



TONGASS NATIONAL FOREST

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2008 Annual Monitoring & Evaluation Report

SEPTEMBER 30, 2009

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SPECIAL POINTS OF INTEREST:

- **Monitoring indicates the conservation strategy provides a sufficient amount and distribution of habitat to maintain viable populations of old-growth associated species**
- **57,164 acres are in Geographic Special Areas for karst**

MONITORING OVERVIEW

The Tongass National Forest web site contains the 2008 Tongass National Forest Monitoring and Evaluation Report. An annual written summary of forest wide monitoring programs is specified in Chapter 6 of the Tongass Land Management Plan (Forest Plan). This report summarizes specific monitoring that was completed during fiscal year 2008.

For the past several years, we have put the report on this web site to make it widely available. This system saves the cost of printing and mailing the document while still disseminating the monitoring information. This cost savings is important due to shrinking budgets and buying power. The monitoring report can be found on the Tongass web site under Projects and Plans.

Some of the monitoring protocols have changed in 2008 with the issuance of the Record of

Decision for the Tongass Land and Resource Management Plan (Forest Plan) Amendment. This plan amendment was completed in January 2008. Some of the monitoring questions have changed to help the Forest better define and focus the monitoring work.

If you have questions or comments about this report, please contact Carol Seitz-Warmuth at the Ketchikan Forest Supervisor's Office, 907-228-6341.

[Dear Reader Letter from Forrest Cole, Tongass Forest Supervisor](#)



CHANGES IMPLEMENTED IN 2008

A few previously used monitoring questions have been dropped in 2008 and a few new questions have been added in order to more accurately address information and evaluation needs. The monitoring conducted helps answer the monitoring questions and define whether the appropriate standards and guidelines have

been implemented. Monitoring also collects data and provides evaluation to determine if the standards and guidelines are helping the Forest reach our goals. Some of the monitoring describes validation monitoring conducted to determine if our predictions and assumptions used in developing the plan are correct. The report-

ing period for most of the monitoring activities has changed so now in 2008 we have begun providing an annual short summary and reporting on the annual / biannual reporting items as specified in the Plan, then subsequently providing a detailed more comprehensive evaluation in five years.

PHYSICAL AND BIOLOGICAL ENVIRONMENT
AIR QUALITY

Is air quality being maintained?

In Sitka, air quality monitoring was conducted through lichen biomonitoring in the pulp mill and Blue Lake non-wilderness areas.

Tissue samples, including one new species, were collected in areas around the pulp mill in 2008 but have not yet been analyzed due to dropped funding. These samples will be compared to

the baseline samples taken during the early 1990's (while the pulp mill was still in operation) which were found to be above contaminant thresholds. It is expected that the 2008 samples will reflect a decrease of contaminant levels now that the pollution source has been removed.

Photos taken in 2008 in the vicinity of the pulp mill show that lichens and some small

bryophytes have begun to return as compared with photos taken in the early 1990's which reveal negative impact due to SO₂ and other pollutants emitted during the pulp manufacturing.

[Air Quality Reference report](#)

[Lichen Biomonitoring](#)



BIODIVERSITY ECOSYSTEM

Is the old-growth habitat protected under the Forest Plan being maintained to support viable and well distributed populations of old-growth associated species and subspecies?

No changes were made to the spatial distribution, size, and composition of old-growth or other non-development LUDs in 2008.

The old-growth habitat pro-

ected under the Forest Plan has been maintained and continues to support viable and well distributed populations of old-growth associated species and subspecies. The conservation strategy as implemented in the 2008 Forest Plan provides a sufficient amount and distribution of habitat to maintain viable populations of old-growth associated species after 100 years of Plan im-

plementation. Although this does not represent a "no risk" conservation strategy, it represents a balance of wildlife conservation measure that considers the best available scientific information and reflects and acceptable level of risk for continued species viability (USDA 2008c, p. D-17).

[Biodiversity Reference report](#)

Currently, 266 Riparian Management Areas (RMA's) associated with 37 recent timber sales (harvested 2000-2008) are monitored.

STREAMS / FISH HABITAT

Is riparian vegetation maintained or restored to a condition that supports key riparian functions?

Windthrow is a natural and important phenomenon of Southeast Alaska. It recycles forest stands, and maintains and renews the forest ecosystem. However, timber harvest has the potential to exacerbate the rate of windthrow in adjacent forest stands. Monitoring the occurrence and characteristics

of windthrow in riparian areas adjacent to harvest units and comparing that to windthrow found in control riparian areas will assess whether stream buffers are retained in a condition found within the natural range of variability.

2008 was the ninth consecutive year that windthrow in stream buffers associated with Stream Class I, II and III streams was monitored in this ongoing project. The

number of trees felled due to windthrow is documented and measured using low-altitude digital aerial photographs.

Monitoring results to date have shown that post harvest windthrow is present to some degree in 128 (48%) of the 266 monitored buffers adjacent to harvest units.

[Fish Habitat Reference report](#)



WILDLIFE TERRESTRIAL HABITAT

Are population and habitat trends for Management Indicator Species (MIS) consistent with expectations? Are these trends due to changes in habitat conditions or other factors? If they are tied to habitat conditions, is there a direct relationship with forest management, climate change or other factors? Terrestrial MIS include red squirrel, black bear, brown bear, marten, river otter, Sitka black-tailed deer, mountain goat, gray wolf, Vancouver Canada goose, bald eagle, red-breasted sapsucker, hairy woodpecker, and brown creeper.

Eleven wildlife research projects were underway in 2008:

- Alaska Landbird Monitoring Survey (ALMS)
- Breeding Bird Surveys (BBS)
- Christmas Bird Count (CBC)
- Black Bear Study on POW Island
- Brown Bear Juneau Access Project
- Brown Bear Mainland Project
- Deer Abundance on Prince of Wales (POW) Island
- Deer FRESH Model
- Marten Status on Admiralty Island
- Small Mammal Inventory and Archive
- Small Mammal ISLES Project

New information does not support any changes to the Forest Plan at this time. Population and habitat trends are currently consistent with Forest Plan expectations. There have been no changes to the spatial distribution, size, and composition of old-growth or other non-development LUDs in fiscal year 2008.



[Wildlife Reference report](#)

SOIL AND WATER

Are the soil conservation practices implemented and effective in meeting Alaska Regional and Soil Quality Standards and maintaining soil productivity?

In FY 2008 Tongass Soil Scientists finalized a report from the FY 2007 monitoring.

In FY 2007 soil scientists revisited seven harvest units where soil disturbance transects were completed more than 10 years ago. The pur-

pose of this monitoring is to determine if small soil disturbances documented 10 years ago were still evident today.

This monitoring indicates that many small soil disturbances, less than about 25 square feet in size are not detrimental to woody plant growth even on relatively poor soils. The Tongass' interpretation of the minimum size requirements for detrimental puddling, lack of ground cover, burned areas,

altered wetness, and compaction could be changed from 1 foot to 25 square feet with very little risk of missing any detrimental soil conditions.

[Soil and Water BMPs](#)

[Soil and Water Monitoring Report](#)

[Soil Quality Monitoring on the Tongass](#)

Because migratory birds are far ranging species that require a diversity of habitat for foraging, breeding, and wintering, patterns of population declines are generally detected at larger observational scales than those traditionally used to manage lands.

WETLANDS

Were the wetland conservation practices implemented and effective to avoid and/or minimize impacts to wetlands to the extent practicable?

In FY 2008 the Tongass conducted wetland-road monitoring field work on 5 road segments on the Thorne Bay ranger District. Approximately 3.3 miles of road were constructed through

wetlands in FY 2008. The roads were constructed as part of the Scratchings and Buckdance-Madder Timber sales. The road construction impacted about 13 acres of forested wetlands and about 3 acres of forested wetland/non-forested wetland complexes.

Because the rate of road con-

struction has declined since the Forest Plan was written, it was suggested in 2008 by an outside reviewer that a more simplified monitoring approach would meet minimum requirements.

[Wetlands Report](#)



**HUMAN USES AND LAND MANAGEMENT
TIMBER RESOURCES**

Are timber harvest activities adhering to applicable timber management standards and guidelines relative to: created openings exceeding the maximum size limit for unit harvest, harvest on slopes greater than 72 percent slope gradient, or within the 1,000 foot beach and estuary buffer?

There were 590 acres fully or partially harvested during FY 2008. 239 acres resulted in the creation of an opening through the use of even-aged management. The 100-acre size limitation applies to all harvest units that create an

opening. No openings exceeded 100 acres in size.

Of the total 2008 harvest, no units that were harvested within the 100 ft. TTRA stream buffer nor within the 1,000 foot beach and estuary buffer.

Of the total harvest acres that created openings in the fiscal year 1998-2008 period, five units exceeded the 100-acre limit. All five were analyzed and approved in project-level Records of Decision. As mentioned above, there were no units harvested in fiscal year 2008 that created an opening in

excess of 100 acres.

During FY 2008, 34 harvest areas (timber stands) were delineated in the Forest's geographic information system (GIS), with corresponding records created in the Forest Service Tracking Activity System (FACTS) database. Accounting for adjacency (harvested stands that touch one another, which create a larger opening when added together), 11 harvest areas were logged in FY 2005 that created openings using the even-aged silvicultural system.

[Reference report](#)



TRANSPORTATION SYSTEM

Are the standards and guidelines used for forest development roads and log transfer facilities effective in limiting the environmental effects to anticipated levels?

In 2008, all active log transfer facilities were operated in accordance with their permits. The cases where fuel/hydraulic fluid spills were a problem were handled as specified in the Spill Prevention Control and Counter Measure Plan (SPCC) anti-

pated in their operating plans. The actions of the sale administrators, which are prescribed in the standards and guidelines for log transfer facilities, have served to limit the environmental effects of LTF operation to anticipated levels. The guideline for locating LTFs along straits and channels proved to be effective in reducing underwater bark accumulations.

The Daily Oil Sheen Logs

proved to be very useful in documenting causes of sheens and corrective actions. The logs are required by stipulation of NPDES permits in some cases and by Forest Service contract in others.

[Reference report and Oil Sheen Monitoring](#)

In 2008, the Tongass reported seven wilderness areas managed to a minimum stewardship level.

In 2008, no wilderness areas were reported as being managed to standard.

**MINING AND MINERALS
EXPLORATION**

Are Federal regulations (36 CFR 228) to ensure surface resource protection implemented and is the administration of this regulation through the Forest Plan effective in limiting soil and water resource impacts?

Monitoring protocols are under development for this monitoring question. No progress update or data was reported although the minerals program is active on the Tongass reviewing and monitoring plans of operation for the mines.



WILDERNESS

Is the wilderness character being maintained?

Four wilderness elements were addressed during 2008 monitoring.

Untrammelled: This quality appears to be stable within both wildernesses. There were no large-scale efforts to manipulate the biophysical environment.

Natural: The natural quality remained stable in both wilderness areas. Mountain goats monitoring showed a sustainable population with

minimal harvest. There were no wildfires within either wilderness. No lichen monitoring took place in 2008. Fisheries sockeye and stream monitoring showed some good populations but less sockeye than in previous years were reported.

Undeveloped: Monitoring showed that this quality is stable to improving within both wilderness areas. There were no new non-recreational structures, installations or developments.

Solitude or Primitive and

Unconfined Recreation: Monitoring showed that this quality is degrading in the South Baranof Wilderness and stable in West Chichagof-Yakobi Wilderness. Two unauthorized structures were discovered and removed in South Baranof Wilderness. Observable loss of solitude was recorded in site-specific areas due to the newly extended range of charter boats.

Wilderness Report



HERITAGE RESOURCES

Are (1) project clearance/inventory, (2) project implementation, (3) mitigation, and (4) enhancement completed in accordance with the requirements and regulations for heritage resources?

In accordance with the National Historic Preservation Act (NHPA) the Tongass is conducting project clearance/inventory, project implementation, mitigation as well as enhancement of heri-

itage resources. The Tongass is meeting some of these obligations through a Programmatic Agreement with the Alaska State Historic Preservation Officer (SHPO) and the Advisory Counsel on Historic Preservation. This agreement formalizes compliance with sections 106 & 110 of NHPA. On the Tongass in FY08 heritage sites were monitored in the Juneau, Ketchikan, Petersburg,

and Prince of Wales zones. A listing of these sites is include in the referenced document. This monitoring question is consistent with the previous monitoring questions.

Reference report



RECREATION

Are areas of the Forest being managed in accordance with the prescribed Recreation Opportunity Spectrum (ROS) class in Forest-wide Standards and Guidelines? Is the ROS classification consistent with public demand?

Monitoring data collected in 2008 indicates that wilderness areas are mostly being managed in accordance with the prescribed ROS class, but with a few exceptions. For

example, at several lakes social encounters exceed the standards set for the prescribed ROS class. This is primarily a result of the large number of floatplane landing tours authorized under special use permits from the Forest Service. ROS classifications may not be consistent with public demand for these services. A change in the ROS classification, however, may result in additional difficulty maintaining wilder-

ness character in the core area of MFNMW.

Although a few major visitor impacts were found in non wilderness areas in 2008, such as a trespass cabin, most areas were free of substantial visitor impacts. Social encounters were found to be well below the limits set by the established ROS class.

Reference report



ECONOMIC AND SOCIAL ENVIRONMENT
ECONOMICS

Are the effects on employment and income similar to those estimated in the Forest Plan?

Wood: The forest plan assumes that the entire NIC 1 component would be harvested. This has not happened and employment in the woods products sector currently is much lower than predictions in the 2008 Forest Plan FEIS.

Recreation and Tourism: The recreation and tourism estimate in the Forest Plan was not calculated for this

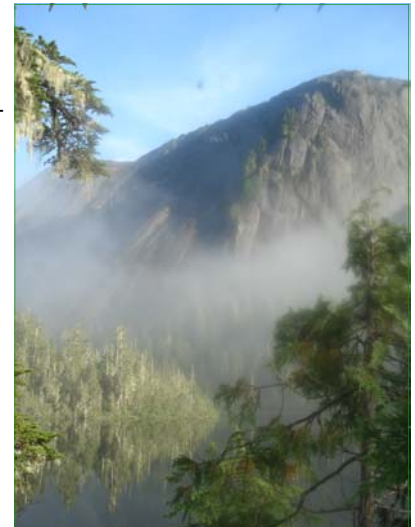
analysis; instead, employment for the Retail and Service sectors is used because recreation and tourism are included in this sector. Employment has shown a slight increase in the recreation/tourism sector in SE Alaska as determined by the proxy industry – the service and retail sector. In the final EIS (2008) there is little difference in recreation employment between the various forest management alternatives.

Commercial Fishing: The Final EIS (2008) does not

show any estimates of employment in salmon harvesting and processing. There is no expected significant change to the commercial fishing sector over the next decade as a result of national forest activities.

Mining: The Final EIS (2008) does not show any estimates of employment in the mining sector in SE Alaska. The mining sector has shown an increase in employment since 2005.

[Reference report](#)



COST AND OUTPUTS

What is the trend in outputs and costs associated with those outputs?

This is a new monitoring question in 2008 and as such, information gathered in 2008 on costs and outputs has not yet been analyzed to uncover trends.

The annual costs estimated in the 1997 Forest Plan were only guidelines. Since the plan was made, the budget

line items (BLIs) have been changed and rearranged enough that a direct item by item comparison would be very difficult at best. Additional data needs to be collected to discern if the costs associated with carrying out the planned management prescriptions are consistent with the Forest Plan estimates. While doing this, consideration should be given to

inflation since 1997, changing Federal regulations, and the effect of “pooling” some of the funds in the Washington Office.

[Reference report and chart](#)

The employment data from the State over the last four years indicates a slight growth in those sectors associated with tourism and recreation activities.



**ADDITIONAL MONITORING QUESTIONS
CLIMATE CHANGE**

What are the long-term changes to the permanent snowpack and how does it affect the physical and biological environment?

As this was a new question in 2008, no monitoring on the topic took place.

Referenced below is a study on climate change and the national forest's carbon footprint.

This monitoring project was addressed by breaking it

down into 2 questions: how does climate change impact the landscape, and how does management influence the impact of climate change more generally.

[Carbon footprint monitoring](#)



TIMBER RESOURCES



Is the timber management program meeting the objectives of achieving economic timber sales and rebuilding the volume under contract and shelf volume components of the sale program?

Evaluation criteria and sampling periods associated with most of these questions are outlined.

Congress mandates that all timber sales offered for sale by the Tongass National Forest, using the Residual

Value Appraisal System and with Western Red Cedar appraised for domestic processing be above base rates before they can be offered for sale.

Evaluation criteria include: NEPA cleared volume, timber volume offered for sale, timber sale volume on the shelf, and timber sale volume under contract. The various data will be reviewed.

[Reference report](#)

TIMBER RESOURCES

Is the ASQ land base consistent with resource information and programmed harvest?

The Forest Plan developed an allowable sale quantity as part of the purpose and need as required by the Forest and Rangeland Resources Planning Act. This question com-

pares the amount of sold and harvested timber to the output of the computer model used to develop the Forest Plan, The ASQ is an upper ceiling governing the amount to timber that may be sold over a decade. The amount of timber sold in FY08 was not tabulated and reported.



INVASIVE SPECIES

What are the status and trends of areas infested by aquatic and terrestrial invasive species relative to the desired condition?

Knowledge of aquatic invasive species on the Tongass is still being developed. Three known species have been identified, Red legged frog (*Rana aurora*), Pacific Tree frog (*Pseudacris regilla*) and Atlantic salmon (*Salmo salar*). Red legged frog occurs in a population that may increase on Graham Island

and decrease on Chichagof island. The Pacific Tree frog population had remained at the release site for years; however, may now be expanding.

Reference report

How effective were our management activities, including those done through partnerships, in preventing or controlling targeted invasive species?

The Tongass developed a manual supplement to pre-

vent further spread of high priority invasive plants. The Forest drafted a vehicle washing action plan and is working on provisions for timber contracts. Control efforts for invasive plant species has primarily been hand pulling. A minor amount of mechanical mowing and pesticides have been applied.

Reference report



KARST AND CAVE

Are the biological, mineralogical, cultural, paleontological components, and recreational values of the karst and caves maintained?

Roughly 468,957 acres of carbonate rock underlie the Tongass. Dissolution of the carbonate rock develops landforms and caves with unique surface and subsurface drainage systems, depressions, sink holes, collapsed channels and karren (*shallow furrow in rock that*

shows direction of water flow) features. Of the land of the Tongass underlain by carbonate rock, 269,925 acres are in the wilderness group and natural settings LUDs, and 57,164 acres are in Geologic Special Areas for karst. Of the remaining carbonate acres, 21,241 lies in the beach fringe; leaving 177,791 acres in the development LUDs. The karst areas are mapped according to the vulnerability of the

karst resource to land management planning. Key elements of the vulnerability strategy focus on the openness of the karst system and the potential to transport water, nutrients, soil and carry pollutants in underlying hydrologic systems. Geologists worked with planners to assess karst vulnerability and mitigate potential impacts.

Reference report

By identifying karst vulnerability, the Tongass strives to maintain the capability of the karst landscape to regenerate vegetation, maintain water quality in karst hydrologic systems and protect the cave resource values.

SUBSISTENCE MANAGEMENT

Are the effects of management activities on subsistence users in rural Southeast Alaska communities consistent with those estimated in the Forest Plan?

Fisheries: Twenty three new projects began statewide in 2008. There were 18 new projects in stock, status and trend projects, and five in harvest monitoring, traditional ecological knowledge

projects. A total of 86 projects were ongoing in 2008, the additional 63 ongoing projects were approved in earlier years.

Wildlife: At the meeting of the Southeast Alaskan Regional Subsistence Advisory Council meeting in February of 2008, it was reported that no RFPs for Wildlife were sent out in FY2008. At the time, the future of the Wild-

life Monitoring Program was uncertain for FY 2009.

Many special actions were approved for both fisheries and wildlife in 2008.

In 2008, a fourth year of funding was provided to estimate the abundance of deer on prince of Wales and surrounding islands (Game Management Unit 2).

Reference report



WILD AND SCENIC RIVERS

Are Wild, Scenic, and Recreational River Standards effective in maintaining or enhancing the free flowing conditions and outstandingly remarkable values at the classification level for which the river was found suitable for designation as part of the National Wild and Scenic River System?

Of the five candidate river systems on KMRD, two were visited by recreation/wilderness field crews this

season. Assessment of the river's free flowing conditions and outstandingly remarkable values was not the primary purpose of any of the field trips, but some general observations were made.

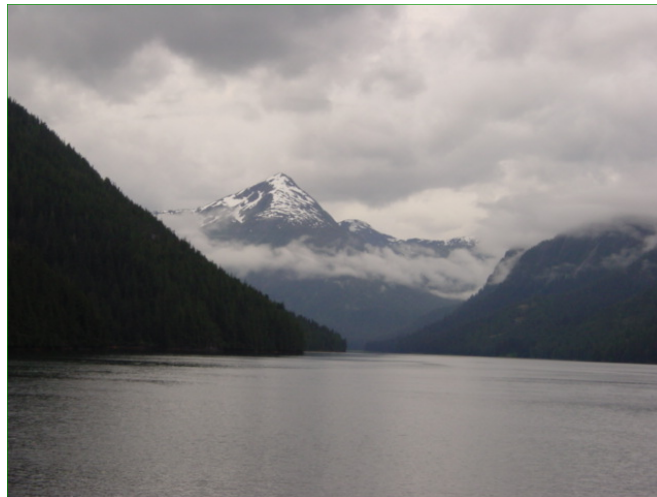
[Reference report](#)



SCENERY

Are the adopted scenic integrity objectives established in the Plan met?

Work to define the scenic integrity objectives and develop the associated protocol is necessary. No progress on this effort was reported.



Fish populations declined for several years following timber harvest in the Salty and Tunehean watersheds.

These declines may not be due to harvest activities as fish populations in other unharvested watersheds exhibited similar declines.

STREAMS-FISH HABITAT

Are the trends in abundance of the fish management indicator species (Dolly Varden char, cutthroat trout, coho salmon, and pink salmon) related to changes in habitat associated with forest management, climate change or other factors?

A protocol using juvenile coho salmon to monitor TLMP Fish and Riparian Standards and Guidelines

was completed in 2008. The proposed monitoring protocol, currently being reviewed, will to determine if it is sufficiently sensitive to forest management activities and if it can be implemented.

It is too early to speculate on the effects of forest management on Dolly Varden char and cutthroat trout abundance until sixteen treatment streams are harvested and

the statistical tests are completed.

The proposal to monitor fine sediment accumulation in pink salmon spawning beds is currently being reviewed to determine if it is sufficiently sensitive to forest management activities and if it can be implemented.

[Reference report](#)



BIODIVERSITY ECOSYSTEM – RARE PLANTS

What are the cumulative effects of changes to habitats that sustain rare plants?

A systematic sampling scheme was developed using ecological subsection, general lithology and surface geology. According to the Alaska Natural Heritage Program database of rare plants in Alaska, the Tongass has about 108 rare plant species that includes 12 species listed on the Regional Forester's sensitive species list that are either known or suspected to

occur. In fiscal year 2008, work was concentrated on ultramafic rock areas. Five surveys were conducted using a survey protocol that followed the standard level 1-6 for rare plants using the timed meander method. Findings varied in these surveys varied; rare and sensitive plants were found in 2 of the 3 survey sites. In addition to this work, project plant surveys were conducted and rare plants were identified in two of the pro-

jects.

Conservation assessment and strategies need to be developed to develop an understanding of the rarity of a species and the implications of management activities on species viability. In 2008 a conservation assessment was undertaken for one rare plant. This plant, a large Round leaved orchid was selected since its known occurrence was in productive old-growth forest

currently managed for timber harvest.

The objective of the monitoring was to assess project level effects and also include Forest-wide effectiveness monitoring. This assessment effort identified some of the aspects necessary to develop in a monitoring protocol.

[Reference report](#)

TRANSPORTATION SYSTEM

Are roads and trails maintained in accordance with management objectives?

Each district on the Tongass is either currently developing an Access and Travel Management (ATM) plan or has recently completed an ATM plan. As of December, 2008, Sitka, Wrangell and Ketchikan/Misty Ranger Districts have completed their ATM plans, the rest of the districts are scheduled to

have completed plans by December, 2009. The process involves a thorough look at the existing conditions of forest roads, existing annual and deferred road maintenance, projected funding amounts for road maintenance, the projected ten-year timber sale program, and recreation and subsistence use of the forest roads.

Each of the completed ATM

plans has recommended closing some roads to motor vehicle use. This is normally accomplished by removing drainage structures and creating physical barriers to cars, trucks, and all terrain vehicles. Monitoring the effectiveness of the motor vehicle barriers will occur annually.

[Reference report](#)

Some roads have been closed to motor vehicles following the management objectives identified in their respective ATM plans.

TIMBER RESOURCES

Has a Timber Sale Adaptive Management Strategy threshold been reached, so that it is appropriate to move to the next phase?

The evaluation criterion for this question is volume harvested by fiscal year. The timber program will be restricted to Phase 1 areas until harvest levels reach

100 MMBF for two consecutive fiscal years. After reaching the 100 MMBF harvest level for two consecutive fiscal years, timber management activities can be planned on Phase 2 areas, which includes all Phase 1 areas. After reaching 150 MMBF harvest levels for two consecutive fiscal years, timber management activities

can be planned on Phase 3 areas, which include all Phase 1 and Phase 2 areas.

[Reference report](#)



TIMBER MANAGEMENT

Are the non-interchangeable components (NICs) of the allowable sale quantity consistent with actual harvest?

Is the proportional mix of volume in NIC I and NIC II as estimated in the Forest Plan accurate?

The ASQ consists of two separate non-interchangeable components (NIC), also referred to as economic components. The purpose of partitioning the ASQ into two separate com-

ponents is to maintain the economic sustainability of the timber resource by preventing over-harvest of the most economic timber stands. The partitioning of the ASQ also serves to identify that portion of the timber supply that is at risk of attainment because of marginal economic conditions.

[Reference Report](#)



TIMBER RESOURCES

Are timber harvest activities adhering to applicable timber management standards and guidelines relative to: created openings exceeding the maximum size limit for unit harvest, harvest on slopes greater than 72 % slope gradient, or within the 1,000 foot beach and estuary buffer?

In fiscal year 2008, there were no units over 100 acres in size. Trends in harvest opening size have been to-

ward smaller openings and less reliance on the even-aged silvicultural system. The 11 openings averaged 22 acres, and ranged in size from 3 acre to 53 acres. Of the 239 acres managed via the even-aged system, 39 percent retained a portion of the original stand structure.

[Reference report](#)



TIMBER RESOURCES

Is the timber demand being met within limits of the adaptive management strategy and TTRA?

Annual demand calculation is an analysis of the timber industry in Southeast Alaska, where the variable include installed mill capacity, projected harvest level, and timber volume under contract. The adaptive management

strategy will be implemented in three phases. Phase 1 will restrict the timber program to a portion of the suitable land base that excludes moderate and higher value roadless areas. Should the level of harvest reach 100 MMBF for two consecutive fiscal years, the Tongass could then plan for timber

projects in the Phase 2 portion of the approved suitable land base. Should the harvest reach 150 MMBF for two consecutive fiscal years, the Tongass could then plan for timber projects in Phase 3 areas, which includes the entire suitable land base. The demand calculation is based upon an estimate of

timber harvest, not on actual timber harvest. Actual timber harvest is recorded and reported in the Timber Sale Accounting System.

[Resource Report](#)

BIODIVERSITY ECOSYSTEM

Are the effects of biodiversity shown through the cumulative change in old-growth by biogeographic province consistent with the estimates of the Forest Plan (change could include effects of timber harvest, land exchanges or conveyance, windthrow, insect and disease, climatic change, etc)?

There have been no substantial changes to POG habitat in the last year as a result of land exchanges or conveyance, windthrow, insect and

disease, climate or other changes. A total of 590 acres of timber were clearcut harvested from three different Biogeographic provinces in fiscal year 2008. New information does not support any changes to the Forest Plan at this time.

Is old growth structure retained in the matrix adequate and is it representative of old growth types across VCUs and across the Forest?

There were no changes in

LUDs in 2008 (Tables BE-2 and BE-3). The 590 acres of timber harvest completed in 2008 implemented Forest Plan Standards and Guidelines that protect old-growth habitat within the matrix. Therefore there were no changes to the minimum acres of POG habitat in the matrix.

New information does not support any changes to the Forest Plan at this time. The old-growth structure retained in the matrix is adequate and

representative of old-growth types across the forest. The Forest Plan standards and guidelines protect 19 percent of the existing POG habitat in the matrix. Between the reserve system and the standards and guidelines that apply to the development LUDs, the Forest Plan protects 91 percent of the POG habitat on the Tongass.

[Reference report](#)

SOIL AND WATER

Are the soil and water conservation practices as described through the Best Management Practices and site specific prescriptions implemented and effective in minimizing soil erosion and maintaining the State Water Quality Standards?

According to the BMP Implementation Monitoring Program, practices applied on the ground, through contract specifications, met the overall objectives of reducing risks to aquatic resources

associated with declining road maintenance budgets. Most BMPs were fully implemented.

As time and funding allows, we will collect additional baseline aquatic habitat data from alluvial fan (AF), high gradient contained foot slope (HC2) and wide floodplain (FP5) streams. We need larger sample sizes from these streams to assess or bolster statistical differences between managed and unmanaged streams.

[BMP Road Storage Projects Report 2008](#)

[Soil Protocol Intro](#)

[Soil Protocol Review by John Gries](#)

[BMP Monitoring Maps](#)

[Turbidity Results](#)

[Implementation Summary](#)

[Buckdance-Madder](#)

[Scratchings](#)

[Summore](#)

[Tuxekan](#)

The conservation strategy as implemented in the 2008 Forest Plan provides a sufficient amount and distribution of habitat to maintain viable populations of old-growth associated species after 100 years of Plan implementation.

WILDLIFE TERRESTRIAL HABITAT

Is current management providing for sufficient habitat of federally listed threatened or endangered species and Alaska region sensitive species?

Active research projects in 2008 include Aleutian Tern Surveys on the Yakutat Forelands, Black Oystercatcher Surveys, and Sooty Grouse on POW Island.

New information includes

the 2008 update of the recovery plan for the Steller sea lion (NMFS 2008) and the completion of a conservation action plan for the black oyster catcher (Tessler et al. 2007).

What is the geographic distribution and habitat relationships of mammalian endemic species in the Tongass?

The Museum of Southwestern Biology, University of

New Mexico and Tongass National Forest are collaborating on research and management efforts aimed at monitoring the status of mammals on the Tongass National Forest.

[Reference report](#)



TRANSPORTATION

Are the roads and trails maintained in accordance with management objectives?

Each district on the Tongass is either currently developing an Access and Travel Management (ATM) plan or has recently completed an ATM plan. As of December, 2008, Sitka, Wrangell and Ketchikan/Misty Ranger

Districts have completed their ATM plans, the rest of the districts are scheduled to have completed plans by December, 2009.

As of December, 2008, some roads on Zarembo, Wrangell, Etolin, Rynda, Bushy and Shrubby islands and the mainland on Wrangell and Ketchikan/Misty districts have been closed to motor

vehicles following the management objectives identified in their respective ATM plans. Monitoring the effectiveness of the motor vehicle barriers will occur annually.

[Reference report](#)



BIODIVERSITY

Are harvested forest lands restocked within 5 years after harvest?

All stands harvested in 2003 were certified as restocked in FY2008 or an earlier fiscal year.

[Reference report](#)

Following young-growth treatments, is the change in understory vegetation providing improved habitat for key old-growth associated species?

In 2001 the Tongass-Wide Young-Growth Studies (TWYGS) was established in order to answer this question. The studies are designed to evaluate the potential benefits of treating pre-commercial stands to in-

crease wood production and wildlife habitat. The primary research objectives are to assess the response of understory plants (herbs and shrubs) and overstory trees to several silvicultural treatments. This study is intended to last a minimum of 30 years in order to adequately assess long-term responses to silvicultural treatments.

At present, TWYGS includes four adaptive-management experiments: Introducing red alder to 0 to 5 year-old stands; moderate and heavy thinning of 15 to 25 year-old stands; moderate and heavy thinning along with pruning, in 25 to 35 year-old stands; and comparing girdling and conventional thinning, with and without slash treatment, in stands over 35 years-old.

As research continues to be collected and evaluated over the coming years, the answer to this monitoring question will emerge.

[Young Growth Report](#)

[TWYGS Report](#)

Are young growth treatments improving other key habitat components for old-growth associated species?

In fiscal year 2008, approximately 5226 acres of young growth were thinned. An estimated five percent (259 acres) was specifically for wildlife or riparian habitat restoration. However, there is not enough information available at this time to assess how young growth

other key habitat components. The action plan is to: continue to review the results of young growth research; develop a strategy to identify what key habitat

components should be addressed and monitored; and review project level

monitoring that is occurring and assess if there is a way to apply the results of this information forest-wide.

[Reference report](#)



INSECTS AND DISEASE

Are destructive insects and disease organisms increasing to potentially damaging levels following management activities?

The most important diseases and natural declines in 2008 were wood decay of live trees, hemlock dwarf mistletoe, and yellow-cedar decline. Heart and butt rot fungi cause substantial decay in late seral spruce-hemlock forests. There are no serious insect threats to old-growth stands. No serious insect or

disease organisms in young-growth stands were detected through monitoring efforts. Dwarf mistletoe is present in some stands following partial harvests, but at disease levels less than occurred before harvest.

In 2008, porcupines caused significant damage to the health and productivity of young growth trees. Thinning guidelines were produced by staff at the Wrangell Ranger District for young-growth stands with porcu-

pine.

Although yellow-cedar decline is not a management induced problem, recent research indicates good recovery rates of wood from snags. Also wood from dead cedar retains all strength properties, even 80 years after death. Given the large acreage of decline and the value of the wood, there is interest in salvage recovery.

[Reference report](#)

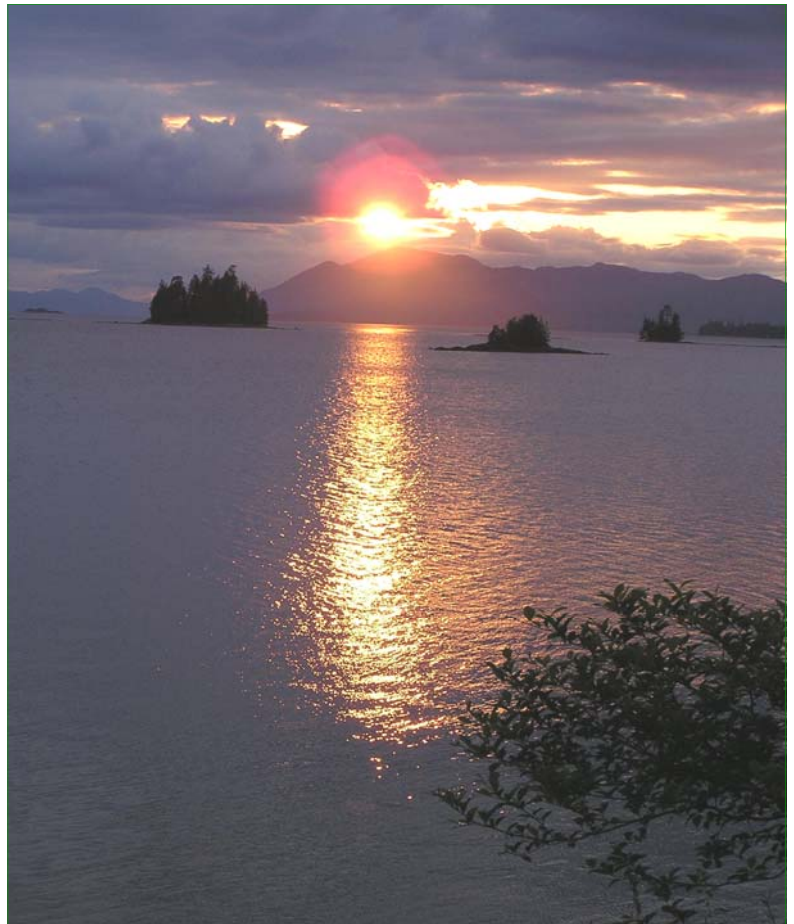


<http://www.fs.fed.us/r10/tongass/>

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RESTORATION

What is the ecological condition and trend of watersheds in terms of key characteristics (such as soil productivity, water quality and quantity, invasive species, etc.) of watershed health identified in the desired condition (aquatic ecosystem potential) of the plan area? How effective are management actions in improving watershed health (maintaining or moving watersheds toward Condition Class I)?

Because these are new monitoring questions in the 2008 Forest Plan we do not have monitoring results or actions to report. Our approach to answering these questions will be to establish a framework to categorize ecological condition and trend of watersheds in Southeast Alaska, and to collaborate with Forest Service Research to de-

velop an integrated suite of monitoring tools to evaluate the effectiveness of management actions in improving watershed health.

Is the natural range and frequency of aquatic habitat conditions maintained?

We quantified the natural range of variability of stream habitat parameters in SE Alaska. Biologists and hydrologists developed a systematic approach to measuring stream habitat.

Statistical analysis of data from 262 of these stream reaches, stratified by channel Process Group (Paustian 1992), revealed three parameters that show consistent difference between managed and unmanaged watersheds with t-test results at or above the 95 percent confidence intervals (Tucker and Caouette, in

review). These parameters are channel width/depth ratio, key woody debris, and pool frequency, and appear strongest in two Process Groups: flood plain (FP) and moderate gradient mixed control (MM). Two additional measures of pools were significant at the 90 percent confidence interval in FP streams: pool size and a normalized measure of residual pool depth. These parameters are interpreted as baseline fish habitat objectives (Forest Plan Fish Standards and Guidelines FISH2 IV) to assess aquatic habitat condition.

[Reference report](#)

“We have measured and established statistical differences between stream habitat in un-managed old growth streams and stream habitat that has been degraded from intensive past management.”

