SADDLE LAKES TIMBER SALE EIS

Scenery Resource Report

Affected Environment Section

DRAFT

Prepared by:

Matthew J. Boisseau
Forest Service Landscape Architect

for:

Ketchikan Misty-Fiords Ranger District
Tongass National Forest

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Introduction

Scenery is a key attribute of the tourism draw on the Tongass National Forest and among the list of requirements outlined in section 6 (g)3 of the National Forest Management Act (NFMA) of 1976, is that which requires interdisciplinary review for impacts to aesthetics, along with engineering, environmental, biological, and economics. The Tongass National Forest Land and Resource Management Plan 2008 (i.e., the Forest Plan) implements this requirement by making scenery its own unique resource category in both its management prescriptions and forest-wide standards and guidelines.

This resource report analyzes aspects of the existing condition within the Saddle Lakes project area so that effects associated with alternatives proposed can be objectively analyzed and disclosed in the environmental effects section to follow.

Background

Ketchikan is located on the western coast of Revillagigedo Island, near the southernmost boundary of Alaska. It is 679 miles north of Seattle and 235 miles south of Juneau. The 2.2 million acre Misty Fiords National Monument lies 22 air miles east of Ketchikan. It is the first Alaska port of call for northbound cruise ships and State ferries. It lies at approximately 55° 20' N Latitude, 131° 38' W Longitude (Sec. 30, T075S, R091E, Copper River Meridian). The community is located in the Ketchikan Recording District. The area encompasses 3 sq. miles of land and 1 sq. miles of water.

Tongass and Cape Fox Tlingits have used Ketchikan Creek as a fish camp which they called "kitschk-hin," meaning creek of the "thundering wings of an eagle." The abundant fish and timber resources attracted non-Natives to Ketchikan. In 1885, Mike Martin bought 160 acres from Chief Kyan, which later became the township. The first cannery opened in 1886 near the mouth of Ketchikan Creek and four more were built by 1912. The Ketchikan Post Office was established in 1892. In the late 1890s, nearby gold and copper discoveries briefly brought activity to Ketchikan as a mining supply center.

By 1936, seven canneries were in operation, producing 1.5 million cases of salmon. The need for lumber for new construction and packing boxes spawned the Ketchikan Spruce Mills in 1903, which operated for over 70 years. Spruce was in high demand during World War II, and Ketchikan became a supply center for area logging. A $55 million pulp mill was constructed at Ward Cove near Ketchikan in 1954. Its operation fueled the growth of the community. The mill's 50-year contract with the U.S. Forest service for timber was canceled, and the pulp mill closed in March 1997. The project area boundary is adjacent to Native Corporation and State timber harvest units as well. Corporation harvest activity is ongoing and the Alaska mental health trust is still harvesting in the Leak Lakes area. The Forest Service has the Ketchikan Pulp Company long term timber sale contract and environmental studies such as the Salty EA, Foggy EA, and Sea Level EIS.

Comment [RR1]: I would add in the background of timber harvest in the project area and adjacent native corporation harvests and State harvests. For the FS we have the Longterm Sale, Salty EA, Foggy EA, and the Sealevel EIS. Most of the corporation lands have been logged in the past and harvest is still going on. Alaska mental health trust is still havesting in the Leask Lakes area.

Comment [mb2]: Rob, is this the correct long term sale? I looked this up on the internet.

Analysis and Inventory Method

Determining or predicting both acceptable and unacceptable levels of visual impacts due to timber harvest is a complex process because many key variables must be considered. Examples of these variables include the harvest method and logging systems used, the type of activities a viewer at the site might be engaged in; the viewing distances involved; the physical attributes of the fore, middle, and background scenes; view angles, direction, etc.

Comment [RR3]: These have all been clear cuts. Some PCT in the area.

Project area landscapes were documented from key viewing points using digital photography and a hand held global positioning device. Individual photographs/digital images were combined to create panoramic views of the proposed unit locations and the surrounding landscapes. These photographs were used to develop visual simulations of the scenic effects of timber harvest from selected viewpoints along the visual priority routes (VPRs). Adobe

Photoshop and/or visualization software used in this effort. The analysis evaluated whether the proposed action or the alternatives do the following:

- Meet the SIOs established by the Forest Plan for the project area.
- Describes the future ESI condition that would result from implementing the project.
- Describes the visual impact from.
- Recommendations for any mitigation, enhancement, and monitoring deemed necessary were provided.

Spatial information used for study is based on the most current and accurate Geographic Information System (GIS) information available.

Guidance

The direction for complying with scenery objectives for this project is found in the following agency publications:

- Land and Resource Management Plan, Tongass National Forest 2008
- USDA Agriculture Handbook No. 462, Volume 2, Chapter 1
- Landscape Aesthetics, Scenery Management System (AH 701)
- Forest Service Handbook (FSH) 2309.22.
- AH 559: National Forest Landscape Management Volume 2, Chapter 5, Timber

References used in the body of this document are cited in text and listed in the bibliography.

Affected Environment

This section provides details regarding the scenery resource of Ketchikan – Misty Fiords Ranger District, including standards per the Forest-wide standards and guidelines found on pages 4-56 to 4-63 of the Forest Plan.

Overview of Scenery Concerns

As explained in the background section, the lands managed by the Ketchikan – Misty Fiords Ranger District has a long history of timber or logging activity, and the visual effects associated with large scale clear cut sales is evident when viewed from the Carroll and George Inlet saltwater use areas and from the interior Forest roads.

The Saddle Lakes Recreation Area is identified on page F-23 of The Forest Plan under Visual Priority Routes and Use Areas as an opportunity requiring consideration for scenery as well.

There is concern that the Saddle Lakes Timber Sale may further diminish the scenic quality of the project area and have direct or indirect effects on the scenic qualities that help drive tourism. The Environmental Consequences section addresses this concern by disclosing anticipated effects per alternative.

Timber management is treated as a factor affecting the scenic integrity level of an area, rather than its scenic attractiveness class, land use patterns, and cultural features (components of the landscape character) are not included as differentiating elements (Tongass 2005).

Effects Indicator

The effects of the alternatives are compared by changes in scenic integrity.

Landscape Character

Tongass National Forest is divided into 11 landscape character types. Landscape Character Types are large geographic areas that have general or distinguishing visual characteristics that when combined with other physical, biological, and cultural attributes, help define an areas meaning of "place". The project area falls into what is defined as the Inside Passage Islands Landscape Character Type. A location map is provided below, followed by a detail description of this character type.

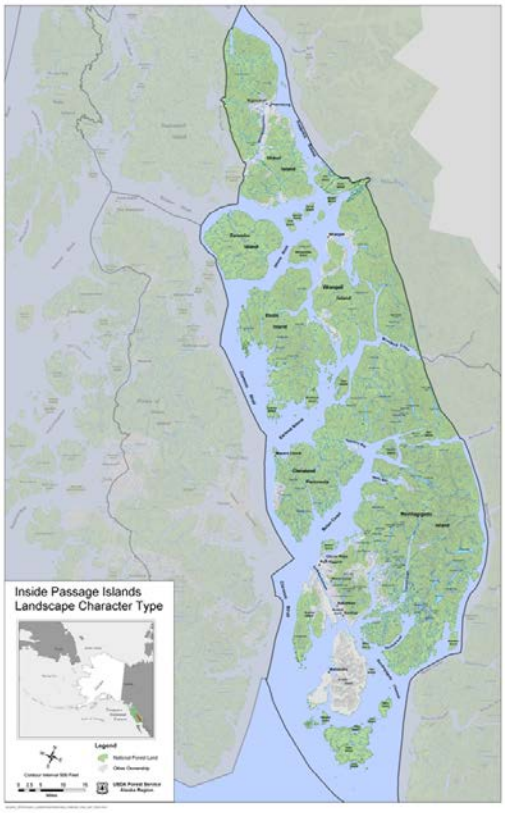

Figure 1. Landscape Character location map (Tongass, 2005)

Landforms

The Inside Passage Fiordlands is a complex unit consisting primarily of tall rounded mountains, long broad ridges, deep fiords, and long connected inland waterways. It includes portions of the mainland south of the Stikine River and all of the Cleveland Peninsula, but the majority of the character type covers all or portions of Mitkof, Kupreanof, Zarembo, Etolin,

Wrangell, Revillagigedo, Gravina, Annette, and Duke Islands as well as many smaller islands. The project area is a part of Revillagigedo Island. This character type lies just west of the Boundary Ranges Icefields unit, which provides a higher mountain and glacial backdrop to this unit on clear days. The landscape type contains many glacially modified landforms including hanging valleys with steep-sided slopes, broad U-shaped valleys, and coastal lowlands. Higher mountains generally occur on the mainland; the majority of the mountains in this unit are less than 3,000 feet, although some reach over 4,000 feet. Topography ranges from rolling to very rugged. Some of the most rugged and angular mountains in the unit occur around Ketchikan, on a small portion of the Cleveland Peninsula, and on Etolin Island (Tongass National Forest 2005).

Vegetation Patterns

In the higher mountains of the unit, alpine vegetation covers extensive areas and widespread alder brushfields often separate the alpine from hemlock, spruce, and cedar forests on lower mountain slopes. Most of the lower rounded mountain areas support productive western hemlock and Sitka spruce forests. Many portions of these forests have been harvested over the past 40 years or more and now support young second-growth forests. Forested wetlands and emergent wetlands, the latter occurring adjacent to large estuaries and cirque lakes, are common in some areas (Tongass National Forest 2005). See Figure 2 for depiction of vegetative patterns within the analysis area for the Saddle Lakes project and reference the Vegetation/Silviculture report for details.

Comment [RR4]: Figure 4 is the VQOs not veg patterns? Not sure what you want to use to depict veg patterns, past harvest, volstrata, suitable? You may just want to reference the vegetation / silviculture report. Figure 2 is titled vegetative patterns.

Water Features

Streams are mostly high gradient and contained and often deeply incised. Some of the mainland streams are glacial. Long, narrow bays and lakes follow bedrock weaknesses in some areas of this unit. Cirque basin lakes are often tucked in hanging valleys of mountain summits. All of the islands and land masses are connected by a network of broad waterways that serve as major transportation routes (Tongass National Forest 2005).

Comment [RR5]: Reference the aquatics report.

Cultural Elements

With the exception of the areas around the towns of Ketchikan, Wrangell, Petersburg, other small settlements, and in areas of timber management, the majority of the landscape shows very little human influence. Some of the area is privately owned or owned by the State of Alaska. Extensive timber harvest has occurred on the private lands and in many portions of National Forest System lands, beginning in the 1950s (or earlier) and continuing through the present. Extensive road systems to support timber management have also been developed and are visible in many portions of this unit. Around Ketchikan, Wrangell, Petersburg, and other communities, roads, buildings, and other structures are very visible (Tongass National Forest 2005).

Comment [RR6]: May want to say - For additional information please refer to the aquatics report.

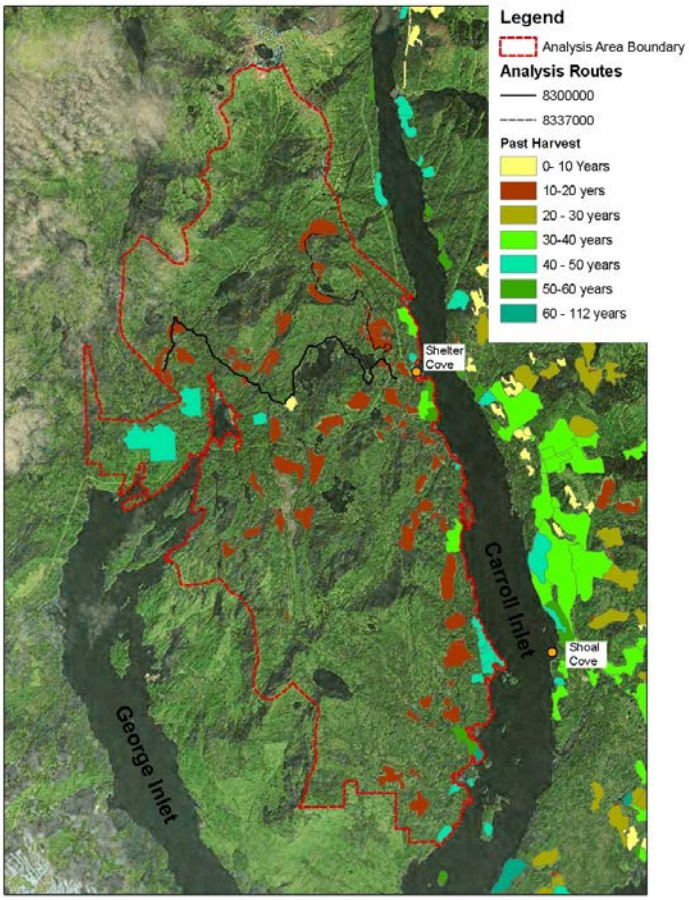

Figure 2. Existing vegetative patterns for Saddle Lakes vicinity (Imagery\15 meter\Alaska eSAT)

Scenic Attractiveness

Scenic attractiveness is the primary indicator of the intrinsic beauty of a landscape and of the positive responses it evokes in people. It helps determine landscapes that are important for scenic beauty, as well as those that are of lesser value, based on commonly held perceptions of the beauty of landform, vegetation pattern, composition, surface water characteristics, and land use patterns and cultural features (Tongass, 2005).

The scenery management system provides a process that rates the inherent scenic attractiveness based on the values listed above as either class A - Distinctinve, B-Typical or C-Indistinctive. The following list provides detailed description for each class.

Class A – Distinctive: Areas where landform, vegetation patterns, water characteristics, and possibly long established cultural features combine to provide unusual, unique, or outstanding scenic quality.

Class B – Typical: Areas where landform, vegetative patterns, water characteristics, and cultural features combine to provide ordinary or common scenic quality. The above features would generally be the more frequently found features in the ecological unit – i.e. they would form the basic matrix of the unit. All lands within the Saddle Lakes analysis area boundary are of this category.

Class C – Indistinctive: Areas where landform, vegetative patterns, water characteristics, and cultural features have low scenic quality, often water and rock forms of any consequence are missing, and the landscapes generally have weak or missing attributes of variety, vividness, pattern, and other factors that contribute to scenic quality.

The following figure depicts the mapped scenic attractiveness areas within and outside of the analysis area boundary.

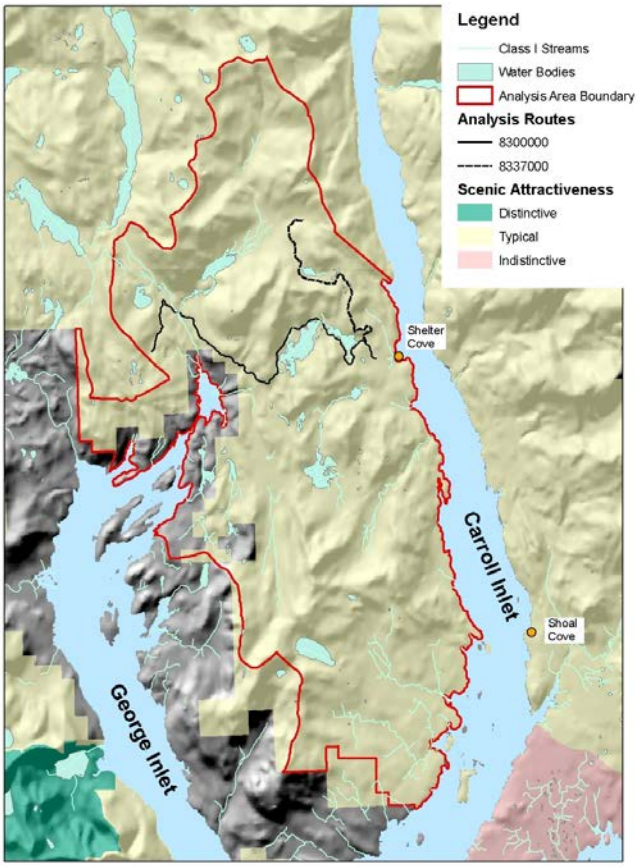

Figure 3. Scenic Attractiveness Classes Map (Forest GIS data)

Scenic Integrity Objectives (SIO)

Comment [mb7]: SIO map needs to reflect SIO for FR 8300 (VPR) and Saddle Lakes Rec.

The Forest Service developed and implemented the Visual Management System in 1974. This long serving system is replaced by the newer (but similar) Scenery Management System

1995. Under this new system, Scenery Integrity Objective (SIO) is the term used to describe the visual condition of the landscape.

The Scenic Integrity Objective (SIO) is used to also describe the degree of acceptable alteration of the characteristic landscape, and is assigned to land use designations, as seen from visual priority travel routes and use areas.

Scenic integrity objectives can very widely and generally depend on land use designation, the distance from the observer, and whether or not the activity can be seen at all. Scenic Integrity Objectives for the land use designations on the Tongass NF can be found on pages 4-56-59 of the Forest Plan.

The following describes the SIOs adopted by the Forest Plan. A figure that visually depicts there distribution in and outside the analysis are follows.

- High SIO: Activity is not readily evident to the casual observer. This SIO represents approximately ____% of the lands within the analysis area boundary.
- Moderate SIO: Activity is visible to the casual observer, but does not dominate landscape. This SIO represents approximately ____% of the lands within the analysis area boundary.
- Low SIO: Activity can dominate a scene, but must blend with surrounding landscape, as viewed by the casual observer. This SIO represents approximately ____% of the lands within the analysis area boundary.
- Very Low SIO: Activity clearly dominates but must blend to some degree when viewed as background. This SIO represents approximately ____% of the lands within the analysis area boundary.

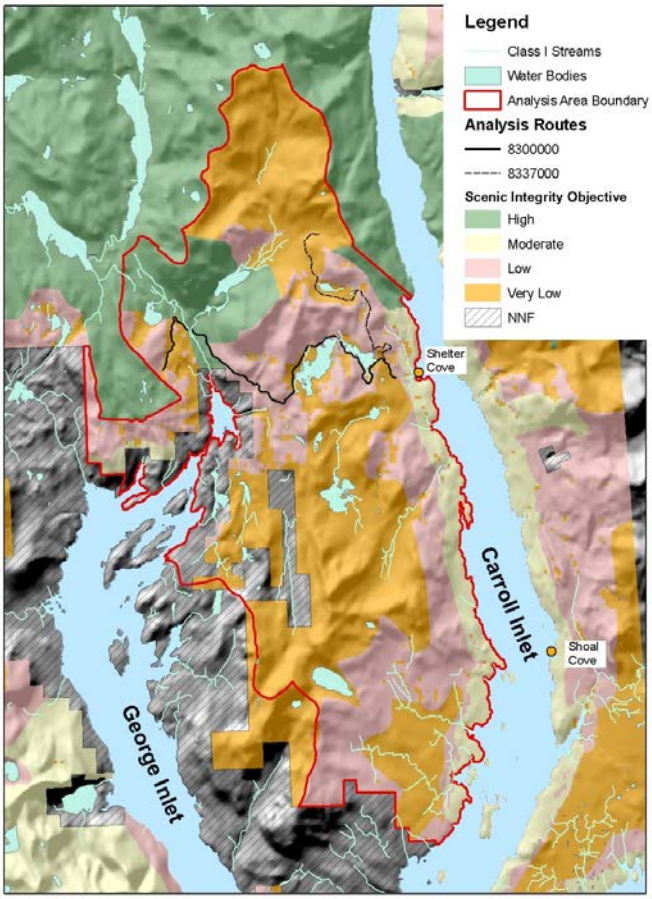

Figure 4. Scenic Integrity Objective Map (Forest GIS data)

Comment [mb8]: Will require update.

The Visual Quality Objective (VQO), used in the older visual Management System (VMS), is still offers definitions people are familiar with and use when describing scenery conditions. The crosswalk below will assist the reader understand the transition from the old, more familiar VMS terms to the new SMS terms used in this analysis and as reflected in the current Forest Plan.

Table 1. Comparison of Management System Terms

VQO Descriptions - Old	**Equivalent SIO Descriptions - New**
Preservation*	Very High Scenic Integrity*
Retention	High Scenic Integrity
Partial Retention	Moderate Scenic Integrity

Modification	Low Scenic Integrity
Maximum Modification	Very Low Scenic Integrity

* This classification does not existing within project area boundary.

Existing Scenic Integrity (ESI)

The Forest Plan (p. 4-56) states that it is important to compare the existing scenic integrity of the project area to the scenic integrity objective (SIO) of the land use designation. This is to determine if existing condition conflicts with Forest Plan scenic integrity objectives.

Existing scenic integrity is defined as the current state of the landscape, considering previous human alterations (USDA 1995, p. I-2). The latest GIS data on record that represents ESI is the existing visual conditions layer (EVC).

The Forest Service GIS inventory shows five existing visual condition / scenic integrity objective types within the project area. The types are listed and described below. A map that depicts the distribution within the project area follows.

Type 1: Natural - Areas in which only ecological change has taken place (except for trails needed for access). They appear to be untouched by human activities (Region 10, p. 712). This type corresponds with Very High SIO and comprises approximately 50% of lands within the analysis area boundary.

Type 2: Naturally Appearing - Areas in which changes in the landscape are not noticed by the average person unless pointed out. They appear unnoticed (Region 10, p. 712). This type corresponds with High SIO and comprises approximately 3% of lands within the analysis area boundary.

Type 3: Slightly Altered - Areas in which changes in the landscape are noticed by the average forest visitor, but they do not attract attention. The natural appearance of the landscape still remains dominant. They appear to be minor disturbances (Region 10, p. 712). This type corresponds with Moderate SIO and comprises approximately 2% of lands within the analysis area boundary.

Type 4: Altered – Areas in which changes in the landscape are easily noticed by the average forest visitor and may attract some attention. They appear to be disturbances but resemble natural patterns (Region 10, p. 712). and comprises approximately 6% of lands within the analysis area boundary.

Type 5: Heavily Altered – Areas which changes the landscape are strong and would be obvious to the average forest visitor. These changes stand out as a dominating impression of the landscape, yet they are shaped so that they might resemble natural patterns when viewed from 3-5 miles or more distant. They appear to be major disturbances (Region 10, p. 712). This type corresponds with Very Low SIO and comprises approximately 40% of lands within the analysis area boundary.

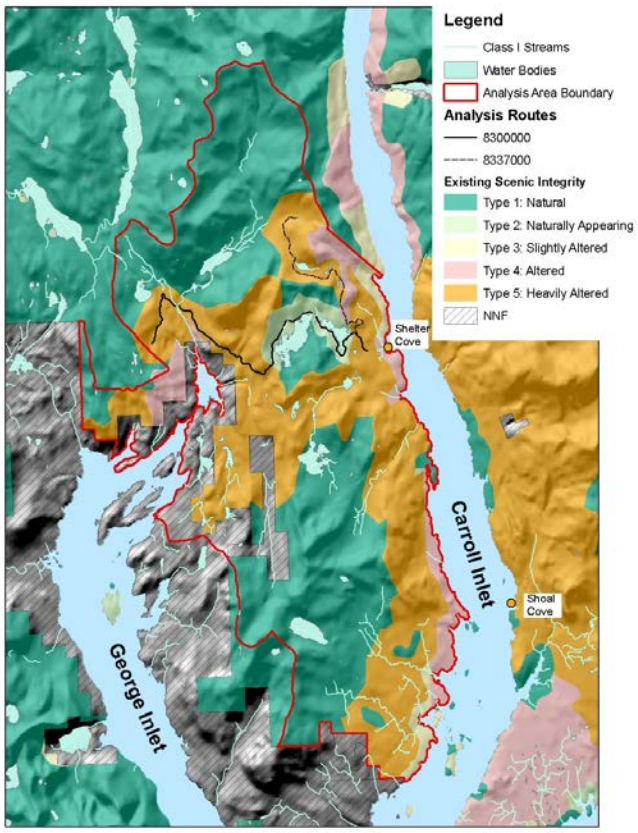

Figure 5. Existing Scenic Integrity and Visual Condition (Forest GIS data)

Visibility and Visual Distance

As part of the 2008 Forest Plan revision process, a contractor (Tetra Tech) performed a visual analysis and assessment of the lands on the Tongass National Forest based on the process outlined in the USDA Forest Service Agriculture Handbook Number 701, Landscape Aesthetics: A Handbook for Scenery Management. In this effort, distance zone and visibility (i.e., seen and unseen areas) GIS coverage were produced based on Visual Priority Travel Routes and Use Areas identified by Forest recreation and landscape architecture staffs.

The following figure depicts the result of the GIS based viewshed analysis in relation to the project area. According to the viewshed analysis, approximately ____% of the project area is considered seen, and approximately ____% of the project area is unseen. Coverage of such is intended to help predict or anticipate where activity is likely to be see or not seen for large scale planning purposes. Field verification at the project level is often required since the analysis is based on a bare earth model (for example, activity is that is masked by tall trees in the foreground, unseen in reality, may still show as visible when overlaid on the visibility map).

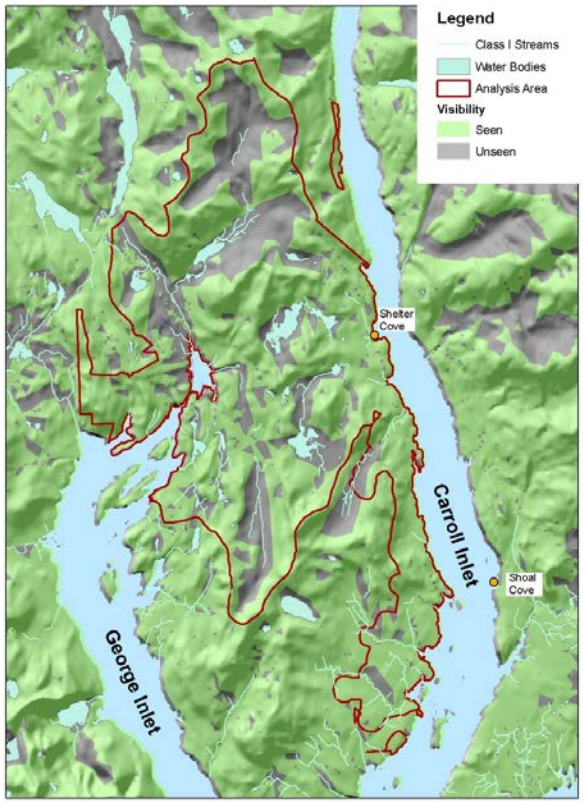

Figure 6. Visibility Map of seen and unseen areas within the analysis area.

Comment [mb9]: Will require update based on FR 8300 and Saddle Lakes VPR.

Knowing distance zones are important for determining visual absorption capability and for determining Scenic Integrity Objectives (a process that was completed for Forest Plan revision). They were obtained by measuring foreground, middleground, and background distances from the identified Visual Priority Routes and Use areas, as well key features such as other recreation sites, roads, and trails, etc.

The distance zones referred to throughout the scenery section of this document are described as follows.

- Foreground: The part of a landscape located less than 1/2 mile from the viewer. Approximately 13% of the project area is within this distance zone.
- Middleground: The area located from 1/2 mile to 5 miles from the viewer. Approximately 57% of the project area is within this distance zone.

Unseen areas are also depicted in the GIS coverage for distance zones, and as mentioned previously, approximately 30% of the project area is considered unseen. This would offer highest level of visual absorption capability.

The following figure displays the distribution of distance zones within the project area.

Figure 7. Distance zones from the VPR's within the analysis area.

Comment [mb10]: Will require update based on inclusion of 8300 and Saddle Lakes VPR.

Land Use Designation (LUD)

Desired future conditions on the Forest for visual quality are guided by the LUDs in the Forest Plan, which are designated Scenic Integrity Objectives (SIOs) for each and identify the degree to which a natural landscape may be altered and provide guidelines to ensure that management activities are consistent with scenic objectives. The long-term desired future condition for a specific area is the maintenance of a scenic integrity level that is at least as high as the adopted SIO for that area.

The LUDs within the analysis area, a summary of their management goals, and the amount of area they inhabit are listed below. Their distributions are provided in the map figure that follows.

- Old Growth Reserve: To maintain areas of old-growth forest and their natural ecological processes to provide habitat for old-growth associated resources. (Forest Plan, page 3-57). This LUD constitutes approximately 10% of the analysis area.
- Recreational River: To manage according to the Wild and Scenic Rivers Act National Wild and Scenic Rivers System. Manage to maintain free-flow characteristics and outstandingly remarkable values. Recreation users have the opportunity for primitive and semi-primitive experiences, solitude, and remoteness in a natural setting (Forest Plan, page 3-74). Though not within the analysis area boundary, The Naha river and the lakes it connects are in close proximity.

- Modified Landscape: To provide a sustained yield of timber and a mix of resource activity while minimizing the visibility of developments in foreground distance zones (Forest Plan, page 3-109). This LUD constitutes approximately 41% of the analysis area.
- Timber Production: To maintain and promote wood production (Forest Plan, page 3-116). This LUD constitutes approximately 38% of the analysis area.

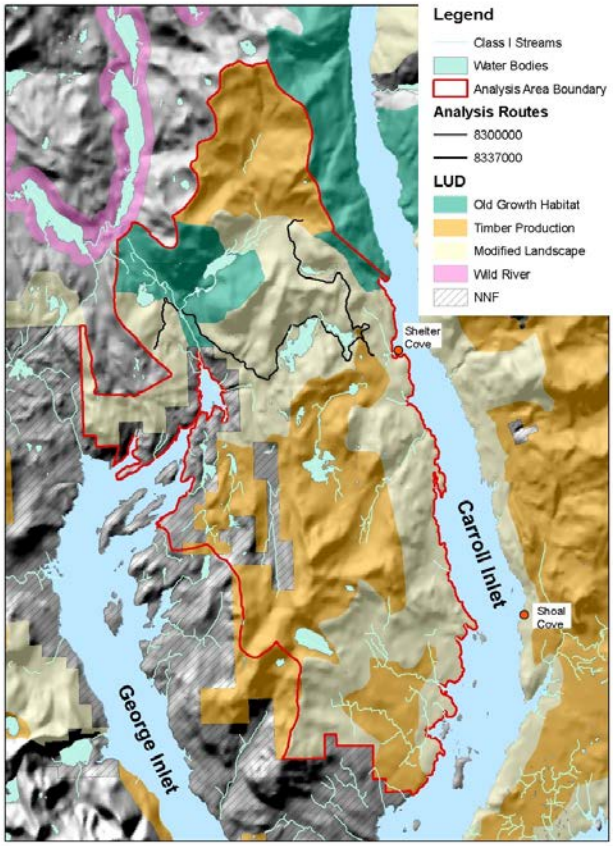

Figure 8. Land Use Designations within the analysis area.

Visual Absorption Capability

Visual Absorption Capability (VAC) is defined as an estimate of the relative ability of a landscape to accept management manipulations (e.g., timber harvesting) without significantly affecting its visual character. It is a measure of the relative capacity of the land to absorb visual change, and is rated as being High, Intermediate, or Low.

For example, High VAC means that landscape has a higher estimated tolerance for activity where low VAC means a lower tolerance and can take less activity. Intermediate is somewhere in between.

Forest Service Manual Supplements should be prepared by each region to establish visual absorption capability factors and ranking values (USDA 1995). Landscape Management Handbook Region 10 FSH 2309.22, Chapter 500 provides such guidance. When determining the VAC ratings for this project, factors such as LUD, distance zones, and slope values were combined to determine areas of high, intermediate, or low visual absorption capability useful for timber planning.

Timber harvest unit sizes can be influenced by the VAC settings and Scenic Integrity Objectives (see Forest-wide Standards and Guidelines for Scenery pages 4-57 – 4-59), and referring to these factors in the unit layout and design portion of the planning process is recommended.

Implications for Scenery

For Timber Harvest in areas with High SIO and VAC settings are:

- Low - Single tree selection or group selection (group openings less than 2 acres).
- Intermediate – Single tree selection or clearcut (openings approximately 5 -15 acres)
- High – Clearcut (openings approximately 15-30 acres)

For Timber Harvest in areas with Moderate SIO and VAC settings are:

- Low – Group Selection (group openings less than 2 acres) or clearcut (openings approximately 5 -10 acres).
- Intermediate - Clearcut (openings approximately 15-40 acres)
- High - Clearcut (openings approximately 40-60 acres)

For Timber Harvest in areas with Low SIO and VAC settings are:

- Low - Clearcut (openings approximately 15-40 acres)
- Intermediate - Clearcut (openings approximately 40-60 acres)
- High – (Clearcut (openings approximately 60-100 acres)

For Timber Harvest in areas with Very Low SIO and VAC settings are:

- Low - Clearcut (openings approximately 50 - 75 acres)
- Intermediate - Clearcut (openings approximately 80-100 acres)
- High – (Clearcut (openings approximately 80-100 acres)

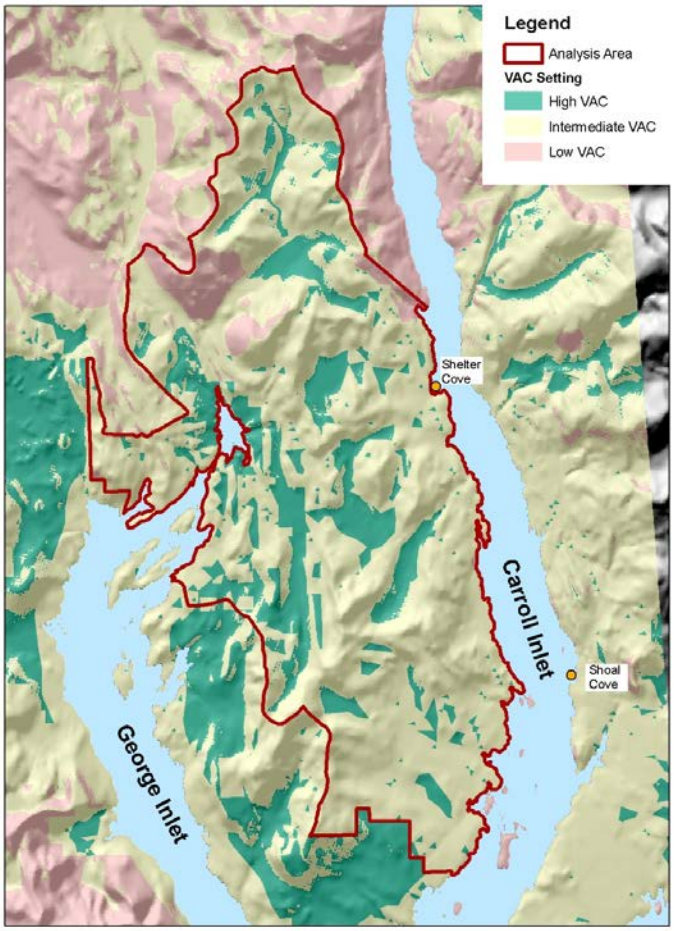

Figure 9. Visual Absorption Capability settings within the analysis area.

Comment [mb11]: Will require update based on new priority travel route distance zone information.

Visual Priority Routes and Use Areas (VPR)

Appendix F of the forest plan identifies places from where scenery is to be emphasized for each Ranger District in the form of landscape analysis. These can be routes which cruise ships, ferry boats, and personal watercraft frequently travel or destinations they anchor up at. They can also be roads people drive, cabins or recreation areas where people stay, and trails on which they hike. VPR's specific to the Ketchikan – Misty Fiords Ranger district are found on pages F-22 - 24 of the Forest Plan. Within the vicinity of the project area, these include:

- Saltwater Use Areas – Carroll Inlet and George Inlet
- Routes not constructed or NEPA Cleared: Planned or Opportunities – Saddle Lakes Recreation Area, Shelter Cove boat ramp, and Harriet Hunt – Shelter Cove Connection Road (i.e., FR 8300..).

The following figure depicts the Visual Priority Travel Routes and Use areas listed above within the vicinity of the project area.

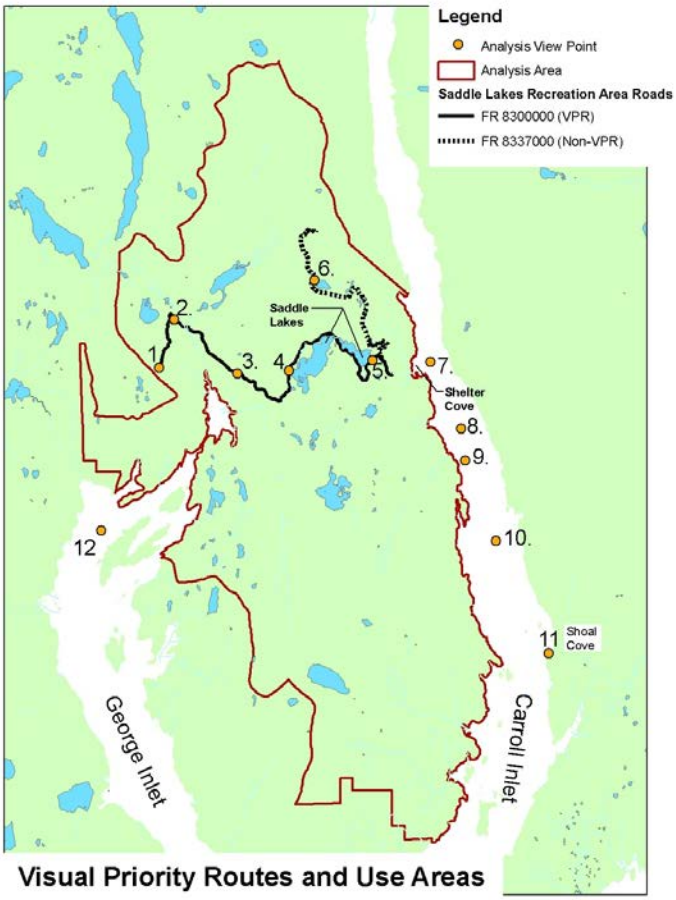

Figure 10. Affected Visual Priority Routes and Use Areas.

Viewpoints establish a base from which to analyze effect from proposed actions (i.e., proposed roads, landings, harvest units, etc.). They are places were visual effects are most likely to be noticed from within the VPR areas identified. The following are viewpoints from which the existing conditions images were gathered from.

Comment [RR12]: Swap water body text and correct spelling on Carol.

Comment [RR13]: Matt let me know if you want to look over some of my additional photos.

Figure 11.Analysis View Point 1 – Past clearcut harvests as seen directly from roadway renders a dominant appearance, but regeneration is underway, and meets the definition of Low SIO.

Figure 12.Analysis View Point 2 – Past clearcut harvest as seen directly from roadway renders a heavily altered appearance but meets Low SIO because of regeneration.

Figure 13.Analysis View Point 3 – Past clearcut harvests looking southeast offers heavily altered foreground views (Low SIO) and naturally appearing views in the background (High SIO).

Figure 14.Analysis View Point 4 – Naturally appearing landscape settings within the Saddle Lakes area has potential as recreation destination. This setting is reflective of Very High SIO.

Figure 15.Analysis View Point 5 – View of naturally appearing scenery across Saddle Lake with slight evidence of activity. This setting is reflective of High SIO.

Figure 16.Analysis View Point 6 – Altered appearing landscape settings within close proximity to water body is reflective of Low SIO.

Figure 17.Analysis View Point 8 – Altered appearing landscape settings in the foreground as seen from George Inlet is reflective of its Moderate SIO.

Figure 18.Analysis View Point 9 – Altered appearing landscape settings as seen from George Inlet is reflective of its Moderate SIO.

Figure 19.Analysis View Point 10 – Altered appearing landscape settings as seen from George Inlet is reflective of its Moderate SIO.

Figure 20.Analysis View Point 11 – Altered appearing landscape settings as seen from Shoal Cove is reflective of its Moderate SIO.

Figure 21.Analysis View Point 12 – Altered appearing landscape settings as seen from George Inlet is reflective of its Low to Very Low SIO.

Environmental Consequences

To follow.

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