

**FEDERAL AID
FINAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

**Alaska Department of Fish and Game
State Wildlife Grant**

Grant Number: T-1 **Segment Number:** 6
Project Number: 15
Project Title: Evaluating the effects of forest management on bird and vegetation communities
Project Duration: July 1, 2004 – June 30, 2007
Report Period: July 1, 2006 – June 30, 2007
Report Due Date: September 30, 2007

Project Objectives

1. Monitor how bird densities, forest structure, and understory composition have changed since 1991-1993.
2. Compare bird densities, forest structure, and understory composition among treatments to test whether thinning or gapping helps enhance recruitment of birds, plants, or forest structural attributes that are characteristic of old-growth forests.
3. Test whether retention of old-growth trees in harvested stands helps hasten recruitment of birds and vegetation components that are characteristic of old-growth stand.

Project Accomplishments for entire project

1. Existing data on the locations of study plots from 1991–1992 were made available by Dominick DellaSala and his staff from the World Wildlife Fund in the spring of 2005.
2. Existing data from bird and vegetation surveys conducted in 1991–1992 were made available by Dominick DellaSala and his staff from the World Wildlife Fund in the spring of 2006.
3. Eight biologists spent over 1,150 hours in the spring and summer 2005–2006:
 - a. Re-establishing survey protocols and study areas used from 1991–1992;
 - b. Re-establishing monitoring plots; and
 - c. Surveying birds and forest vegetation to monitor decadal trends.
4. More specifically, in 2005 and 2006 we re-surveyed breeding bird and forest vegetation communities using the original methods at 5 replicate study areas for each of 3 different treatments; old-growth, young-growth untreated, and young-growth thinned. Each study area included 5 points that were surveyed 4 times from 1–20 June to estimate breeding bird densities and one time from 10–27 June for vegetation structure and composition. All points were also geo-referenced using GPS.

Project accomplishments during the last segment only (July 1, 2006 – June 30, 2007)

1. Field data from 1991, 1992, 2005, and 2006 were electronically compiled, verified, and prepared for analyses.

2. Two Statisticians were consulted to determine the appropriate statistical models for addressing objectives 1–3.
3. Data analyses and report writing were begun and are scheduled for completion by 30 September 2007.

Significant Deviations

1. We had originally intended to resurvey 4 different treatments; the 3 described above (#1) and young-growth with canopy gaps (gapped hereinafter). However, after revisiting the original gapped plots we found that most (60%) had been subsequently thinned and were no longer suitable for study. We searched for replacements but found that no gapped sites were available that met the original criteria in terms of location, stand size, year of harvest, and year of treatment. Resurveying the remaining 40% of the plots was considered but abandoned because the small sample of plots (10) would not provide sufficient samples for monitoring. Thus, gapped plots were removed from Objective 2.
2. In 2005, we could not find candidates from the FWS biotechnician register that were i) available for the short time-frame of sampling and ii) had adequate field experience. Thus we used personal service contracts to hire one qualified technician. This contract included hourly rates and travel expenses comparable to those included in the original proposal.
3. An additional \$15,000 in funds were provided to this project by the USDA Forest Service's Tongass National Forest and by the U.S. Fish and Wildlife Service's Pacific Joint Venture.
4. Considerable savings were incurred in this study in 2005 and 2006 because lodging was provided by USDA Forest Service and vehicles and gas were provided by U.S. Fish and Wildlife Service, Juneau Fish and Wildlife Field Office, the Denver Zoological Foundation, and the USDA Forest Service.
5. Additional funds and cost savings were used to fund a second field season in 2006. This will greatly strengthen any findings from this study.
6. The original project completion date of March 2007 was extended.

Project Leader:

Steve Matsuoka,
Alaska Landbird Coordinator
U.S. Fish and Wildlife Service
Migratory Bird Management
1011 E. Tudor Road, ms 201
Anchorage, Alaska 99503 USA
907-786-3672, 907-786-3641 (fax)
steve_matsuoka@fws.gov