

**TONGASS FOREST PLAN AMENDMENT BIOLOGICAL ASSESSMENT
FOR SPECIES UNDER THE JURISDICTION OF THE U.S. FISH AND WILDLIFE SERVICE
Tongass National Forest, Alaska**

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6/24/16

BACKGROUND/HISTORY

The purpose of this Biological Assessment (BA) is to address the effects the 2016 Tongass National Forest Plan Amendment on federally-listed species and their critical habitat as required by 50 Code of Federal Regulations (CFR) 402.02. This document complies with Section 7 of the Endangered Species Act (ESA) which requires all federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), to ensure that their actions are not likely to jeopardize the continued existence of federally-listed species or adversely modify their critical habitat. Because the Forest Plan Amendment directs management in areas of the Tongass that are adjacent to marine waters, and that are likely to have interrelated and interdependent activities within and near marine waters around the Tongass, the Forest Plan Amendment may affect federally-listed marine species that occur in the area. This BA addresses all federally-listed species and critical habitat under USFWS jurisdiction found in the action area, including species listed as threatened, endangered, proposed, or candidate by USFWS. A separate Biological Assessment focusses on federally-listed species and critical habitat under NMFS jurisdiction.

This BA analyzes effects of the selected alternative, Alternative 5 from the Final Environmental Impact Statement for the 2016 Forest Plan Amendment, hereon called the proposed action. The purpose of the proposed action is to accomplish the transition to young-growth management as directed in the Secretary of Agriculture, Thomas Vilsack's Memorandum 1044-009: "Addressing Sustainable Forestry in Southeast Alaska" (USDA 2013). The proposed action is a programmatic action detailing which lands will be available for timber harvest, especially young-growth timber stands, and changes or additions to management direction needed to promote and speed the transition to young-growth management while maintaining a viable timber industry in southeast Alaska. The proposed action also includes changes related to renewable energy development, and other changes suggested in the five-year review of the 2008 Forest Plan and internal and external scoping, as warranted. Because of the programmatic nature of the proposed action, it is important to note that all future on-the-ground projects that result from the proposed changes in management direction will require additional analysis and compliance with the ESA and other applicable laws and policy.

Consultation with USFWS to Date

10/15/15: Email to USFWS to request concurrence on the proposed species list for species under USFWS jurisdiction. No species under USFWS jurisdiction were included on the proposed list.

10/28/15: Meeting with Steve Brockmann of USFWS to discuss the Forest Plan Amendment, the potential for species under USFWS jurisdiction, and the 10/15/15 email requesting species list concurrence.

10/29/15: Email from USFWS indicating that no listed terrestrial species occur in Southeast Alaska, but that short-tailed albatross do visit nearshore waters adjacent to the outside islands, particularly where the continental shelf break is close to shore. USFWS recommended adding the short-tailed albatross to the species list 'if there is potential for the Forest Service to operate or authorize activities that could include working in or transiting the Gulf of Alaska adjacent to the Tongass National Forest'.

5/25/16: Email to USFWS to verify that the species list is still accurate as per CFR 402.12(e). The short-tailed albatross was included on this list.

6/16/16: Email from USFWS indicating the species list is accurate for species under USFWS jurisdiction.

DESCRIPTION OF THE ACTION AREA AND PROPOSED ACTION

Action Area

The action area encompasses the Tongass and adjacent marine waters and lands. The action area includes all areas that are likely to be directly and indirectly affected by the proposed action from changes in management direction associated with timber harvest, thinning treatments, road construction and renewable energy development. The action area also includes areas that may be affected by interrelated and interdependent actions of the proposed action.

The 16.7-million-acre Tongass occupies about 7 percent of the area of Alaska. The Tongass is located in the southeastern portion of the state (the area commonly called the panhandle of Alaska or Southeast Alaska) and extends from Dixon Entrance in the south to Yakutat Bay in the north, and is bordered on the east by Canada and on the west by the Gulf of Alaska (Figure 1). The Tongass extends approximately 500 miles north to south and approximately 120 miles east to west at its widest point.

The Tongass includes a narrow mainland strip of steep, rugged mountains and icefields and more than 1,000 offshore islands known as the Alexander Archipelago. Together, the islands and mainland have nearly 17,000 miles of meandering shoreline, with numerous bays and coves. A system of seaways separates the many islands and provides a protected waterway called the Inside Passage. Federal lands comprise about 95 percent of Southeast Alaska, with about 80 percent in the Tongass and the remainder in Glacier Bay National Park and Preserve, state, Native corporations, and other private ownerships.

Most of the area of the Tongass is undeveloped. Approximately 74,000 people inhabit Southeast Alaska, primarily in 32 communities located on islands or mainland coastal areas. Only eight of the communities have populations greater than 1,000 persons. Most of these communities are surrounded by, or adjacent to Tongass lands. Only three communities are connected to other parts of the mainland by road: Haines and Skagway in the north and Hyder in the southeast.

Proposed Action

The proposed action is Alternative 5 in the Forest Plan Amendment Final Environmental Impact Statement (2016) and is based on the recommendations from the Tongass Advisory Committee. Key changes in management direction for lands and resources on the Tongass from the proposed action are listed in Table 1. Table 2 provides acreage allocations in land use designations, and suitable and projected harvest under the proposed action and current management. And Table 3 shows comparative outputs and measures for the proposed action and current management.

While Tables 1-3 give a general portrayal of the proposed action, the most important aspects to the short-tailed albatross result from changes in young-growth management direction that may influence interrelated and interdependent activities within marine waters along the outer coast, and management changes in permissiveness of renewable energy development along the outer coast. The beach and estuary fringe currently constitutes an area of approximately 1000 feet slope distance inland from mean high tide around all marine coastline and identified estuaries. Currently, areas within the beach and estuary fringe are generally classified as unsuitable for timber harvest, with exceptions including salvage sales, specialty wood products, habitat restoration treatments, customary and traditional subsistence uses, and for infrastructure and access development on the landward edges of the fringe where there are not feasible alternatives in project design. The proposed action will open up the beach and estuary fringe buffer to young-growth harvest in all but the first (shoreward) 200 feet of the buffer. These areas will be subject to commercial thinning or patch cuts no greater than 10 acres in size, a maximum of 35% removal, a single entry young-growth harvest, and only within the first 15 years after Forest Plan approval. No young-growth harvest will occur on islands <1,000 acres in size. Young-growth management objectives within the beach and estuary fringe under the proposed action will include dual intents of facilitating recovery of old-growth conditions, while also producing commercial timber byproducts. The proposed action is predicted to result in 3,903 acres of young-growth harvest within the beach and estuary fringe that would not occur under current management direction (current = 0 acres). The proposed action is predicted to result in 67 miles of new and reconstructed roads within the beach and estuary fringe associated with this predicted young-growth harvest.

Another key element of the proposed action for short-tailed albatross relates to increased flexibility in siting development of renewable energy facilities and infrastructure. The proposed action will replace the Transportation and Utility System LUD in the 2008 Forest Plan, with a series of renewable energy and Transportation Corridor System standards and guidelines. Currently, renewable-energy-site selection requires substantial documentation as to why projects could not be developed in allowable areas (“window” categories) instead of areas designated for avoidance, which applies to most lands on the Tongass. Changes under the proposed action will allow renewable-energy projects to be developed on any Tongass lands without requiring this justification, as long as all other standards and guidelines, regulations, and laws are met. The proposed action will also reduce scenic integrity objectives (SIOs) to Low for renewable-energy siting.

Table 1. Key changes in management direction from the proposed action. LUD = land use designation. RMA = riparian management area. TTRA = Tongass Timber Reform Act.

Old-growth harvest

- Will be allowed only within Phase 1 of the 2008 Timber Sale Program Adaptive Management Strategy; Phases 2 and 3 will no longer be allowed.
- No old-growth harvest will be allowed within the T77 watersheds or the TNC/Audubon conservation priority watersheds.

Young-growth harvest

- Entry into all Phases 1, 2, and 3 of the Timber Sale Program Adaptive Management Strategy will be allowed without regard to harvest levels.
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- Commercial harvest of young growth will be allowed in Old Growth Habitat LUDs, the Beach Fringe outside of a 200-foot buffer, and in RMAs outside of TTRA buffers, where commercial harvest is currently not allowed. Only patch cuts (up to 10-acre openings) or commercial thinning will be allowed with up to 35% removal, and only during the first 15 years after plan approval. No harvest on islands < 1,000 acres in size.
- Scenic Integrity Objectives (SIOs) will be reduced to Very Low in development LUDs. SIOs currently range from Very Low to Moderate in Modified Landscape LUDs, Very Low to High in Scenic Viewshed LUDs, and from Very Low to Low in Timber Production LUDs.

LUD Changes

- Old Growth Habitat LUDs will be modified to correspond with the biologically-preferred alternative in areas where they were negatively affected by land conveyances and other changes resulting from Public Law 113-291.
- The transportation and utility systems overlay LUD will be removed.

New Plan Components

- Young-growth plan components added to Forest Plan.
- Renewable Energy plan components added to Forest Plan.
- Transportation Systems Corridors plan components added to Forest Plan.
- Forest-wide plan direction added to Forest Plan.

Table 2. Acres allocated in land use designations, and suitable and projected harvest under the proposed action and current management.

| | Proposed Action | Current (No Action Alternative) |
|--|------------------------|--|
| Land Use Designation Group | Acres Allocated | Acres Allocated |
| Wilderness LUD Group | 5,922,131 | 5,922,131 |
| Natural Setting LUD Group – No YG Harvest | 6,270,909 | 7,464,989 |
| Natural Setting LUD Group- With YG Harvest | 1,202,450 | 0 |
| Development LUD Group | 3,359,367 | 3,367,736 |
| Total National Forest System Lands | 16,755,685 | 16,755,685 |
| Suitable Acres | Acres Allocated | Acres Allocated |
| Suitable Acres – Old Growth | 229,060 | 328,615 |
| Suitable Acres – Young Growth | 338,973 | 263,904 |
| Projected Harvest | Acres Allocated | Acres Allocated |
| Projected Harvest Acres after 25 years | | |
| Old Growth | 23,813 | 38,527 |
| Young Growth | 43,316 | 9,669 |

| | | |
|---|---------|---------|
| Projected Harvest Acres after 100 years | | |
| Old Growth | 42,479 | 62,851 |
| Young Growth | 284,144 | 209,882 |

Table 3. Selected outputs and associated measures under the proposed action and current management. LUD = land-use designation. YG = young growth. MMBF = million board feet. PTSQ = projected timber sale quantity.

| Resource/Category | Proposed Action | Current (No Action Alternative) |
|--|-----------------|---------------------------------|
| Percent in Wilderness LUD Group | 35% | 35% |
| Percent in Natural Setting LUD Group with No YG Harvest | 37% | 45% |
| Percent in Natural Setting LUD Group with YG Harvest | 7% | 0% |
| Percent in Development LUD Group | 20% | 20% |
| Suitable Area for Timber Management in Inventoried Roadless Areas | | |
| Old growth and Young growth (acres) | 0.0 | 0.0 |
| Percent of Existing Productive Old Growth Harvest after 100 years | 0.8% | 1.3% |
| Percent of Original Productive Old Growth remaining after 100 years (92% in 2015) | 91% | 90% |
| Estimated forest Land Suitable for Timber Production- Old Growth (acres) | 229,060 | 328,615 |
| Estimated forest Land Suitable for Timber Production-Young Growth (acres) | 338,973 | 263,904 |
| Long-term Projected Timber Sale Quantity (PTSQ) in MMBF | 98 | 138 |
| Years until maximum PTSQ is achieved | 18 | 38 |
| Years until full transition is achieved (i.e., 41 MMBF of Young Growth is harvested) | 16 | 32 |
| Maximum New Road Construction after 25 years/100 years (miles) | 267/994 | 281/944 |
| Maximum Road Construction on Decommissioned Road Grades after 25 years/100 years (miles) | 102/527 | 64/428 |
| Maximum New Road Reconstruction after 25 years/100 years (miles) | 219/1,058 | 160/887 |

LISTED SPECIES & CRITICAL HABITAT IN THE ACTION AREA

Only one federally-listed species under USFWS jurisdiction occurs within the action area, the short-tailed albatross (*Phoebastria albatrus*). No designated critical habitat under USFWS jurisdiction exists within or near the Tongass. The short-tailed albatross does not breed within or near the action area; the species nests on islands in Japan and Taiwan and more recently on Midway Island. Outside the breeding season, the species spends much of its time feeding in the Alaskan waters of the Bering Sea, Aleutian Islands, and Gulf of Alaska. Juveniles are the only age group that forage within the action area, especially where the shelf break is close to shore (Figure 2). The shelf break comes close to the Alexander Archipelago and the Tongass along Chichagof and Baranof Islands. This species occurs in southeastern portions of Alaska at casual to accidental levels, during all seasons of the year (USGS/ASC, 2016). The marine regions preferred by short-tailed albatrosses for feeding are areas of upwelling and high productivity, such as continental shelf breaks. Their diet includes squid, shrimp, fish eggs, fish, and crustaceans. Food is generally seized from the surface, but the species is also known to scavenge fish waste from fishing vessels.

The short-tailed albatross was formerly the most abundant albatross in the North Pacific, numbering in the millions. The short-tailed albatross was federally listed as endangered throughout its range, including the United States, on July 31, 2000 (65 FR 147:46643-46654). Prior to that, it had been listed as endangered throughout its range except within the United States and its territorial waters. The population of this species is currently increasing at between 5 and 9% per year from about 1,200 individuals in 2000, resulting in a total population estimate of short-tailed albatrosses of 4,354 in 2014 (USFWS, 2014).

Historical declines were a result of feather overexploitation. Current threats include commercial-fisheries bycatch, oil and other sea contaminants, ingestion of plastics, collisions with cables on fishing vessels, invasive predators in nesting areas, and extreme weather and volcanic activity at their primary breeding colony on Torishima Island, Japan. Bycatch in longline fisheries for groundfish in the North Pacific Ocean were a known cause of mortality and concern for short-tailed albatrosses. During the 1980s, fishermen reported two takes of short-tailed albatrosses, one in the Bering Sea, and one in the Gulf of Alaska. Since 1990, NMFS observers recorded five short-tailed albatrosses taken in Alaskan waters. Satellite telemetry indicated that short-tailed albatrosses move north from their breeding areas after the breeding season to the southern tip of the Kamchatka Peninsula, then east to the western Aleutian Islands. The albatrosses spend considerable time in the western Pacific where they could be exposed to additional fisheries encounters. Thus, the Alaskan bycatch represents only a portion of the fishing mortality that occurs. Bycatch in longline fisheries conducted in the North Pacific by vessels representing Japan, Taiwan, Korea, Russia, and China also occurs.

Oil and other sea contaminants are also a problem for short-tailed albatrosses. Albatross may be exposed to organochlorine contaminants such as polychlorinated biphenyls and pesticides as well as toxic metals via atmospheric and oceanic transport. These contaminants may result in impaired reproduction, reduced immune function, inability for thermoregulation, impaired endocrine balance, genetic mutations, and direct mortality (USFWS, 2008). Contamination by oil can harm short-tailed albatross through acute toxicity through direct exposure or by chronic

sublethal exposure to low levels. Exposure to oil can impair thermoregulation, result in poisoning through ingestion, pollute food sources, reduce prey availability, and result in embryotoxic effects (USFWS, 2008). Plastics also pose a current threat. Albatross are known to accidentally consume plastics, mistaking them for food items, which can result in internal injury, or reduced gut volume for food consumption (USFWS, 2008). Toxins can be released from the ingested plastics and potentially cause harm in seabirds as well (USFWS, 2014).

ENVIRONMENTAL BASELINE CONDITIONS

The current condition of beach, estuary, and marine habitats within the action area has been moderately degraded in localized areas, especially on non-Tongass lands in cities and towns. Past human impacts in these habitats have resulted from community and infrastructure development, timber harvest and associated log transfer and shipping, road construction, log transfer facility construction, mining, recreation and tourism including cruise ships, outfitter guides and recreational boating, recreation site development, dispersed recreation and subsistence gathering, commercial and sport fishing, restoration and wildlife habitat enhancement projects, and land adjustments and regulatory changes (Table 4). Natural processes have also been in effect on the action area, including climate change and other processes detailed in Table 4. However, despite these past impacts, the beach, estuary, and marine habitats within the action area are largely intact, healthy, and continue to be productive for federally-listed marine species.

Commercial fishery by-catch by long liners and ground fisheries may be a current threat in the action area. There have not been any documented cases within the action area and only one documented case in the last 20 years in the Gulf of Alaska. The endangered status of the Short-tailed Albatross has resulted in positive changes in the fishing industry and as a result, seabird bycatch has been reduced. Ongoing efforts to reduce bycatch in Alaska include continued collection of bycatch data via onboard observers, research on seabird deterrent devices, required use of protective measures, and outreach and education for fishermen. Coordinated effort between state, federal, and international governments, fishermen, scientists, and fisheries managers has also helped.

Table 4. Past actions and projects within the action area.

| Past Actions | Location | Year(s) | Description |
|---|---|---------------|---|
| Climate Change and Natural Processes | | | |
| Climate Change - General | Throughout Southeast Alaska | Past 25 years | Some climate models for Southeast Alaska have predicted rising temperatures, a 10 percent decrease in summer precipitation in portions of the region, and decreased soil moisture due to increased evaporation during warmer, dryer summer weather. These climate change-related processes may have already been initiated. |
| Yellow Cedar Decline | Primarily in a wide band from western Chichagof and | Past 50 years | Yellow-cedar decline and mortality, has dramatically changed many of the forests of Southeast Alaska and this decline is believed to have been climate related. Aerial surveys have |

| Past Actions | Location | Year(s) | Description |
|---------------------|---------------------------------------|----------------|---|
| | Baranof Islands to the Ketchikan area | | mapped approximately 585,000 acres of decline in a wide band from western Chichagof and Baranof Islands to the Ketchikan area (USDA Forest Service and ADNR 2015). In 2014, approximately 20,000 acres of dying (i.e., active decline) yellow-cedar trees were mapped (USDA Forest Service and ADNR 2015). |
| Fire | Throughout Southeast Alaska | Historical | Because of high precipitation levels, fire has not been a major factor in shaping the forests of Southeast Alaska. However, approximately 400 to 500 acres have burned annually on the Tongass. |
| Insects and Disease | Throughout Southeast Alaska | Historical | A range of insects and diseases have taken their toll in Southeast Alaska forests; however, their severity has varied substantially over the years. Surveys have documented that individual insect pest species typically affect a few thousand acres to hundreds of thousands of acres each year. In addition to insects, stem decays cause substantial loss in all tree species in unmanaged stands. Tree death and stem breakage resulting from decay contribute to the structural diversity in stands and may be a major factor in small-scale disturbance in Southeast Alaska (Hennon and McClellan 2003). Dwarf mistletoe has also had high infestation levels in many hemlock stands below 500 ft in elevation (Shaw and Hennon 1991, Shaw et al. 2008). |
| Windthrow Events | Throughout Southeast Alaska | Historical | Small-scale windthrow events are very common throughout Southeast Alaska forests. These small events involve individual trees or small groups of trees. The open gaps in the canopy that result, allow young trees to colonize and fill the openings. Therefore, over time, complex, mixed-aged stands are produced. Insect and disease infestations are major contributing factors. These small-scale openings cover about 6 to 13 percent of Southeast Alaska forest canopies (Nowacki and Kramer 1998). Areas not protected by topographic barriers from the severe effects of infrequent, major storms are subject to large-scale windthrow events that cause catastrophic damage. Entire stands have blown down in the past, resulting in the regeneration of more even-aged stands with |

| Past Actions | Location | Year(s) | Description |
|--|--|-------------------------|--|
| | | | more uniform canopies (Nowacki and Kramer 1998). Both forms of windthrow are a part of the natural forest generation, growth, and development. Juday et al. (1998) concluded that there was a high risk of increased large-scale blowdown across Southeast Alaska as well as increased windthrow around harvest units as a result of climate change. |
| Watershed Effects | Throughout Southeast Alaska | Past 25 years | Climate change effects on water quality, water quantity, and fish to date are not clear, if they have occurred at all. |
| Timber Harvest Activities | | | |
| Past Harvest – Tongass National Forest | Throughout Southeast Alaska, but concentrated on Prince of Wales and adjacent islands with large portions on Wrangell, Mitkof, Kupreanof, Kuiu, Revillagiggedo, and Baranof Islands. | Mostly 1954 to present | Approximately 462,000 acres of forest land have been harvested on the Tongass National Forest. Of these, about 422,000 acres were clearcut and are in even-aged management. Close to 70 percent of this harvest took place in the 1960s, 1970s, and 1980s; therefore the majority of young growth originating from harvest is 25 to 55 years of age. Less than 10 percent is greater than 55 and less than 4 percent is greater than 65 years of age. Attachment 1 to this appendix is a Catalog of Past Harvest for Southeast Alaska and is broken down by ownership and year/decade. |
| Past Harvest – State and Private Lands (non-NFS) | Throughout Southeast Alaska, wherever private or state lands are present; mostly on Prince of Wales and adjacent islands, Kupreanof, and Baranof Islands. | Mostly 1975 to present | Approximately 453,000 acres of forest land have been harvested on non-NFS lands within the Tongass National Forest boundary. The vast majority of this harvest took place in the 1980s and 1990s, so it is mostly younger than the young growth on NFS lands. Attachment 1 to this appendix is a Catalog of Past Harvest for all of Southeast Alaska and is broken down by ownership and year/decade. |
| Past Road Construction for Timber Harvest | Throughout Southeast Alaska, but concentrated on | Mostly 1950s to present | To date, approximately 9,461 miles of road have been constructed on the Tongass National Forest and adjacent non-NFS lands within the Tongass boundary; 5,155 miles are on NFS land |

| Past Actions | Location | Year(s) | Description |
|--|--|-------------------------|---|
| | Prince of Wales and adjacent islands along Wrangell, Mitkof, Kupreanof, Kuiu, Revillagiggedo, Baranof, and other islands. | | and 4,306 miles are on non-NFS land. The vast majority of these roads were developed for timber harvest purposes although these miles include state highways and local roads, in and around communities. Of the 9,461 miles, about 4,584 miles are open roads (2,431 miles on NFS land and 2,153 miles on non-NFS land). The remaining 4,877 miles are either closed roads (2,980 miles) or decommissioned roads (1,1,897 miles). |
| Past Log Transfer Facility (LTF) Construction | Throughout Southeast Alaska, but concentrated on Prince of Wales and adjacent islands along Wrangell, Mitkof, Kupreanof, Kuiu, Revillagiggedo, Baranof, and other islands. | Mostly 1950s to present | LTFs are used to transfer logs to barges or rafts for towing. About 116 LTFs currently exist on the Tongass and there are 55 marine access points suitable for transferring logs to barges that have current permits on NFS lands. Another 10 marine access points no longer have permits. In addition, there are about 126 LTFs on State land and another group of LTFs exist on private lands. |
| Land Adjustments | | | |
| Misty Fjords National Monument Wilderness Inholdings | Ketchikan Misty Fjords Ranger District (KMRD) | 2012 | The 68-acre inholding located on the Eulachon River was acquired in 2012. |
| Public Law 113-291 | Many parts of the Tongass, but especially Prince of Wales and adjacent islands | 2015 | Public Law 113-291 amended ANCSA and provided Sealaska Regional Corporation final Section 14(h)(8) ANCSA entitlement. On March 9, 2015, Sealaska Corporation received its final ANSCA entitlement and conveyance of 70,075 acres. This conveyance affected multiple areas, LUDs and ranger districts on the Tongass. Public Law 113-291 also amended Section 508 of ANILCA by adding 8 new LUD II areas, containing 152,000 acres. The new LUD II designations changed the previous LUD designations for these lands (both development and non-development LUDs) to LUD II. |

| Past Actions | Location | Year(s) | Description |
|--|---|-----------------------|---|
| Other land adjustments | Tongass-wide | Prior to 2015 | National Forest System Lands have been conveyed to Non-Federal parties under the Native Allotment Act, Alaska Native Claims Settlement Act (ANCSA), Alaska National Interest Lands Conservation Act (ANILCA) and other authorities. |
| Misty Fjords National Monument Wilderness Inholdings | Ketchikan Misty Fjords Ranger District (KMRD) | 2012 | The 68-acre inholding located on the Eulachon River was acquired in 2012. |
| Mining | | | |
| Various Mines | Tongass-wide | From 1867 to present | Mining history in Southeast Alaska dates back to the first mineral location in 1867, prior to the existence of the Tongass. During the late 1800s, gold was discovered in Southeast Alaska and mining ventures began to pop up. Historic mines include the Treadwell Mine and the Alaska Juneau Mine in Juneau; the Kensington and Jualin mines north of Juneau (recently reopened); the Ross-Adams uranium mine on Prince of Wales Island; the undeveloped Quartz Hill molybdenum deposit in the non-Wilderness Misty-Fjord National Monument; copper mines in the Ketchikan area; and many other deposits that were explored or developed throughout the Tongass. Mineral exploration and extraction has continued, at some level, since the first discoveries. |
| Energy | | | |
| Swan Lake Hydroelectric Project expansion | KMRD | 2016-2017 | In August 2015, the Federal Energy Regulatory Commission issued an order amending SEAPAs license for the project. SEAPA will expand the reservoir raising the spill elevation 15 feet and add 25% additional storage for winter hydropower generation, displacing up to 12,000 MWhrs of diesel generation (800,000 gallons) annually. The project will inundate about 93 acres of additional land of which about 26 acres is federal lands within the Tongass National Forest. |
| Recreation and Tourism | | | |
| Cruise Ships | Tongass-wide, especially the major ports | Late 1880s to present | The Southeast Alaska cruise ship industry has developed and grown to substantial levels. The first cruise ships sailed in the late 1880s and the number of passengers now numbers about one |

| Past Actions | Location | Year(s) | Description |
|--|-----------------------------------|-------------------------|--|
| | | | million per year. Modern cruise ships began sailing to Alaska in the 1970s and the number of passengers reached about 500,000 in 1995 and the number of passengers doubled in the next 20 years. These ships use the major ports of Southeast Alaska. |
| Outfitter Guides | Tongass-wide | Mostly 1920s to present | Outfitters and guides have provided services throughout Southeast Alaska for many years, beginning as hunting and fishing guides in the early years, they have expanded the services they provide. The Forest Service issues special use permits to manage the number and distribution of outfitters and guides. |
| Helicopter Landings and Tours | Mostly the Juneau Ranger District | | |
| Dispersed Recreation and Subsistence Gathering | Tongass-wide | Mostly 1920s to present | Dispersed recreation has steadily increased in Southeast Alaska along with the growth of the tourism industry, the growth of communities, and the development of roads. Gathering of subsistence resources has also increased, although more slowly, with the growth of subsistence communities. |
| Fishing and Recreation Lodges | Tongass-wide | Mostly 1940s to present | Numerous lodges have been developed on private lands adjacent to the Tongass National Forest. Some of these have gone out of business but most continue to operate. |
| Recreation site development and closure | Tongass-wide | Mostly 1960s to present | A wide range of recreation facilities have been developed on the Tongass. They include 25 campgrounds and camping areas, 10 day-use areas, 35 picnic sites, 155 cabins/lookouts, 44 shelters, 68 trailheads and 885 miles of trail, and many other facilities. |
| Community Development | | | |
| Community Development | Tongass-wide | Mostly 1890s to present | Settlement and community development in Southeast Alaska occurred primarily from the late 1800s to the present. Mining, fishing, and fish canneries were the primary early factors encouraging settlement, later followed by logging. Today there are 32 communities in Southeast Alaska. Eleven of these communities have less than 100 people ranging up to Juneau with over 33,000. The footprint of these communities ranges in size from a few acres to several thousand acres. Road development is |

| Past Actions | Location | Year(s) | Description |
|---|-----------------|-------------------------|--|
| | | | associated with community development and is covered above under timber harvest activities. |
| Wildlife Habitat Enhancement and Regulatory Actions | | | |
| Habitat Enhancement | Tongass-wide | Mostly 1960s to present | A range of wildlife habitat enhancement projects has occurred throughout Southeast Alaska. These projects were designed to improve forest and riparian habitats for wildlife. They include extensive pre-commercial thinning, some with wide-spacing, riparian thinning and snag creation. |
| State Hunting and Trapping and Federal Subsistence Regulations | Tongass-wide | Mostly 1959 to present | State regulations have been in place since shortly after Statehood (1959) to control hunting and trapping activities. These regulations set bag limits and seasons and limit the hunting and trapping methods that can be used in pursuit of game animals, game birds, and furbearers. Prior to Statehood, federal regulations governed hunting and trapping. In addition, a Federal Subsistence Board establishes subsistence regulations for many areas of the State. |
| Watershed and Aquatic Habitat Improvement and Aquatic Regulatory Actions | | | |
| Restoration Projects | Tongass-wide | Mostly 1960s to present | The Forest Service has conducted numerous watershed improvement projects including: watershed monitoring and assessments; instream and riparian rehabilitation; placement of large woody debris in streams; conducting landslide assessments; improving fish passage in streams (creating jump pools, barrier modifications, culvert replacements); stream and lake stocking, and lake fertilization; decommissioning roads; and maintaining fish passage structures. The number and locations of projects have varied year to year based on funding and need. |
| State Fishing and Federal Subsistence Regulations | Tongass-wide | Mostly 1959 to present | State regulations have been in place since shortly after Statehood (1959) to control fishing and shellfish collecting. These regulations set bag limits and seasons and limit the methods that can be used to pursue resources. Prior to Statehood, federal regulations governed fishing. In addition, a Federal Subsistence Board establishes subsistence regulations for many areas of the State. |

EFFECTS OF THE ACTION

Potential effects on the short-tailed albatross stem from proposed changes to management direction within beach, estuary, and marine habitats along the outer coast of the Tongass, including programmatic increases in young-growth, renewable-energy, and road management within and near these habitats, and interrelated and interdependent activities in nearby marine waters. Future activities, and interrelated and interdependent activities, within and near beach, estuary, and marine habitats along the outer coast that could result from management changes under the proposed action and affect this exclusively marine-foraging species include: transport of logs and vessel transit related to young-growth tree harvesting in beach and estuary fringe on the outer coast, and development and maintenance of facilities for wind, tidal, wave, biomass and other types of renewable energy that has interrelated or interdependent activities in adjacent marine waters. It is important to recognize that all future on-the-ground projects and actions associated with the proposed changes in management direction will be subject to additional ESA compliance, and consultation as warranted.

Programmatic opening up of the beach and estuary fringe to commercial young-growth harvest and associated road development, as well as increasing permissiveness of renewable energy development in coastal areas may affect the short-tailed albatross by increasing the likelihood of disturbance from interrelated or interdependent activities in adjacent marine waters where juveniles forage. Several factors, however, reduce the potential for disturbance impacts to insignificant and discountable levels for the short-tailed albatross. First, that this species forages exclusively over marine waters and typically offshore at shelf-breaks, and that its mobility allows for avoidance of disturbing activities, both limits their potential exposure to activities and limits the potential for effects should overlap occur.

Second, interrelated and interdependent activities are unlikely to overlap with foraging areas of this species except in rare instances due to the localized scope of potential management activities on the outer coast. The scope of potential disturbance from young-growth harvest in beach fringe on the outer coast is very small; of about 17,000 miles of shoreline on the Tongass, about 500 miles have incurred past harvest, and a very small fraction of these occur along the outer coast and have the potential to be further assessed for future young-growth harvest projects. That the Forest-wide maximum young-growth harvest would affect only about 0.4% of the forest land within the beach and estuary fringe under the proposed action also suggests a relatively small scope for potential impacts. Further, much of the harvest of beach fringe will occur by road and helicopter, which will reduce the potential for oceanfront disturbance. Similarly, renewable energy developments that result from increased permissiveness in coastal areas are likely to be localized in scope.

In addition, prescriptive standards that apply to the proposed action will reduce the potential for disturbance, especially the 200-foot shore-side no-harvest buffer and no harvest on islands <1,000 acres in size, but also the limitation to a single-entry harvest within 15 years of Plan approval, plus treatment type (commercial thinning or patch cuts ≤ 10 acre openings) and treatment scope ($\leq 35\%$ removal) restrictions. Desired conditions in beach and estuary fringe that steer management to achieve dual objectives of accelerating old-growth characteristics while also providing a commercial timber byproduct may also reduce potential interrelated activities. Other proposed standards and guidelines for adherence to the USFWS Land-based Wind Energy

Guidelines (USFWS 2012) and APLIC guidelines (APLIC 2012) may help minimize potential impacts from renewable energy development. With all of these factors considered, the proposed action may affect, but is not likely to adversely affect the short-tailed albatross.

CONCLUSIONS

The proposed action may result in increased young growth, road, and renewable-energy management within beach and estuary fringe along outer-coast waters and in shipping-related changes in outer-coast areas. Therefore, the proposed action may affect the short-tailed albatross. The proposed action **may affect, but is not likely to adversely affect** the short-tailed albatross because effects will be insignificant and discountable due to the following:

- Interrelated and interdependent activities along the outer coast will be localized and limited in scope, making them unlikely to overlap with foraging areas of this species except in rare instances,
- Exclusive non-terrestrial use by this species of outer-coast, shelf-break waters for foraging only make this species unlikely to be affected,
- This species' ability to avoid foraging where potential overlapping activities occur,
- Very low likelihood of interrelated and interdependent activities to the proposed management changes having negative effects on foraging of this species if they do overlap, and
- Application of prescriptive standards and guidelines would help minimize the potential for effects on this species.

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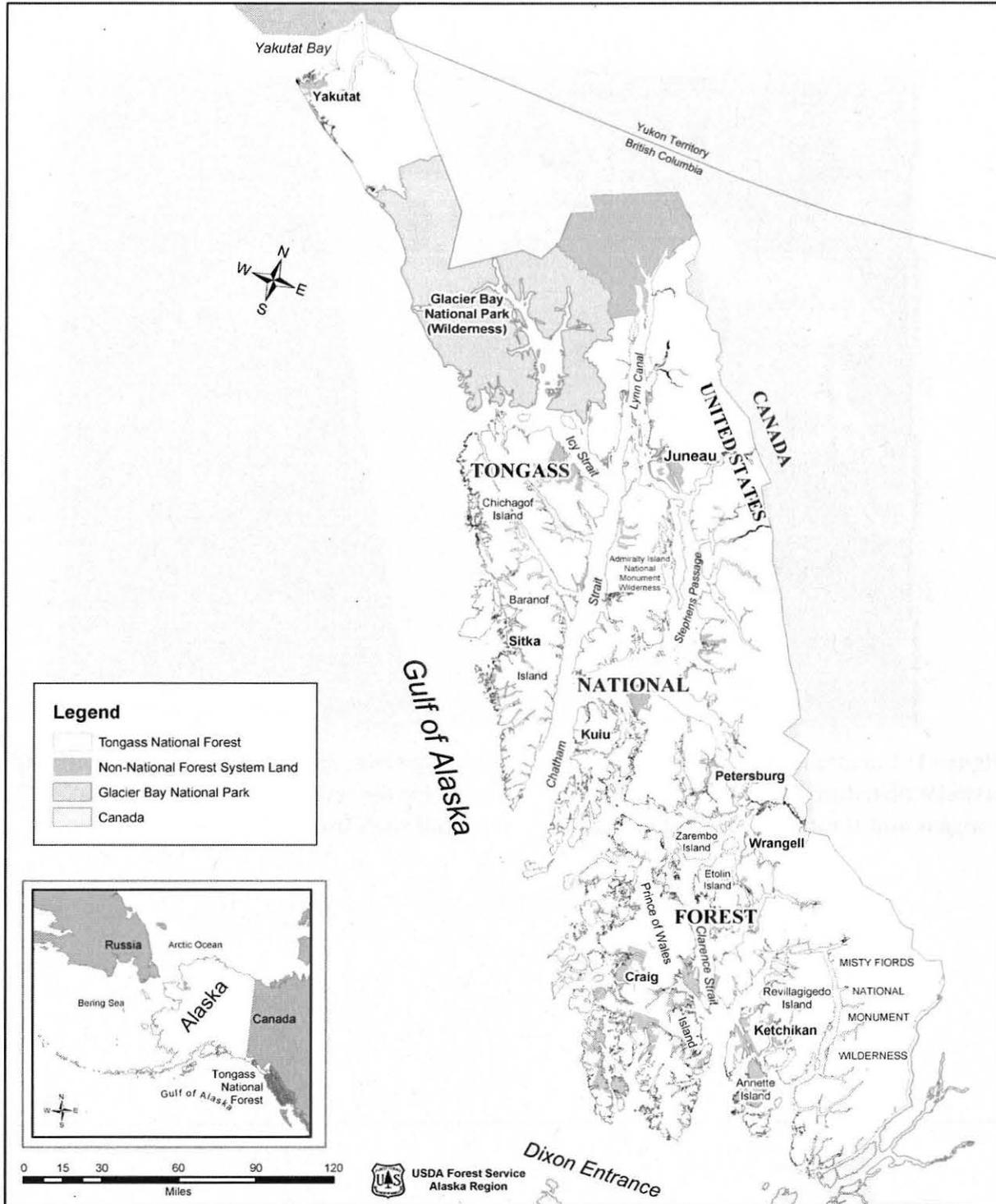


Figure 1: Map of the Tongass National Forest and Action Area.

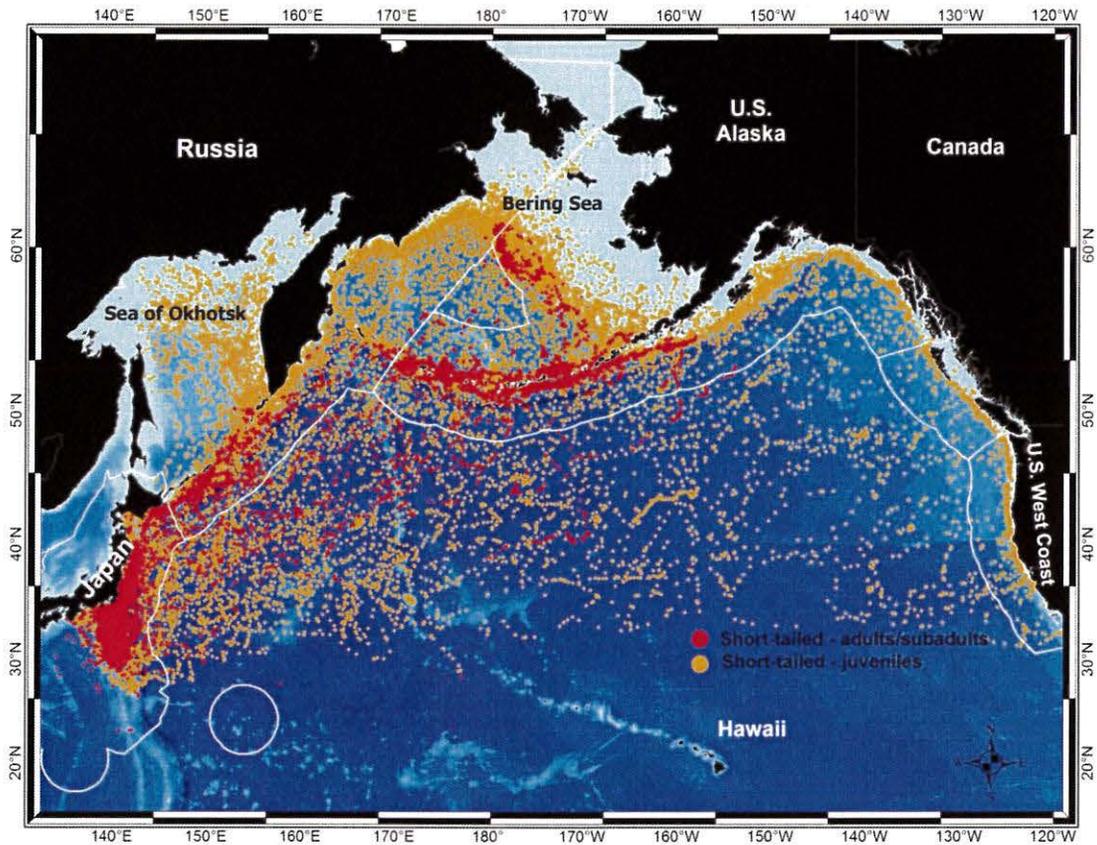


Figure 1: Locations of short-tailed albatrosses tracked from 2002-2012, showing adult and juvenile distribution in the North Pacific. Juveniles are the only ones found near the Tongass and they are concentrated on the continental shelf break (USFWS, 2014).