STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPARTMENT OF FISH AND GAME
OFFICE OF THE COMMISSIONER

333 RASPBERRY ROAD
ANCHORAGE, AK 99518-1599
PHONE: (907) 267-2339
FAX: (907) 267-2442
e-mail: douglas.vincent-lang@alaska.gov

November 6, 2008

Ms. Deanna Lynch
Western Washington Fish and Wildlife Office
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, Washington 98503

Re: Marbled Murrelet Rangewide Status Review

Dear Ms. Lynch,

Attached is information gathered by the State of Alaska to assist the U.S. Fish and Wildlife Service with the rangewide status review of the Marbled Murrelet. Included are descriptions of existing regulatory and environmental programs in place that conserve Marbled Murrelets in Alaska, as well as summaries of existing information and research efforts.

The attached reports include studies of Marbled Murrelets funded by the Alaska Department of Fish and Game. A report highlighting the pertinent issues regarding the Marbled Murrelet research conducted by former Fish and Game biologist Matt Kirchhoff will be submitted to you in the near future. Matt examined multiple methods for censusing Marbled Murrelets in Southeast Alaska during the years of 2004-2008.

Various methods for collecting and analyzing Marbled Murrelet census data have been used by researchers. We urge your careful consideration of the methodologies used and their limitations, and suggest your rangewide status review incorporate a detailed statistical review of the various analyses.

Thank you for the opportunity to provide you with this information. We are willing to discuss this information in more detail if you wish. If you have any questions, please feel free to contact me.

Sincerely,

Doug Vincent-Lang
Endangered Species Coordinator
Alaska Department of Fish and Game

cc: Doug Larsen—Director, ADF&G/DWC
Mary Rabe—Nongame Coordinator, ADF&G/DWC
Sadie Wright—ESA Team, ADF&G/DWC
Gary Mendivil—Program Coordinator, DEC
Don Perrin—Large Project Coordinator, DNR
Liliana Naves—Research Analyst, ADF&G/Subsistence
Brad Meyen—Department of Law

MARBLED MURRELET INFORMATION:

Provided by the State of Alaska to the U.S. Fish and Wildlife Service to aid in the preparation of the status review for this species.

TABLE OF CONTENTS

APPENDICES: Please contact Sadie Wright (sadie.wright@alaska.gov) for copies of the Appendices.

STATE REGULATIONS/MANAGEMENT

Department of Environmental Conservation—

Water Quality Management

The Water Division regulates water quality for the State of Alaska through water quality and wastewater standards found in the Alaska Administrative Code at 18 AAC 70, 18 AAC 72 and 18 AAC 83. These regulations provide specificity for the State of Alaska's implementation of the federal Clean Water Act. The state's water quality standards and wastewater regulations are based on the general prohibition principle, such that no person may cause or contribute to a violation of the water quality standards in state waters and discharges to state waters must be authorized by a permit. These water quality standards apply to both marine and fresh waters and protect water quality for a wide variety of uses, including growth and propagation of aquatic life, which includes marine mammals and their prey.

For waters that are of naturally high quality, the water quality standards include an antidegradation provision that prohibits any degradation of water quality unless certain conditions are met and even then all uses still have to be protected. Alaska's water quality standards also apply to waters of the outer continental shelf adjacent to Alaska by virtue of the Alaska Coastal Management Program. The Division's Wastewater Discharge Authorization Program regulates stormwater pollution of water bodies through review and approval of construction plans and stormwater pollution prevention plans from industrial sites.

Oil and gas wastewater discharges

Oil and gas wastewater discharges are mainly permitted through the EPA's NPDES General Permit Cook Inlet Oil and Gas Exploration, Development and Production Facilities. This permit covers discharges on the both the Outer Continental Shelf and state waters in the vicinity of Cook Inlet, Alaska. ADEC issued State Certification of the EPA's NPDES Cook Inlet General Permit in 2007.

Water Quality Monitoring and Assessment

The Clean Water Act mandates that each state develop a program to monitor and report on the quality of it surface and groundwaters and prepare a report describing the status of its water quality. Section 303(d) requires that states list any waterbodies that do not meet water quality standards. Because of Alaska's size, sparse population, and its remote character, the vast majority of Alaska's water resources are in pristine condition. More than 99.9% of Alaska's waters are considered unimpaired. In specific localized parts of Alaska, surface water quality has been impaired. Historically, these waters are predominantly impaired from sediment, turbidity, and fecal coliform bacteria contamination from urban and stormwater runoff.

Petroleum products, such as oil spills or fuel leaks are also a source of impairment. Detailed information on specific water considered impaired can be found in *Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report, April 1,2008,* which is available on the Water Quality Standards, Assessment and Restoration

Program's web site. Further data on the condition of water quality, sediments and biology of Alaska's coastal waters is also available from the Alaska Monitoring and Assessment Program, which has done statistically-based regional surveys of the Aleutian Islands, Southcentral Alaska and Southeast Alaska coastal waters.

Oil Spill Prevention and Response

The DEC Division of Spill Prevention and Response (SPAR) is responsible for protecting Alaska's land, waters and air from oil and hazardous substances spills. SPAR regulates spill prevention through review and approval of spill prevention plans for oil terminals, pipelines, tank vessels, barges, refineries, oil exploration facilities and oil production facilities. SPAR ensures response preparedness through the review and approval of oil discharge contingency plans, inspections, oil spill response exercises, oil spill response drills. Oil Spill contingency plans are required under Alaska Statute AS 46.04.030 and Alaska Administrative Code regulations at 18 AAC 75. Oil Spill Proof of Financial Responsibility is required under Alaska Statute AS 46.04.030. The State of Alaska requires oil spill contingency plans for the following facilities:

- Offshore oil and gas exploration facilities
- Onshore oil and gas exploration facilities
- Crude oil transmission pipelines
- Oil flow lines and gathering lines
- Noncrude oil terminals (over 10,000 bbls)

The DEC Spill Prevention and Response (SPAR) Division's mission is to prevent, respond and ensure the cleanup of unauthorized discharges of oil and hazardous substances. The Industry Preparedness Program (IPP) requires regulated facilities and vessels to develop state-approved oil spill response and contingency plans, to establish a facility-wide spill prevention program and to ensure that personnel, equipment and financial resources are available to respond to spills. In the event of a spill, the Prevention and Emergency Response Program (PERP) serves as the State's emergency responders to oil and hazardous substance spills and ensures that cleanup measures are implemented as soon as possible.

Detailed information on historical oil spills is available in the department's latest report, *DEC 10-Year Statewide Summary: Oil and Hazardous Substances Spill Data*, and the *Summary of Oil and Hazardous Substances Spills by Subarea,* both of which are available on the program's web site. This report provided the following conclusions and highlights relating to the marbled murrelet's marine habitat:

- Oil (both crude and noncrude oil products) constitute the vast majority (82%) of the reported spills
- Spills from unregulated vessels were most common for the coastal areas of Southeast Alaska, Prince William Sound, Kodiak, Cook Inlet and the Aleutians.
- Seasonal trends for marine spills occur in the coastal areas of the state during the commercial fishing season, typically April through September.

- Cook Inlet experienced the greatest number of spills. This can be attributed to the higher population and industrial density, plus the major highways, railway and other transportation infrastructure in the area.

Significant Spill Events by Subarea

Aleutians – On December 26, 1988, the Tanker Barge 283 released 2,041,662 gallons of diesel fuel near the Shumagin Islands. On November 26,1997 the M/V Kuroshima grounded near Unalaska Island resulting in a spill of 38,976 gallons of bunker fuel. On December 8, 2004, the Selendang Ayu also went aground near Unalaska Island, releasing 335,732 gallons of diesel fuel.

Prince William Sound – The Exxon Valdez went aground on Bligh Reef on March 24, 1989, releasing 11 million gallons of crude oil, with significant marbled murrelet mortality in coastal and offshore waters following the spill. On August 4, 2001, the F/V Windy Bay struck a reef and sank, releasing 35,000 gallons of diesel fuel.

Additional Information

Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report, April 1, 2008 available at
http://www.dec.state.ak.us/water/wqsar/waterbody/2008FinalIntegratedReport3-1908.pdf

DEC Wastewater Permits Database, available at
http://www.dec.state.ak.us/ias/permitsearch/default.aspx

DEC (2007) *DEC 10-Year Statewide Summary: Oil and Hazardous Substances Spill Data* (July 1, 1995 – June 30, 2007) available at
http://www.dec.state.ak.us/spar/perp/subreports.htm

DEC (2007) *Summary of Oil and Hazardous Substance Spills by Subarea (July 1, 1995 – June 30, 2005)*
http://www.dec.state.ak.us/spar/perp/docs/10year_rpt/10Yr_Subareas_FINAL.pdf

Department of Fish and Game

Division of Subsistence—

The ADFG Division of Subsistence has not conducted a dedicated survey to assess customary and traditional uses of marbled or Kittlitz's murrelets and comprehensive household surveys have not specifically inquired about uses of these species. Household surveys conducted in the Aleutians Islands have inquired about ancient murrelets. An estimated harvest of 28 ancient murrelets and 70 ancient murrelet eggs in Unalaska (1994) can be found in the Community Subsistence Information System CSIS (http://www.subsistence.adfg.state.ak.us/CSIS/). An estimated harvest of 14 ancient murrelet eggs in Akutan is reported in Fall et al. (1998) and can be found also in the CSIS. Mention of historic use of ancient murrelets in Atka is reported in Veltre & Veltre (1983, page 139). Uses of marbled or Kittlitz's murrelet in their area of occurrence

cannot be ruled out. However, given the dispersed nesting habits and small size of adults, harvest of eggs (Hunn et al. 2003) and adults may be rather occasional. Besides, people may not know the bird to which eggs gathered from solitary nests belong, which makes harvest assessment difficult.

The Division of Subsistence has not conducted research focusing on traditional ecological knowledge about murrelets and, although information about this subject has not been mentioned in other studies, one should not conclude that traditional ecological knowledge does not exist. In this context, it is of interest to trace references to murrelets in languages spoken in the main distribution area of these species. The Iñupiat Eskimo dictionary (North Slope and Seward Peninsula) did not include a word for murrelets (Webster & Zibell 1970). The Aleut dictionary (Aleutians Islands) presented two nouns from different dialects specifically referring to ancient murrelet, although no reference was made to other murrelet species (Bergsland 1994). The Tlingit dictionary (Southeast Alaska) identified only one word for "auklets or murrelets (diving birds)" (Davis & Leer 1976). However, Hunn et al. (2003) have identified a single Tlingit name for both marbled and Kittlitz' murrelets. What is evident is that native peoples of Southeast Alaska are familiar with these species. Alutiiq (Alaska Peninsula, Kodiak, Kenai Peninsula, Prince William Sound) reference to murrelets could not be found in Leer (1978), Leer et al. (1978), or Leer et al. (1996). This pattern may reflect an incomplete coverage of the languages in the referred dictionaries or suggest that marbled or Kittlitz's murrelets have not been used as primary subsistence or cultural resources.

The Division of Subsistence is not aware of subsistence activities in breeding and feeding grounds that could directly or indirectly interfere with murrelets, although dedicated studies have not been conducted. In Southeast Alaska, while commercial gillnets are operated in open marine waters, subsistence gillnets are set at the mouth of rivers and the nets are closely monitored by the fishers. Setnets in the Chilkat River and rivers in the Yakutat area are set in fresh water or close to shore in marine waters (Turek M, personal comm., ADFG Division of Subsistence, Juneau).

Literature Cited:

Bergsland, K. 1994. Aleut Dictionary. Alaska Native Language Center, University of Alaska Fairbanks.

Davis, H. and Leer, J. 1976. English-Tlingit Dictionary (nouns). Sheldon Jackson College.

Fall, J.A., Paige, A., Vanek, V., and Brown, L. 1998. Subsistence harvests and uses of birds and eggs in four communities of the Aleutian Islands area: Akutan, False Pass, Nelson Lagoon, and Nikolski. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 243.

Hunn, E, Johnson, D.R., Russell P.N., and Thorton T.F. 2003. A study of traditional use of birds' eggs by the Huna Tlingt. Technical Report NPS/CCSOUW/NRTR-2002-02

NPS D-113. PACIFIC Northwest Cooperative Ecosystem Studies Unit. College of Forest Resources, Seattle.

Leer, J. 1978. A Conversational Dictionary of Kodiak Alutiiq. Alaska Native Language Center. University of Alaska Fairbanks.

Leer, J., Anahonak, C., Moonin, A., and Tablios, D. 1978. Nanwalegmiut Paluwigmiut-llu Nupugnerit: Conversational Alutiiq Dictionary. National Bilingual Materials Development Center. University of Alaska Anchorage.

Leer, J., Christiansen, M., Lind, D., Phillips, T., Phillips, R., and Sam, M. 1996. A Short Dictionary of Alaska Peninsula Sugtestun and Alaska Peninsula Alutiiq Workbook. Alaska Native Language Center. University of Alaska Fairbanks.

Veltre, D.W. and Veltre, M.J. 1983. Resource utilization in Atka, Aleutian Islands, Alaska. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 88.

Webster, D.H. and Zibell, W. 1970. Iñupiat Eskimo Dictionary. Summer Institute of Linguistics, Inc., Fairbanks, Alaska.

Department of Natural Resources—

The USGS 2006 "Status Review of the Marbled Murrelet (*Brachyramphus marmoratus*) in Alaska and British Columbia" document summarizes the State of Alaska efforts for conservation of Marbled Murrelets in that management of state lands within the species range provides indirect benefits to Marbled Murrelets. The document states that habitat loss from timber harvest is a major threat to the listed species. In Alaska, where the species is not listed under the ESA, DNR Area Plans provide indirect benefits to the species through management guidelines for forestry and timber harvest. In addition, Area Plans provide land use management guidelines for species that are listed under the ESA. DNR Area Plans are the product of work by State and Federal agencies, other land owners in the area, local governments, special interest groups, and the public. Area Plans within the Marbeled Murrelett's range include:

- Central/Southern Southeast Area Plan
- Prince of Wales Island Area Plan
- Northern Southeast Area Plan
- Yakataga Area Plan
- Prince William Sound Area Plan
- Kodiak Area Plan

These plans can be accessed online at:
http://www.dnr.state.ak.us/mlw/planning/areaplans/

Forestry Management Guidelines

The timing, location, harvest amounts and methods of timber harvests are controlled by state statutes and regulations. The Alaska Land Act (AS 38.05.110-123) and Regulations (11 AAC 71) provide policy and guidance for management of state forest resources. The Forest Resources and Practices Act (AS 41.17) and Regulations (11 AAC 95) provide additional policy and guidance for managing forest related activities.

Area plans adopted under AS 38.04.065 determine whether forest harvest is an appropriate use of state lands. Area plans designate the main uses for state lands, set guidelines to ensure that multiple uses occur compatibly, and classify the land according to its main uses. Land must be classified before it and any interests in the land can be sold (11 AAC 55.040(i)).

Proposed timber sales throughout the state must be included in two consecutive annual five-year Schedule of Timber Sales published by the DNR Division of Forestry (DOF), with certain exceptions. These annual sale schedules identify the location, timing, and volumes of proposed timber harvests on state forestland managed by DNR. Small sales of 10-160 acres are, as a matter of DNR policy, also listed in the five-year sale schedule at least once.

Site-specific guidelines for forest management activities are addressed through a Forest Land Use Plan (FLUP) prior to offering timber for harvest (AS 38.05.112). A Forest Land Use Plan is required for all sales greater than 10 acres. All timber sales must be in the overall best interest of the state. When a written Best Interest Finding is required under AS 38.05.035, it is made part of the FLUP.

Timber Harvest Guidelines

All timber harvest activities must be compatible with the general management guidelines of this section and with the management intent statements and land use designations identified in specific management units of the area plans.

Timber Harvest Stipulations. All timber harvest operations will be conducted in accordance with the stipulations in the Forest Land Use Plan, the Alaska Forest Resources and Practices Act (AS 41.17 & 11 AAC 95), the Alaska Land Act (AS 38.05 & 11 AAC 71), and other pertinent state guidelines and laws.

Forest Land Use Plans (FLUPs). Although an area plan may establish areas of potential timber harvest, it does not make specific timber harvest decisions. Before timber harvest decisions are made for specific locations in planning area, DOF will prepare a Forest Land Use Plan (FLUP), as required under AS 38.05.112, and a Best Interest Finding, required under AS 38.05.035. FLUPs will contain site-specific guidelines for timber harvest. Negotiated timber sales will occur in the future within the planning area that are less than 10 acres in size or less than 500 MBF. These sales do not require a Best Interest

Finding but may require a FLUP if they are greater than 10 acres in size. In either case, they must still adhere to the area plan's standards, guidelines and management intent statements.

Size and Shape of Timber Harvest Units. In determining the size, shape, and spacing of timber harvest units, DOF will take into consideration: reforestation; water body types; effects of soil erosion and mass wasting on water quality and fish habitat; terrain; marketing conditions and other economic constraints; harvest equipment capabilities; efficiency; wind firmness of areas that are not cut. DOF will also make allowances for important fish and wildlife habitat and scenic quality. Harvest units may not exceed 160 acres in size unless approved in an FLUP after consultation with DEC and ADF&G, and public review. The 160-acre limit applies to all harvesting systems except single tree selection. In some subunits, management intent indicates a smaller acreage.

Leave Area Design Criteria. After consultation with ADF&G as part of the FLUP planning process, leave areas that are identified in the approved FLUP, which may include areas of Old Growth Forest, shall be maintained to make allowances for important fish and/or wildlife habitat. The cumulative benefits of the forest wide protections provided by the Chugach and Tongass Land and Resource Management Plans as well as the opportunities for coordinated federal-state land management at the site and regional levels, should be considered in making determinations of the need for and the subsequent design of leave areas. Leave areas provide interconnected habitat for travel, feeding, resting, and escape or avoidance of predators. Areas where evidence of their use by wildlife is found to occur, natural travel corridors such as ridge points, the forested edge of wetlands, the coastal fringe, portions of Old Growth Forest, and riparian corridors should be considered for inclusion within designated leave areas. To achieve this intent, special management areas extending out 300 feet from each bank are designated along anadromous and high value resident fish streams to facilitate wildlife movement, and provide important riparian habitat for fish and wildlife. Special management areas shall be greater where larger widths are specified in the management intent statement for upland tracts. Buffers not less than 330 feet will be left around each bald eagle nesting tree unless, upon consultation with USFWS, a site specific activity may be conducted within 330 feet of the nesting tree. Wind firmness of residual trees will be taken into consideration when designing leave areas between designated cutting units. Bridge timbers may be taken from leave areas if there is no feasible or prudent alternative.

Harvest Unit Layout. A mosaic of forest age classes will be created by cutting units and leave areas where feasible and prudent. DNR will lay out units following DOF's Engineering Guide for Southeast Region.

Timing of Harvest Activity. Among those management units with areas designated Settlement or General Use and identified as suitable for timber harvest, DOF will rotate the location of harvest activities between management units over time. Rotating the location of timber harvest will reduce the level of impacts to any particular management unit at any one time. In general, there should be no more than one timber sale in an area designated Settlement every two years, unless the community or the overall public

interest supports a more active timber harvest program. This policy applies only to timber sales greater than 10 acres.

Steep Slopes. Forest management activities may not be conducted on slopes consistently greater than 67 percent, on an unstable slope, or in a slideprone area unless approved in an FLUP. DNR shall consult with ADF&G on decisions involving timber harvest in areas steeper than 67 percent. Harvest operations will be designed to prevent mass wasting and to maintain soil productivity, tree regeneration, and fish habitat.

Recreation and scenic values. In determining the size and shape of cutting units, DOF shall make allowance for scenic quality in or adjacent to areas of substantial importance to the tourism and recreation industry. In these areas, cutting units will reflect local topography and, to the extent practical, blend in with the topography and minimize linear borders. The relative importance of scenic quality will be specified in the management statements and controlled by the management intent guidelines for each management unit.

Settlement Areas. In areas designated Settlement, state commercial timber sales will adhere to the Forest Resources and Practices Act (FRPA) and pertinent state regulations for commercial forestry, and will not be considered a "land use conversion" as described in FRPA. Such timber harvest shall be direct support of current or future state subdivision development. However, the salvage of damage trees, including beach salvage, is authorized and may occur separately from subdivision development.

Maintenance of Areas adjacent to the Coast. Areas adjacent to the coast shall be maintained in order to achieve the objectives of fisheries and/or wildlife habitat protection; public access; dispersed recreation; scenic viewshed protection; and, within portions of this area, the selective harvest of timber. The width, configuration, and specific management objectives of these areas are identified for affected upland tracts in the management intent statements of the Resource Allocation Tables in the area plan. These areas are to be provided in existing Old Growth Forest areas. The exact configuration of coastal maintenance areas (forestry) are to be determined by ADF&G and DNR during the FLUP planning process. If authorized in the management intent for a specific tract, selective timber harvest may occur beyond the first 500 feet from mean high water, or as otherwise provided in these descriptions. Within a limited number of tracts, either selective harvest or conventional harvest methods may be used within the 500-1,000 foot area, the type depending on the results of the FLUP planning process. It is recognized that divergence from the inland boundary applying to specific tracts may be necessary to provide flexibility for uses and activities permitted by the state, including timber harvest, but shall only be authorized if the overall objectives of the coastal maintenance area are maintained. DNR shall consult with ADF&G in making decisions of this type.

Sustained Yield of Forest Resources Forestland will be managed to guarantee perpetual supplies of renewable resources to serve the needs of all Alaskans for the many products, benefits, and services obtained from them. Annual allowable timber harvest for the

planning area shall be based on the acreage with designations identified as suitable for timber harvest in the Central/Southern Southeast Area Plan, the Prince of Wales Island Area Plan, and the Southwest Prince of Wales Island Area Plan within the Division of Forestry's Ketchikan area, taking into consideration the standards and guidelines of this plan and relevant statutes and regulations. The acreage may change over time as lands are converted to other uses. The number of acres of land suitable for timber harvest will be reviewed and revised periodically, and a new annual allowable harvest calculated. The annual allowable harvest will be calculated using the area control method. The amount of timber harvested annually from the planning area will vary and may be more or less than the annually allowable harvest figure for the area covered by this area plan. However, at no time shall the acreage harvested on a decadal basis exceed the annual allowable harvest for that period within the planning period.

Protection of Fish and Wildlife Habitat. Land designated Forestry, or land where timber harvest is an appropriate use, will be managed for multiple use of all resources and to ensure the sustained yield of renewable resources. Prior to harvest, DNR shall consult with and give due deference to ADF&G on the effects of the proposed harvest on fish and wildlife habitat, and make allowance for important fish and wildlife habitat, as provided under AS 41.16.060 and 41.17.098(d). The relative importance of wildlife habitat will be specified in the management intent statements and controlled by the management guidelines for each management unit. Important fish habitat is defined as a water body supporting anadromous or high quality resident fish, as defined in AS 41.17.118(a)(2)(A) and consistent with the meaning of AS 41.17.060. Timber harvests of less than 10 acres in size are considered consistent with this guideline without consultation unless activities are proposed for which ADF&G has due deference. Riparian areas shall be managed in accordance with AS 41.17.118 and 11 AAC 95.185. No harvest activities will be undertaken within 100 feet of an anadromous or high value resident fish stream except as provided by 11 AAC 95.275 & .355. Within 100-300 feet from the stream, harvest may occur but must be consistent with the maintenance of important fish and wildlife habitat required under AS 41.17.118(a), with due deference to ADF&G.

Threatened and Endangered Species. All land use activities will be conducted consistent with state and federal Endangered Species Acts to avoid jeopardizing the continued existence of threatened or endangered species of animals or plants; or to provide for their continued use of an area and to avoid modification or destruction of their habitat. Specific mitigation recommendations should be identified through interagency consultation for any land use activity that potentially affects threatened or endangered species.

ADF&G FUNDED PROJECTS

Completed Research—

K.J. Kuletz, E.A. Labunski, and S.G. Speckman. 2008. Abundance, distribution, and decadal trends of Kittlitz's and marbled murrelets and other marine species in Kachemak Bay, Alaska. Final Report (Project No. 14) by U.S. Fish and Wildlife Service for Alaska Department of Fish and Game, State Nongame Wildlife Grant, Anchorage, Alaska.
See Appendix A.

C. Nations, L. McDonald, and J. Parrish. 2008. Power to detect trends in *Brachyramphus* Murrelet populations in Southeast Alaska. Final Report for Alaska Department of Fish and Game, State Nongame Wildlife Grant, Anchorage, Alaska.
See Appendix B.

Newman, S.H., S.K. Nelson, D.L. Whitworth, and H.R. Carter. 2006. Marbled Murrelet (*Brachyramphus marmoratus*) activity patterns and health in Port Snettisham, Southeast Alaska, 2005. Unpublished report prepared for the Alaska Department of Fish and Game by Wildlife Trust, New York, NY. 70pp.
See Appendix C.

Newman, S. H., V.M. Padula, S.K. Nelson, and T.B. Haynes. 2008. Health Assessment of Marbled Murrelets in Port Snettisham, SE Alaska. Unpublished report prepared for the Alaska Department of Fish and Game by Wildlife Trust, New York, NY. 45pp.
See Appendix D.

Haynes, T.B., S.K. Nelson, F. Poulsen, and V.M. Padula. 2008. At-sea habitat use and patterns in spatial distribution of Marbled Murrelets in Port Snettisham, SE Alaska. Unpublished report prepared for the Alaska Department of Fish and Game by Wildlife Trust, New York, NY and Oregon State University, Corvallis, OR. 55 pp.
See Appendix E.

Future Research—

Kirchhoff, M. Former Alaska Department of Fish and Game biologist, Matt Kirchhoff, studied Marbled Murrelets in Southeast Alaska from 2004-2008. Prior to the December 1, 2008 deadline, Matt will submit to the USFWS a report outlining his work and focusing on issues pertinent to this rangewide status review. In addition, he will complete a detailed final report that will be submitted to ADF&G in 2009.

Nelson, S.K. et al. 2008-2010. Marbled Murrelet Habitat Use and Activity Patterns at Port Snettisham, Alaska.
Final Report expected 2010.

Nelson, S.K., B.A. Barbaree, S.H. Newman, H.R. Carter, and D.L. Whitworth. 2008. Marbled Murrelet breeding ecology, terrestrial habitat use, and activity patterns in Port Snettisham, Southeast Alaska, 2005-2007. Unpublished report to the Alaska Department of Fish and Game by Wildlife Trust and Oregon State University. XX pp.
Final Report expected December 2008.

Peery, Z. Adaptive Genetic Diversity of the Marbled Murrelet (*Brachyramphus marmoratus*) in Alaska compared to other population centers within the species' range.
See Appendix F.

Summary Information—

Alaska Comprehensive Wildlife Conservation Strategy
The Marbled Murrelet is featured in the Alaska Comprehensive Wildlife Conservation Strategy (CWCS). The CWCS can be found online at:
http://www.sf.adfg.state.ak.us/statewide/ngplan/
Information specific to the Marbled Murrelet is in Appendix 4, Pages 211-216 of the CWCS.

Alaska Natural Heritage Program
Summary information for the Marbled Murrelet is available online at the Alaska Natural Heritage Program website. Marbled Murrelet can be selected from this list of birds:
http://aknhp.uaa.alaska.edu/zoology/Zoology_ADFG_birds.htm
Location data can be provided in GIS spatial data format if requested.