180,000 has been available for studying landbirds on Forest Service lands in Alaska. Currently the Forest Service is trying to continue contributing this amount to landbirds even though budgets in this area have recently changed. This money will be directed to issues at the level of the BCR or individual forests.

Chugach National Forest

- 1) The Chugach currently has two levels of species that are monitored. These include MIS and Species of Special Interest.

Management Indicator Species – Avian Species

- Black Oystercatcher
- Dusky Canada Goose

Species of Special Interest – Avian Species

- Trumpeter Swan*
- Northern Goshawk*
- Osprey
- Peale’s Peregrine Falcon
- Marbled Murrelet

- Townsend's Warbler*

* Species for which monitoring guidelines are currently being developed.

2) Funding is available through National Forest, Wildlife, and Inventory and Monitoring programs.

3) Some current and past landbird projects include:

- Glacier Ranger District: Monitoring Avian Productivity and Survivorship station at Portage now going for 11 years; Alaska Off-road Breeding Bird Surveys ongoing.
- Seward Ranger District: 4 Breeding Bird Survey routes, Alaska Off-road Breeding Bird Surveys in the past, Owl and raptor surveys.
- Cordova: BBS routes, Alaska Off-road Breeding Bird Surveys in the past.

Tongass National Forest

1) Management Indicator Species – 13 species in total with avian species including:

- Vancouver Canada Goose
- Bald Eagle
- Red-breasted Sapsucker
- Hairy Woodpecker
- Brown Creeper

A vigorous 5-step screening process was used to choose the 13 MIS species from a list of 415 candidate taxa. However, adequate attention was not generally placed on how to monitor or fund monitoring for these species. In 1999 the Tongass reassessed their MIS needs and developed informal recommendations to 1) include flying squirrel to the list and 2) drop all avian species due to the difficulty in monitoring their population trends.

Currently the Tongass is completing its required 5-year review of the MIS species included in the Tongass Land Management Plan (TLMP) and will be putting forward their formal recommendations to revise the MIS list and develop monitoring protocols for peer review. Any changes to the MIS list and protocols will require an amendment to TLMP as specified under NEPA guidelines. The current review for Red-breasted Sapsucker, Hairy Woodpecker, and Brown Creeper is using data collected from Breeding Bird Survey, Christmas Bird Count, Monitoring Avian Productivity and Survivorship, and Alaska Off-road Point Count programs. The Forest Service recognizes that these programs were not designed to specifically address questions related to the MIS landbirds.

2) Some current and past bird projects include:

- Breeding Bird Survey, Alaska Off-road Point Count Program, Monitoring Avian Survivorship and Productivity.
- Monitoring of owl nest boxes on Prince of Wales Island, nocturnal owl surveys.
- Trumpeter Swan surveys in Yakutat, satellite tracking of Trumpeter Swans captured on Prince of Wales Island.

3) In 2003 planned bird projects include:

- Testing the random plots for the Alaska Off-road Point Count Program.
- Participate in Black Swift monitoring that is being initiated throughout the Northwest Pacific Rainforest BCR.
- Shorebird migration monitoring.

U.S. Fish and Wildlife Service Refuges.—Mike Boylan, Danielle Jerry, and Jerry Stroebele, USFWS Refuges Alaska.

All of the U.S. Fish and Wildlife Service Refuges in Alaska were established to maintain, restore and protect wildlife populations. Therefore there are clear mandates to support monitoring of wildlife populations in the enabling legislation. Danielle Jerry suggested that in order to make the program more pertinent to Refuges we should deliver information on bird-habitat associations. Such information is critical both to identify important lands for acquisition and to evaluate proposed uses of federal lands (i.e. NEPA right-of-way). For example the Realty Office for U.S. Fish and Wildlife Service currently uses a list of approximately 20 bird species to help guide which lands are acquired and incorporated into the Refuges in Alaska. As such information on habitat use by landbirds from our program could help with this process.

Several funding opportunities are available through the Fish and Wildlife Service most of which provide single year money that must be matched by non-federal funds or services. Tony DeGange and Mike Roy are key contacts for these programs that include *Challenge Cost Share Program*, *Contaminants Funds for Refuges*, *Private Land Stewardship Program*, *Alaska's Coastal Program*, and several different grants from the National Fish and Wildlife Foundation. The U.S. Fish and Wildlife Service also administers two programs, the *Quick Response* and *Science Support* programs, that provide funds to the USGS-Biological Resources Division to address high priority species and issues.

In addition to these soft money grants, the *Refuges Operation Needs Support* (RONS) program provides a mechanism for bringing base funds to refuges to meet their programmatic needs. Projects proposals will be accepted by the regional office from April 8th – May 3rd 2003. High priority projects from this 2003 round of proposal will be funded no sooner than 2005. This is a slow process for bringing money to the region; however, many suggested that this would be the best chance to bring base funds to each of the Refuges wanting to participate in the Alaska Off-road Point Count Program. Finally, each Refuge has discretionary funds that they use to fund priority projects. If we can sell our program to Refuge Managers we could possibly get contribution directly from individual refuges, many of which already participate in the program.

It was suggested that we take an incremental approach that includes 1) working with individual refuges to get their support and participation, 2) apply for soft money to fund portions of the Alaska Off-road Point Count Program in the short term, and 3) use the RONS program to attempt to bring long-term funding for the Refuges to conduct the surveys. There was some discussion on how to work through the RONS program. Some suggested that a region-wide proposal including all of the Refuges should be submitted. Only one proposal (Refuges Science Camps) has ever been submitted in this nature; however, it was successfully funded. Typically each Refuge submits its own proposal. Mike Boylan suggested that we consider first putting in

separate RONS packages for a few individual Refuges and, if we are successful in winning funds, then submit a region-wide proposal.

Developments on mapping state-wide land cover using remotely sensed data: a basis for projecting bird/habitat models across the state.—Mike Fleming, USGS Alaska Science Center.

Current the only state-wide classification of land cover from remote-sensed imagery is based on 1 km resolution data collected from Advanced Very High Resolution Radiometry (AVHRR). This information has been incredibly useful in producing ecoregional maps of the state such as Nowacki et al. (2001; Unified ecoregions of Alaska: 2001; U.S. Geological Survey, open-file report 02-297) but not of fine enough resolution for examining changes in land cover over time or for developing models for predicting the occurrence of landbird species. Two new projects will provide a finer level of resolution for state-wide land classification that may support the development of such models.

Starting in 2003, Mike will be working on updating the statewide classification of land cover using MODIS imagery with a 250 m spatial resolution. This may be complete as early as 2004. Also the Earth Resources Observation Systems (EROS) Data Center of USGS will soon begin developing a land classification coverage for Alaska based on 30 m resolution data collected from Landsat satellites. The coverages will be developed as part of the larger national LANDFIRE program and will have details to the alliance level including information on vegetation classification, crown closure, and height. The current forecast is to have a product available 3-5 years from now.

DISCUSSION ON FIELD METHODS AND TRAINING

1. Considering the high costs related to training, we should consider sharing observers among land units to minimize the total costs of conducting the survey.
 - a) If a team of observers is used in more than one region of Alaska they will likely require specialized training for each region in which they will work.
 - b) Observers could be shared both within and among agencies.
2. We should also look into using volunteers to help conduct the surveys. Because we will be conducting surveys in some exciting new places and possibly having crews visit more than one land unit in Alaska, we may be able to attract some hot shot birders (volunteers or technicians) to come up and help with our efforts.
3. Distance sampling
 - a) We will be estimating distance to birds in intervals (i.e. 10 m intervals to 100 m, 25 m intervals thereafter) rather than estimate distances to the meter.
 - b) Observers must understand that in most cases it is most critical to estimate distances with accuracy to those birds that are detected close to point (< 100 meters). Birds that are far from the observer are typically not included in the calculations of density. This should be stressed in the training. We may consider including more narrow bands close to the

observer (i.e. 5-m intervals to 30 m) in order to increase our ability to model the detection function with precision.

- c) In really open habitats (i.e. tundra), where bird vocalizations and displays can be heard at great distances, estimating distances to birds located afar will be more critical. However, range finders can be used effectively in these cases.
 - d) Laser range finders are a useful tool for verifying distance estimation both in training and during counts. Many suggested that it is helpful to use the rangefinder to measure the distance to a few objects immediately prior to conducting a count at a point to establish references to base your distance estimation to birds upon.
 - e) Some indicated that they had poor success using these laser range finders in tundra habitats where there are few objects to reflect the laser off of. Others have had good success using these in tundra habitats. One 8 x model by Bushnell (\$400 from Cabela's) was found to be particularly useful by Brian McCaffery.
 - f) There can be some error in estimating distance as long as it is random; not systematic. If an observer consistently estimates distances to birds as closer or farther than reality then detection probability will be biased high and low respectively. We need formal training in distance estimation to birds to increase accuracy and reduce bias.
4. Develop a list of answers to frequently asked questions in different regions to take out into the field.
 5. Habitat classification, plant identification, and field measurement of structural components of habitat (i.e. slope, aspect, vegetation height, stem width, etc.) all need to be included in the training.
 6. Many times observers will need to wait for sometime after arriving at a point before they can conduct the count. For example, in bear country observers making noise while traveling between points need to wait at the point for a minute or so to allow normal avian activity to begin again. Also, when traveling by boat, you may need to wait until waves from the boat wake stop lapping on the shore before you can start your count.

DISCUSSION ON INFERENCE AND SCALE/ HIGH PRIORITY ISSUES

Statistical Design

1. This is currently being addressed well by Colleen Handel, USGS, with the development of the study plan and subsequent peer review planned for the near future.
2. Under the current proposed sampling allocation, some species will be monitored at the BCR level; others at the state level (see Colleen Handel's presentation on Boreal Partners in Flight website, www.absc.usgs.gov/research/bpif/bpif.html, go to recent meetings).
3. We should try to have documents available for observers in the field that summarize the important analytical issues that can be directly affected by decision made while conducting the surveys.
 - a) This will help observers make the proper decisions when the unexpected is encountered in the field.

- b) Data collection this summer will help feed back into the design and help refine the methods and protocols used in subsequent years.
- 4. Can we use data from Canada to help estimate population size of species we share?
 - a) Canadians are currently farther behind Alaska in developing their parallel projects; however, we recently discussed the possibility of sharing methods and integrating our programs at an international meeting in Whitehorse this past October.
- 5. Maps of sample allocation will need to be produced and distributed to the land unit biologists for assessing effort, costs, logistical feasibility, etc.

Meeting Agency Needs

- 1. Habitat models and estimating population size and densities by habitat may help meet many of the management and information needs of agencies.
- 2. Specific management questions such as the effects of second growth thinning and variable retention of trees in harvested stands will probably require specific research.
- 3. To increase relevancy of the program, habitat models of species occurrence will be an important product. What habitat variables will be collected?
 - a) Data should be useful for foresters, fire managers, wetlands ecologists, and managers dealing with land acquisition.
- 4. We should consider incorporating other taxonomic inventories and monitoring with the current design in the future.
 - a) For example Carol McIntyre and Carl Roland of Denali National Park are conducting a dual avian and floristic inventory using a systematic sample of survey grids similar to the ones proposed for the statewide program.
 - b) Brad Andres (USFWS) and Winston Smith combined avian and small mammal inventories on Research Natural Areas in southeast Alaska.

Costs and Building Agency Support

- 1. Proposed allocation may leave few resources to deal with other management issues related to landbirds. We will likely need additional money so that other monitoring and high priority issues can be addressed.
- 2. Estimating costs by land unit will be needed for the development of funding requests.
- 3. Challenge Cost Share (CCS) and other grant programs requiring a non-federal match
 - a) The Refuges CCS is requesting 1 page proposals by Dec 30th. The program currently has approximately \$700,000 available for FY2003.
 - b) We should consider using ABO as a matching source to help support the development and delivery of a training program.
 - c) The time of volunteers as well as Canadian dollars and services can be used as a source of matched services. SCA is a possible conduit for volunteers.
 - d) Separate proposals may need to be developed for each land unit using volunteers or Canadian services as a match. A single proposal for a complex of Refuges under their CCS program may not be acceptable.
 - e) Should we consider bringing in other non-profits like PRBO and IBP in the future?

4. Refuges Operation Needs System (RONS)
 - a) We probably should develop a RONS package as part of the long-term funding strategy. This would probably require estimates of costs for each Refuge that wants to participate. Mark Bertram will help develop a single proposal for Alaska. We will need refuge specific cost estimates which will be best derived from allocation maps.
5. Forest Service is interested in testing the random surveys to evaluate how well the program meets their information needs.
6. For NPS we need to hook into the Inventory and Monitoring Program. Allocations for NPS monitoring money will be completed 1.5 – 4 years from now.

Agenda for 14 January Meeting in Fairbanks

1. Get presentation on the web and a summary of the meeting out to the group so members can review the updated design, what has fed into it, and the current state of affairs with program development.
2. Invite someone from NPS to give us an overview of the Park's Inventory and Monitoring Program. It will be important to begin talking to representatives from the Central I&M network (Denali, Wrangell-St. Elias, Yukon Charley) since this component of the NPS's I&M Program is currently furthest along on their planning for future monitoring.
3. Develop a steering committee composed of people representing different agencies and regions. This will help spread the work load of increasing agency support, writing proposals for funding, planning meetings, and developing strategies to address high priority issues.
4. What variables do we need to collect during habitat sampling? Botanists with Refuges and Parks such as Janet Jorgensen and Carl Roland should be brought into this discussion. Habitat classification by Forest Service is currently somewhat different from Viereck et al. Should we review this prior to the Fairbanks meeting?
5. Invite land unit managers, deputy managers, superintendents, and natural resource leaders from Refuges and Parks.
6. We need to come up with a better name from the program.