

MARBLED MURRELET PANEL
Panel Assessment Meeting Notes - Tongass Land Management Plan (TLMP)
TLMP Conference Room, December 7-8, 1995

The panel session began with group introductions. In attendance were:

Facilitator:

Winston Paul Smith, USDA Forest Service, Pacific Northwest Range and Experiment Station. FSL-TLMP, Juneau, Alaska (907) 586-7102

Local Resource Person:

Tony **Degange**. USDI Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage. Alaska 99503, (907) 786-3492

Evaluators

Mike Brown, USFS Ketchikan SO. Federal Building, Ketchikan. AK 99901 (907) 228-6271

Kathy Kuletz. U.S. Fish and Wildlife Service. Migratory Bird Management. 1011 E. Tudor Rd., Anchorage, AK 99503, (907) 786-3453

John Lindell. U.S. Fish and Wildlife Service. Ecological Services. 3000 Vintage Blvd.. Suite 201. Juneau. AK 99801-7100, (907) 586-7240

Gary Miller. U.S. Fish and Wildlife Service. Oregon State Office. 2600 S.W. 98th Ave.: Suite 100, Portland. OR 97266-1398, (503)231-6179

Recorder:

Judi Falk. USDA Forest Service. Juneau Ranger District, Juneau, .AK

Silent Observer:

Frances Preston, USDA Forest Service. Juneau Ranger District, Juneau, AK

The following IDT members were also in attendance:

C.G. (Terry) Shaw. USDA Forest Service, Pacific Northwest Research Station. FSL-TL,MP, Juneau, AK 99801 (907) 586-7077; Co-team Leader of TLMP Scientists and organizer of risk assessment panels.

G. Chris Iverson, USDA Forest Service, Region 10-TLMP, Juneau AK 99801 (907) 586-79 17; gave presentation on development and elements of draft alternatives.

Bruce Rene, USDA Forest Service, TLMP, Juneau, AK 99801 (907) 586-870 1; gave a presentation on the forest planning needs and process.

Richard Enriquez. USDI Fish and Wildlife Service - TLMP. Juneau. .AK (907) 586-8750

Panel Goal and Objectives:

The charge to the group was to review each of the TLMP draft alternatives and assess the influence of implementation each alternative on the viability of the marbled murrelet in southeast Alaska. Each evaluator was instructed to provide an individual , independent (i.e.. without prior discussion of alternatives by the group) , outcome rating for each alternative.

Materials and Procedure:

The group initially listened to a presentation by Tony Degange' in which he presented a synopsis of current knowledge of marbled murrelet ecology in southeast Alaska. During the presentation individual evaluators shared information and personal field experience . Brief discussions focusing on the foraging and nesting ecology, especially habitat needs, of marbled murrelets in southeast Alaska occurred in response to information presented by Tony Degange or evaluators, or in response to questions by panel members during the presentation .

Following the presentation by Tony Degange. panel evaluators individually reviewed alternative and resource maps developed specifically for this panel. The following maps were presented to the panel:

1. Nine draft alternatives (alternative 5 and 6 were represented on the same map because they differed only in rotation. not in land use allocations).
2. Implementation of each alternative for 100 years (i.e., forest condition at 2095 for each alternative) with large and medium OG block polygons from inventory superimposed on each map.
3. Habitat Conservation Areas Strategy (distribution of proposed large and medium OG reserve blocks).
4. Current percentage of young growth by VCU (similar to percent second growth at 2095 for Alternative 1).
5. Percent second growth by VCU for each alternative implemented for 100 years (i.e.. at 2095).
6. Productive old growth (POG) in 1954.
7. POG in 1994.
8. Map of the distribution of Murrelets in Southeast Alaska during the 1970s and 1980s from McAllister's historical records (log books).
9. Boundary map of 21 Ecological Provinces.
10. Current volume class distribution (low. medium. high) across the forest.

Additional resources/information available to the panel were:

1. Draft forest-wide standards and guides.
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3. Additional acres of POG harvested in 100 years per alternative.
4. Handout information summarizing salient points of Tony Degange's presentation on marbled murrelet ecology and distribution.

Summary of Scribe's Meeting Notes for December 7, 1995

The charge to the group was to evaluate how implementation of each of the draft TLMP alternatives could effect marbled murrelets. Each evaluator will provide an individual score.

After Bruce Renee's description of the history of the revision process. many questions arose regarding the Tongass National Forest management structure in terms of how the system of three forest supervisors works. Q. Is there consistency among the areas? A. Sometimes there are differences in how specific projects are implemented but all areas should be consistent with the direction provided in the Forest Plan.

During the discussion of Productive Old Growth (POG) and Unproductive Old Growth (UOG). etc., questions regarding private lands and how to factor them into the panel's analysis arose. There are

¹ Author of marbled murrelet assessment for southeast Alaska. USDI Fish and Wildlife Service, Anchorage, AK

approximately 740,000 acres of private land in southeast Alaska. 80% of that private land has been harvested. These lands are primarily in the southern part of forest (except Hoonah. Kake, etc.). Most private land is city or native, some state. Basically, private lands have been harvested, they previously represented a significant percentage of the productive forest that existed. The land was selected for the timber value.

C: About half the high volume productive component is already gone in southeast if consider NF and private lands.

Forest Development Discussion:

Q: Generally, what is the size of a tree at harvest (assuming 100 year rotation)? A: 12-20' tree.

Q: Is this saw timber? A: Produce alot of fiber, not much sawlog.....don't produce quality timber. just fiber. This encouraged discussion on increasing rotation.

Q: Any attempt to vary this rotation - A: no

Q: How is forest doing on thinning? Stikine is 200,000 acres behind- this not too bad.

C: Other areas are much farther behind so, as a forest we are pretty far behind. Facilitator needs to clarify this.

Q: W-hat happens to most of the timber harvested? A: 50% (check this percentage) of every stand harvested becomes pulp because of age and defects in our timber.

C: The 100 year rotation is based on when maximum net stem growth is achieved.

Q: Wouldn't this decrease with additional harvest based on losses of soil quality?

Q: Can this panel recommend extended rotation? A: Yes.

Q: What is regeneration like in southeast? A: We have a higher percentage of natural regeneration (95%).

Q: Do we restock? A: Don't have to.

Q Does the forest composition change? A: Yes, see more hemlock. less cedar, less spruce in regenerated stands.

Q: What role does fire play? A: Fire is not major disturbance factor in southeast Alaska. Gap disturbance is a more fine scale occurrence. Also, we have catastrophic windthrow at larger scales. but again, these are all very different from harvest disturbance. Only 5% of disturbance is from avalanche, landslide.

Alternative Development Overview Discussion:

Q: What are the ASQ's associated with Alternatives A,P, and D? A: Alt A. = 275, Alt P. = 428 Alt D = 526. New A has basically no timber harvest New D has maximum timber harvest. Don't use these old numbers in today's analysis for murrelets.

Alternative Design Discussion - Wildlife Viability Issues

Q: Under Wildemess/LUD2/Reserves approach, how much of the land in these areas is actually considered productive old growth? A: Except for Admiralty and a few other areas. most of the land is classified as unproductive.

C: It is important to look at more than just the colors on the map....

C: Habitat Reserve Approach needs review, some reserves don't yet meet acreage or composition requirements. This will be reviewed later in this discussion.

Q: Which current alternative proposal most closely resembles current TLMP? A: Something between Alt. 2 and Alt. 7.

Beach and Estuary Fringe Discussion

No questions.

Reserve Theme Discussion

Q: Would all the 1600 acre reserves be old growth? A: At least 50% of 40,000 and 10,000 acre HCA's have to be productive old growth. The 1600 acre reserves must also be at least 50% (800 acres) old growth. When actually designating these 1600 acre reserves, managers/planners might try to include goshawk habitat. murrelet habitat. sensitive plant habitat. etc. When an alternative includes the reserve component. all three of these aspects are included.

Q: Are there any limits on how much road can go in a reserve (HCA)? No, since it is not a no road prescription.

Q: Because of the windthrow problem here. how much of old growth component set aside in a reserve might be lost over time? A: Can't say. but might be able to predict based on our knowledge of windthrow frequency. Would need to incorporate monitoring to learn more. We don't really know..

Q: Two-aged stands are part of only 2 of 9 alternatives now. is it possible that two-aged stands could be incorporated into more alternatives? A: Could be if a hybrid alternative is constructed.

Q: Has it been worked out yet whether 10-20% of the retention from first entry would be retained on second entry? Would same trees be retained from one entry to the next? A: No. hasn't been worked out yet. would depend on your objectives. For some wildlife species. would prefer to always retain same trees. for other wildlife species. this might not be the case.

Matrix Theme Discussion. Alternative 4

C: Under alternatives that apply the matrix there. there will always be one third of each VCU in old growth, the other two thirds would be managed with 200 year rotation.

C: Could never take entire 67% in one year. This would result in 4 age structures. Must also consider past management of the landscape. therefore could not go in and take 25% where harvest has already occurred.

C: On the other hand. in an unentered landscape, could go in and take 25% right away.

C: Alternative 4 incorporates Beach and Estuary Buffers.

Q: Any idea of limb size and structure in younger aged stands? - A: Don't have good limb structure until after at least 150-200 years. However. in post glacial areas, do have good limb development. probably because of very good site index in these types of areas.

Q: What will effects be if the forest composition is changed (referring here to hemlock vs. spruce differences in developing suitable nesting branches for murrelets). A: Hemlocks often develop very good branching. ..good analysis hasn't really been done in southeast regarding this though.

Reserve/Matrix Combination Discussion

Q: Would reserve status change at some point - could it be changed later? A: Theoretically, no couldn't decide later to go in for harvest.

Fish/Riparian Habitat Management Discussion

C: Forest habitat integrity analyses for all VCU's has been accomplished. Watersheds scored based on types and quality of fish runs. There was recognition of the importance of higher value watersheds by applying a more conservative approach to buffering/protection (Option 1).

C: Basically notch up for reserve approach (Option 1) - more conservative. and, notch down for matrix approach (Option 2) less conservative.

Q: What is magic about 100' distance for buffers? A: The height of the average tree If the tree fell. it would provide large woody debris to the stream.

Karst and Cave Resources Discussion

C: Not significant to murrelet discussion

Comparison of Alternative Map Discussion Standard/Guide Discussion

C: This discussion should provide valuable tools for the panelists' analysis.

Q: What is S/G? A: Standards and Guides.

Q: In the lower 48, "occupied" areas have to be protected. A: That is not S/G here, This is due primarily to fact that there are so few known nests in southeast Alaska. In Alaska, we would never be able to accomplish task of identifying occupied areas and then protecting due to expense.

Q: In southeast Alaska, we don't have many known nest sites. do we need stepped up program to go out and find nests? A: This S/G is not a conservation approach. it is more of a stop-gap measure to provide protection for nest sites as they are located during project planning/implementation.

Q: Is it currently direction to go out and conduct surveys in areas slated for management actions? A: No, we have no standard requirement to go out and do surveys in areas where management will occur. It is, however, part of general protocol for timber sale planning in most areas. But, important to remember that there is currently no protocol requiring this.

C: Currently, inventory is strictly voluntary.

Q: Is there a protocol for goshawks? A: Yes, protocol exists. but don't specify intensity and where you go to implement. Level of inventory is. however. higher for goshawks.

Process Discussion

Q: Though evaluators are instructed to not consider oil spills and other activities occurring away from forest, should and can they consider actions on private lands? A: Yes.

Q: Regarding reserves, do they now include second growth? A: No, all have large component of old growth.

Q: Clarify what is meant by "well-distributed across planning area". A: This is difficult to do. definition will be different for each individual. If variation in opinion about this. need only to document that there is disagreement. Everyone does not have to agree on the definition.

C: It will also be important to capture the elements of discussion that are important in later mitigating possible effects of implementation of a particular alternative.

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Resource Person's Presentation and Discussion

C: Encouraged discussion format so that a sharing of information and knowledge among panelists occurred. Important to tap the expertise of all involved.

C: There will be frustration with the lack of information regarding marbled murrelets in southeast Alaska.

Facts Regarding Murrelets:

Highest densities are distributed off land that is primarily covered with coniferous forest.

Taxonomy of murrelet is same in southeast as elsewhere.

Agler et al. (1995), showed murrelets well distributed in southeast Alaska

Problem is how to interpret what marine distributions mean in terms of terrestrial occupation.

Birds can travel up to 200 km on a daily basis.

In southeast Alaska, they may travel an average of 80-100 km on a daily basis from nest to feeding area.

Based on Agler et al (1995) it looks like populations are well-distributed throughout the Forest. Agler's surveys done in June and July.

There are several high density areas - south Lynn Canal. Icy Straight. Stephen's Passage. Chatham Straight. Frederick Sound. Sumner Straight (north and south end).

Mike McAllister's "map from memory" correlates with Agler's information (Mike is a commercial fisherman who has for many years kept journals that qualitatively describe numbers/distributions of murrelets in southeast waters). This may indicate that some areas are more important than others (for feeding, etc.).

Q: What do absences of murrelets in some areas mean? A: Icy Straight as an example. large underwater sill causes mixing. Both bathometric and geometric features play a role. This upwelling process brings food to surface. Up north, work by Kuletz shows murrelets are distributed closer to the shoreline.

Murrelets are generally stratified at 100m or less from shore in areas where there is not upwelling. They do seem to be associated with shallower water. sills. Do find murrelets feeding at greater than 200m. but generally other factors such as sills are playing a role..

Murrelets tend to nest relatively close to shore, in Pacific northwest. 50 to 60 km from shore, in Alaska. it is a much shorter distance. In Prince William Sound 20 km was average.

Marine environment seems to be more important in determining distribution than terrestrial environment,

Population Estimates:

(See also handouts provided for this discussion).

Nelson and Lenhausen - 250,000

McAllister - 70,000

Piatt and Ford - 960,200 (1st quantitative population estimate)

Agler et al. (1995) - 687,061 plus minus 201,162 - total murrelets, small boat survey.

Agler et al. (1994) - 434, 129 plus minus 166.525 - total MAMU. small boat survey.

In the draft assessment, the lower, conservative bound of 434.129 estimate was used.

C: Take home message is that there is a large range in the estimates. but can feel comfortable that there are several hundreds of thousands in southeast Alaska.

C: In relation to sampling technique. the time of day, season, etc. wash out and are not significant when consider you are conducting a random sample.

C. Pane! members feel comfortable with a conservative estimate in the low hundreds of thousands. This represents a conservative approach with 95% confidence that there are this many

USFWS surveys for last 3 years in Icy Straight counted 18,000 murrelets with a 95% confidence interval. This would translate to 19-20 murrelets/square km densities (these figures represent mean from 8 surveys) .

Gus Van Vleit observed 12.000 to 20.000 flying into Glacier Bay every morning from east in surveys he conducted.

Q: Has there been a decline? A: Naslund and Piatt say there has been up to a 50% decline in southern southeast. They used Christmas Bird Count data from southeast and southcentral Alaska. They took 5 year running averages and showed 40-50% declines. Greg Hayward did not show significant population trends. Data from 1990 showed large increase for Glacier Bay. this lends less credence to Piatt and Naslunds work.

C: Comment at this point regarding problems with using CBC data for species with such irregular distributions. Also how did or could have the oil spill have affected MAMU populations?

In summer, mm-relets are evenly distributed in Prince William Sound, they may be more evenly distributed in winter in southeast Alaska - this is a question - no one had an answer.

C: We know that 950,000 acres has been harvested in Southeast Alaska. we don't know if this has affected the marbled mm-relet population.

C: Murrelets exhibit somewhat seasonal movements. In Prince William Sound, populations are much lower in winter than summer. Glacier Bay counts show decrease in winter, also Jim King's work from Bemer's Bay shows winter decreases.

C: Within season movements - Gus Van Vleit work shows movement to and from foraging areas on a daily basis.

C: Not much discussion on marine habitat. Murrelets eat sand lance and herring, there have been no food studies in southeast Alaska.

C: In Prince William Sound, the food web has changed since the 1970's. Capelin has dropped out almost completely - replaced with pollock, which are less fatty. This change in available prey may affect bird populations.

C: In winter, murrelets switch to feeding more on crustaceans. Murrelets may be protected from effects of El Nino because of their broad food habits and ability to switch.

C: The decline of herring in Auke Bay was used to illustrate that it is the only area in southeast Alaska where a study has been conducted. Some changes in Prince William Sound may be related to competition between native fish and hatchery fish. In Prince William Sound, kittiwake/murrelet cooperative feeding has possibly been observed.

Q: Are murrelets nest-limited or food-limited? A: This is the raging question. It is important to know how far from feeding areas nesting areas are, and the energetic costs of movements.

Q: What do we know about habitat in southeast Alaska? A: Two sources of information. dawn watches. and nest site assessment. For southeast Alaska, only 4 known nests. 2 of these are ground nests, and 2 are

tree nests. Both ground nests are at the top of cliffs, substrate is mosses and thick vegetation perched on root systems. One cliff site was about 11' high and in old growth forest habitat. The other cliff (ground) nest was at approximately 600' in a gully on a rock outcrop (on a 70 degree slope). One of the tree nests was in a western hemlock, one was in a mountain hemlock. Both were in decadent trees with missing tops. Nest substrate mossy. Q: How High? What diameter? This question not answered, conversation went on to other topics....

C: In Alaska, 45% of the nests are ground nests, 55% are tree nests. There are higher proportions of ground nests in Alaska.

C: Kuletz radioed 47 birds in Prince William Sound area. relocated 6 birds.

Q: How captured? A: Murrelets were caught birds in mist nets set in the water at night.

C: Ground nests in northern areas of Alaska are generally in treeless areas. Nests in southeast Alaska are less than 13 km from coast.

C: Dawn watches have been conducted at 103 sites in southeast Alaska. Generally, no habitat data is collected at these dawn watch sites. Computer habitat data was used in the murrelet assessment. Looked at volume classes. Detections were positively correlate with season. Volume classes 5 and 6 were also positively correlated with detections ($p=.0005$), and volume classes 4 and 5 were also positively correlated ($p=.003$) with detections. Areas where buffers composed greater percentages of cut areas also had higher detection rates. generally the buffer had to be greater than 600 acres (buffer of 600 acres = approximately 1 sq. mi.. half mile radius circle). Sites between 1 and 7 km from coast had the greatest number of detections.

C: The heads of bays not used as a habitat feature in the analysis described above.

C: The lack of discussion of non-forested habitats in the assessment was not meant to indicate that ground nesting is not important, information just does not exist.

C: There is some habitat data from elsewhere in Alaska. Kuletz et al. has habitat information for southcentral Alaska. The assessment handout contains more information regarding that study. Trees were generally old and in high volume stands at low elevation with high canopy cover and a high percentage of epiphyte coverage.

Q: Is there a difference in the structure of trees with age from southeast to southcentral? A: There is a volume class difference from southeast to southcentral Alaska. Old trees are not necessarily in high volume classes in southcentral as they generally are in southeast. This might also be the case in southeast in some habitats like muskegs. It is not necessarily the age of the tree that is important, it is the canopy structure, the presence of platforms. presence of epiphytes. etc.

After this discussion, panel members scored the alternatives. then the meeting adjourned for the day.

December 8, 1995

Discussion of Panel Assessments • Before

Alternative 1

C: There was most agreement among panel members on effects of Alternative 1.

C: This is because you maintain what now exists, also, areas that have already been cut will go to 200 year rotation. so conditions will actually improve.

C: The reason for differences between those who scored 80 Vs 90 in Outcome 1 for Alternative 2 those who scored 80 stated that they did so because of the amount of high volume old growth that has already been cut. Both who scored 80 didn't think that a 10 point difference was really too significant. They felt that their scores didn't indicate a great deal of uncertainty.

C: All scores across the board indicate some degree of uncertainty. This makes sense and is acceptable.

Alternative 2

C: The panel member with most conservative scores (lowest for Outcomes 1 and 2, highest for Outcome 3...) suggested that the level of harvest is still significant enough under this alternative that there would be major changes.

C: Another panelist explains that their scores were a bit less conservative (did not have such low scores for Outcome 1 and 2) because that panelist sees that we have a bit more flexibility in southeast than they have in, say a place such as the Pacific Northwest because there is more habitat remaining in southeast Alaska.

C: Another panelist agrees that southeast Alaska is in much better shape than the Pacific Northwest, however, there is a time difference and the perspective of the knowledge we have here. Things happened so quickly in the Pacific Northwest. Within 50 years, so much was cut.

Q: Aren't there lessons we have learned and should learn?

C: There is lag time. we are OK now. but will this last.

Q: Regarding abundance vs. distribution - at what scales are we working?

C: This is open to interpretation. One panelist suggests that they worked by ecological province, another indicated that they worked on a more Forestwide basis. This is probably one contributing factor to the observed differences in scoring.

Q: Would you consider that distribution is the same if, after timber harvest, you don't find murrelets in 3 watersheds on a district? Does this mean that the overall distribution of murrelets has been changed or is it still the same?

C: It is better to cut several stands in a watershed? rather than cutting the entire watersheds. However, even with this approach, there might still be a negative impact populations over time.

C: Let's look at the biogeographic province map. (This was brought into the room)

C: If populations exist in each of the bioregions, then the population remains viable and well-distributed across the Forest.

C: Not everyone agrees.

C: There would be enough left to maintain a breeding population. Is this not what viability is?

C: A solid block of forest is probably best in a watershed, but need habitat throughout the Forest. I don't feel comfortable with just a few birds in each province.

C: Important to maintain distribution because of the possibility of catastrophic events (Oil spill example). Fire is another issue in the Pacific Northwest that may not be an issue in southeast Alaska. Could lose a lot with one fire. I agree that distribution is very important.

Q: Is distribution more important than density? A: Probably so.

C: Private lands that have been harvested create some pretty large gaps.

Q: If cut something on a 100 or 200 year basis, doesn't that make difference for this analysis? A: The clearcut itself will look the same in 100 years, but half the landscape will be affected.

Q: Is this important for murrelets? A: Probably so.

Q: Are there any special places for murrelets that could be protected to mitigate risks? A: Yes, low elevation old growth anywhere it exists.

C: I don't think you could switch it around enough to make a difference. Need to protect beach and estuary, these are important areas.

C: It is very significant that Alternative 2 contains no reserves, which are very important. I don't think there is much mitigation possible that could improve Alternative 2.

Q: If begin to mess around (change) Alternative 2 enough is it still a viable Alternative?

C: The best change we could recommend would be to decrease harvest as much as possible in high volume, low elevation stands. This leads us to the discussion about whether it is better to harvest more area (acres) that have less volume (referring to higher elevation areas or areas with lower site index, therefore lower volume/acre).

C: Reserves are important, they are lacking, however in Alternative 2, other than wilderness and LUD2, and these wilderness and LUD2 areas alone probably do not provide enough habitat.

C: If an alternative did not include some type of reserve area, I automatically gave it a lower score.

Q: Would a reserve system of 1600 acres per VCU help? This would be the minimal number of acres that might work.

Q: There are 500 timbered VCU's, would a 1600 acre block in each of these, in addition to 10,000 and 40,000 acre blocks be enough? Is 1600 acre size/VCU adequate? Is it large enough?

C: Must remember that only 800 acres of that 1600 acres would need to be old growth.

A: Yes, that would definitely help (would be amazing compared to what they have to work with in Pacific Northwest).

A: Yes it would help, but need more information. We don't have much data on Fragmentation effects on murrelets..

C: Fragmentation is a big issue down south, but hasn't really been discussed as much in southeast Alaska.

C: Beach fringe and estuary buffers probably would not provide very much in terms of nesting habitat for marbled murrelets. This is the opinion in the Pacific Northwest. We don't know what these buffers would accomplish in southeast Alaska. Most nests are farther inland. these buffers would not necessarily protect nests.

C: If there were some provision that when establishing the 1600 acre reserve area in each VCU, managers would try to include as much interior habitat as possible. Would need to minimize edge. Don't want to create stringers (long, narrow areas of forest with too much edge).

C: Need to allow for buffers around higher volume class old growth where murrelets nest. even if these buffers are not necessarily high quality forest. This approach might decrease the overall density of murrelets, but on the other hand. it might provide for better distribution.

C: Predation could be an issue that is related to increasing edges/fragmenting habitat. Predation and wind effects close to shore may create a situation that indicates that the 1000' beach fringe might not be adequate. 1000' is better than 500'. but don't really know what value this buffer would actually provide.

C: We can come back to the discussion of Standards and Guidelines in relation to the beach fringe and estuary buffers at later point.....

C: Alternative 3 represents a similar rate of harvest to what has occurred since 1954.

Alternative 3

C: It offers reserves - this is major plus.

C: Harvest methods are different - 2 aged stands are considered in Alternative 3.

C: It receives a higher rating because it includes a reserve system. (All panelists agree).

C: Riparian habitat is still a question. Riparian protection is better in Alternative 3 than in Alternative 2, but what does this buy for murrelets? Panelists agree that it probably does not buy much. Linear habitat is not as good for predation avoidance.

C: Don't want to write it off the value of riparian habitats completely. We still don't understand the value of riparian corridors to young birds. They may follow these riparian corridors to the marine environment. etc.

C: It is too risky to consider the riparian buffer as adequate mitigation. Would be basing this decision too much on assumption.

C: There is a great deal of uncertainty about how two-aged management will be applied Also alot of uncertainty about how much benefit two-aged management would provide for murrelets.

C: In a study from down south (Ellson?), it was found that as second growth grows. clumps of old growth made quite a difference in murrelets re-nesting, particularly when there were legacy trees.

C: It is likely that any/most retentions will be more clumped because of the types of logging systems used in southeast Alaska. This would be the case unless Standards and Guides were created that addressed retentions for a particular species.

C: It is reasonable to believe that other logging systems will begin to be used more in future. However, the standards and guides to need to be very specific concerning retentions.

C: Clumps initially won't be good habitat, will take awhile - up to a century - but over the long term the clumping would definitely provide better habitat.

C: Yardeners generally would prefer to leave retention in a big clump.

Q: One panelist defines well-distributed as having murrelets in every watershed. Is it necessary for each VCU to contain murrelets? Will the 1600' reserve in each VCU assure well-distributed?'

A: Within the historic range, the intent is to maintain comparable distribution throughout forest.

Q: If murrelets are no longer present in one watershed on Prince of Wales Island. does this mean they are no longer well-distributed?

C: We do know that murrelets are more scattered than clumped in their distribution. Therefore. yes, if murrelets are no longer present in one watershed, they are no longer well distributed (this was 1 panelists' view).

C: 2 other panelists approached this question from the perspective that if you maintain habitat somewhere (not necessarily in every watershed) there would still be a well distributed population

C: 1 panelist is in-between these 2 views. (This showed the problems in panelists interpreting things differently based on different perspective of scale. One panelist expressed a problem with size of biogeographic provinces in dealing with this question of scale. If provinces were smaller, he would feel more comfortable in dealing with this question of scale.

C: Panelist expressed discomfort in saying that if a few murrelets remained in each province. then considered well distributed. But also expressed that he was not uncomfortable with losing some watersheds to timber harvest here and there.

C: Another panelist deals with the range question from very broad scale. Some drainage's may lose murrelets. but they will probably still be well distributed. If there are sustainable populations in each province. then that is probably OK.

C: A panelist pointed out the example of a 300 mile distance or gap between populations in California.

C: Should try to separate the threshold discussion from the viability discussion. They are different issues. we don't want to confuse them.

Q: We could be in the situation with one pair murrelets in each drainage. Could argue that the population under this scenario was well-distributed? A: Not really. it may not be sustainable.

C: Under Alternative 3, there will still be a lot of green on the map. This was reason that 2 panelists gave higher scores to outcome 1 in Alternative 3.

C: The reference to similarity to historic range caused some confusion. All reserves give well distributed. but not necessarily historic occupancy of range because of gaps created by cutting.

C: One panelist viewed it based on relative risk factor. There is some possibility that murrelets would be where they had always been based on cutting proposed in Alternative 3, but chance of this small.

C: We don't have to come to consensus. or a common score. just an understanding of what well distributed means. It is recognized that panel members interpreted well-distributed differently. This in turn affected the outcome ratings.

C: Let's discuss well distributed throughout southeast Alaska vs. well-distributed in the historic sense. If lost most of the habitat on Prince of Wales Island. several panelists felt that this would not meet the definition in their minds of well-distributed. Several other panelists looked at it from a different perspective.

C: It doesn't make sense in discussion of well distributed to ignore population numbers, If half of the old growth habitat is harvested, this will impact the population. this will in turn impact viability

C: A reduction in abundance will occur. One panelist had a hard time separating population and viability questions from the well-distributed question.

Q: What spacing in nesting habitat exists in the Pacific Northwest? A: No big blocks of contiguous old growth forest habitat exist. There are human-induced gaps 20-30 miles in extent. There are 100 mile areas where harvest has occurred.

C: We don't have any idea how many birds a 1600 acre block would support.

C: To provide an idea of murrelets nesting density; in Prince William Sound, found 6-7 nests on one slope about 2-300 acres. Have found nests 100m from one another. Radioed birds (in study by Kuletz) were about 1 km from one another. Can have clumped nesting.

C: In the Pacific Northwest (Redwoods NP)- several 100 in one park area (acreage not given).

C: Productivity. seems much lower down south. Might be related to a number of things. Could push ourselves to that same line in southeast without knowing.

C: Murrelets exhibit high site fidelity for a small area. they do lots of territorial displays. Have found trees with several nests from different years. The same tree can be used over several years, possibly by the same birds, but not necessarily. All other alcids have high site fidelity.

C: The viability question is very perplexing to deal withif there is some critical threshold. we don't yet know what it is. Might be able to get by with birds scattered as they are down south. but this isn't necessarily good. In fact, we know that it is not good.

Q: What kind of impacts would scattering have on social interactions? Does packing occur? A: No evidence of packing in Pacific Northwest. There may be more non-breeders because of fragmentation that we see in areas in the Pacific Northwest.

Alternative 4

C: If implemented. this alternative would impact fewer acres than Alternative 3, but Alternative 4 has no reserves. Most panelists gave higher ratings to Alternative 4 than to Alternative 3.

C: Old growth retention of 33% per VCU was important in panelists giving Alternative 4 higher ratings than Alternative 3.

C: It is important to remember that the 33% retention is not necessarily a block. it could be linear. therefore must be very careful. Also 33% doesn't have to be old growth.

Q: Is it fair to say that we could be more assured that there would be an old growth block in Alt 3 than in Alt 2? There is twice as much retention in Alternative 4 compared to Alternative 3, but the quality of the retention might not be of as high a value because reserve guidelines would not be imposed. There could. however be a mitigation factor to create Standards and Guides to insure that retention is carried out to benefit murrelets.

C: Most panelists felt that they overrated Alternative 4 during this first scoring because they didn't understand limitations of retention factor.

C: Under Alternative 4, a portion of what is in second growth now would not be harvested in the future. This is good in that it give areas that have been heavily harvested a break, but not so good from standpoint that we would then enter more areas that are now unharvested.

C: Under Alternative 4, within each VCU, 25% of suitable timber could be harvested - matrix system. Any VCU that now has over 25% harvest could not be harvested. No more harvest until second growth is at least 200 years old.

C: Alternative 4 shows that private lands were calculated in so that if 25% of a VCU has already been harvested - even if this harvest occurred on private lands - still can not go in for harvest..

C: Alternative 4 pushes the FS to open more unharvested VCU's over time. This is the tradeoff. It would also involve more roading and a higher cost. When go into a new watershed, there is more pressure from an economic perspective to take more timber during the first entry. Might take up to 25% right away

C: One panelist feels more comfortable with reserves because of thought put into the identification of large and medium-sized reserves in terms of their location. The matrix theory is a little more uncomfortable because it is newer. and because implementation guidelines are not as specific. We don't know at this point in time what will drive the decisions regarding where retention occurs and how much it will be when implementation actually occurs. Most difficult alternatives to evaluate are those that can't put on a map. Alternative 4 is difficult because they cannot see on a map where the retention acres will be.

Q: Please explain VPOP process and who involved, what criteria was - size, volume. distribution. A: This was done by the moderator/facilitator and several people on the panel who have been involved with Tongass issues.

C: A comment in the peer review of VPOP was whether reserves are large enough.

C: For murrelets. they are probably large enough • may not be the case for other species.

C: Even if don't agree with where reserves were located and the 10,000 acre and -40,000 acre size. at least know that alot of thought went into the VPOP process that placed the reserves on the map.

C: Murrelets weren't a species that was strongly considered during this process - more wolves, goshawks, etc....

C: Location of the reserves is fixed. Circles are now around what qualifies for inclusion as a reserve according to VPOP guidelines/requirements. Changes to these areas may occur during public input process and some modifications might occur.

C: If the reserve concept is implemented, it should be revisited in relation to mm-relets • This was a recommendation of one panelist.

C: There should be an opportunity to do this, particularly for the 1600 acre reserves. Probably this panel won't have that opportunity for large and medium reserves.

C: Ail panel members feel it necessary that murrelet input be considered in creation of 1600 acre reserves.

C: The 1600 acre areas will be selected between draft and final by TLMP team.

C: Discussion of placement of 1600 acres - who should do this? Should include district biologists and area people who consider not just single species, but also other species in area. Need criteria that will allow best decisions to be made - allow involvement of both TLMP people and district/area people.

Alternative 5

C: 50% difference in the total acreage harvested between this and Alternative 4.

This alternative includes 4 areas that would be excluded from harvest because so much has already been harvested.

C: This alternative received the highest scores from one panelist because there will be reserves in areas that have already been most intensively harvested. Also got high marks because it includes 200 year rotation, it includes 33% retention in each VCU, plus 25% harvest limit in VCU, also maintains beach fringe and estuary buffers.

C: Another panelist agreed with the above discussion, but gave this alternative somewhat lower scores due to fact that will still lose a lot of old growth.

C: One panelist ranked Alternative 3 higher because of reserve system implementation. Without reserves, there is a greater chance of creating gaps. There are tradeoffs between Alternatives 3 and 5. Alternative 3 has reserves, which are only guaranteed to be reserves for 10 year planning period.

Alternatives 5 and 6 have a mixture of matrix and reserve.

C: One panelist feels safer over the long term because matrix may be a better way to go over the long run than we realize now.

C: Another panelist agreed, but felt that you still lose more acreage of old growth habitat in Alternative 3 than in Alternative 5 (1500 acres less per year).

C: In Alternative 5, at least you have those larger blocks left, don't know that this will be the case in Alternative 3. If you depend on the idea that 33% retention will be in blocks rather than scattered or linear, panelist prefers Alternative 3 because less acreage is harvested. Just don't know risk involved when 33% retention decisions made.

C: The rotation age has changed from 300 to 200 years during the TLMP revision process. ASQ has driven this decision. Disappointed that this has been the case. We should be planning for desired future condition of all resources, not just timber harvest.

C: How does this relate to murrelet issue? A: A 300 year rotation creates a better situation biologically over time for murrelets. An appropriate mitigation measure relating to this would be to increase rotation to 300 years. This would make sense for murrelets, and enable panelists to provide higher scores for Alternative 5.

C: 33% retention is such an unknown (because don't know now where and how it will be located) that it makes it difficult to evaluate. A 300 year rotation would make more sense. There is no reason a 300 year rotation could not be accomplished, it is no less realistic than discussing 200 year rotation.

C: There does not seem to be a very good spread in alternatives. If had a 300 year rotation in one alternative, this would help diversify the spread.

C: Recommendation that a 300 year rotation should be considered for marbled murrelets.

Q: How do people feel about 100 year rotation? A: Really doesn't provide anything for murrelets.

Q: How about with legacy trees? A: Not really any better.

Q: How about 200 year rotation? A: Hard to say, theoretical, if look at diagrams developed from Alabacks ideas, we should be even more conservative (even longer rotation). If we were to assign probabilities to the quality of murrelet habitat at 200 years - still not very high. Probabilities better at 300 years.

C: Rotations are still a bit of a gamble with 300 years, but this leaves more options because we will have harvested less timber.

C: Once we get beyond a 200 year rotation, don't save much more productive old growth. because we would be **using** more second growth by that point in time.

C: The point is that if it isn't set aside, it'll be on the ground. Can't depend on just increasing rotation, also still need reserves.

C. A 300 year rotation means that we'd have more habitat left, not harvested cut, in 2095. This was the group's conclusion on this topic. Under this Alternative. less would be cut, but more VCU's would be impacted. assuming that the ASQ remains constant.

C: Mitigation recommendation: At least half of the 33% old growth retention would have to be in one 1600 acre block. This would improve groups lack of comfort with retentions areas as compared to reserves

C: One panelist commented that he will always give a lower ranking to anything without a reserve. This is point were we want more certainty in the planning process. Just don't know what will happen down the line in the decision process as it relates to identifying retention.

C: Another panelist expressed discomfort with using only reserves to ensure enough habitat will be retained.

C: Historically. timber harvest has always been maximized - this is the history. We have no reason to believe it will be otherwise.

C: Not saying that a matrix approach is not good. there is just more uncertainty associated with it.

C: Remember that there is some assurance that old growth won't be disproportionately harvested - TTRA.

C: But must put in criteria regarding what happens to the 33% retention. Sometimes the proportionality is applied over several entries??? This is an allegation . . .but it is a possibility if the intent of TTRA is not followed or considered.

C: If looking for mitigation to implement for this alternative, put conditions on the 33% retention by formulating standards and guides that insure where and how large it is. This may make it look like Alternative 3, but that doesn't matter. The panel is looking at ways to make their comfort level with any alternative a bit higher. It isn't the role of the panel to select an alternative. Panelists should ~~try~~ to insure murrelet viability for each alternative.

RECOMMENDATIONS FOR ALL ALTERNATIVES:

Retentions of blocks of old growth. low elevation habitat are better than stringers or linear habitat. Less harvest is better.

300 year rotation is better than 200 year rotation is better than 100 year rotation - the longer the **better**.

Alternative 6

C: This .Atemstive is similar to Alternative 5 except for rotation length and 50% harvest in each VCU instead of 25% harvest. This is why panelists marked this lower than Alternative 5. Alternative 6 harvests more timber over a shorter period of time.

C: Also, Alternative 6 presents a higher risk for creation of permanent habitat gaps

C: Any recommendations for mitigation in addition to those for Alternative 5? A: Not really.

Alternative 7

C: This is the alternative with no reserves and lots of harvest. It is the 'ambitious' alternative.

C: It is definitely not as good for murrelets.

C: There is a high likelihood that there will be gaps.

Q: Considering the 5 possible outcomes. at what point is murrelet viability and distribution compromised?

Q: Where will NFMA regulations be comprised?

A: Outcome 3 represents a point where you are in situation similar to what is being experienced in the Pacific Nonhwest. Below Outcome 2, it is still an unacceptable situation, particularly because we don't have enough good information, we don't know enough about murrelets in southeast Alaska.

C: Another panelist disagreed - feels that if refuges or reserves are maintained, then can get as low as Outcome 4 before murrelet viability or NFMA are compromised.

C: The other 2 panelists agree with the first idea, that if we get down to Outcome 4, then you're not in compliance with NFMA.

C: In the lower 48 the situation got pretty grim before anything was done about it. Assuming that the ESA remains a viable law, if we get to Outcome 4, the ESA should kick in.

C: Can't assume that existing refugia are all are habitat for murrelets.

C: There is a difference in the way panelists look at refugia or reserves. A large separation between populations may or may not be as significant or as bad for murrelets as, say, for goshawks. Murrelets may be more mobile and therefore have a higher rate of mixing/population contact. Don't really know much about this.

Q: Are there elements of Alternative 7 that could change to make the risk for murrelets less? If changed from Option 3 to Option I in the riparian, beach, and estuary buffers, would that buy anything? A:

Probably not. Nothing in Option 1 provides for insuring blocking or retention of contiguous habitat.

In fact, the implementation of Option 1 may cause disproportionate harvest of habitat that murrelets do use. You may not cut the beach, riparian, or estuary buffers, but murrelets may not use this type of habitat for nesting anyway. Your effective acres might be much smaller because you would cut more of contiguous habitat that is important to murrelets.

C: Other problems with this alternative include no retention, small buffers, no refugia. Not much could be done to make it much better other than to change it. This alternative more than any other may result in a situation where the only place the murrelets are is in refugia.

Alternative 8

C: This Alternative has reserves. Alternatives 3 and S have two-aged management and reserves. the riparian standard is different from Alternative 3, there are more exclusions in Alternative 3 for wild and scenic rivers.

C: Less acreage harvested in this Alternative is probably due to increased protection of riparian areas.

C: An important consideration is that in the Pacific Northwest, when riparian buffers implemented, often gained much more habitat than just the 100% foot buffer. This is due to the interconnectivity of streams and the web effect at stream intersections.

C: 10- 15% of watershed in retention under Option 3, 30-40% of watershed retained under Option 1, Option 2 about 20%.

C: Alternative 3 should be rated higher because of the higher protection of riparian. Interesting that there is as much difference in panelist scores. Would have expected more difference. One panelist says he would probably change his scores in retrospect.

Alternative 9

C: The current plan is the most ambitious other than Alternative 7 in regard to amount of timber harvested. Primary differences from Alternative 7 are in retention (TTRA) and riparian buffers.

C: Alternative 9 has no buffers. TTRA -There is project by project allocations of old growth retention, can apply those retentions for 1 project, therefore decreases the value of retention because the timber can be harvested during the next entry. This means that some areas aren't truly long-term retention. This process is, however, self-limiting over time, because eventually must retain something. This may be the way the 33% retention areas will be implemented. The panel members are skeptical about implementation of buffers and retention under this alternative.

C: One panelist expressed surprise that Alternative 7 and Alternative 9 scored so low in Outcome 4.

C: Through this discussion, all panel members expressed that this discussion has helped disclose some intricacies, particularly concerning things like 33% retention, that might make them score the outcomes differently the second time around.

C: Experience down south has shown that the more specific the directions regarding nebulous things like retention are, the better. Often intent is not adhered to in process of implementation, if things (such as standards and guides) are not spelled out pretty clearly.

Q: Would it help in all alternatives to increase the Standards and Guides or to establish more concrete Standards and Guides. A: It is important to keep the S/G's simple and realistic in terms of budget and time needed to accomplish them. Must be practical. The S/G's must be accomplishable.

Panelists at this point in time scored the alternative outcomes for the second time and took a lunch break.

After Lunch Discussion of Before and After

C: Not much change in the before and after scores.

C: Whether related to murrelets or not, Alternative 1 is a rather bogus alternative. It shouldn't be included because it is not realistic, will not be implemented or chosen. Need a greater range in the alternatives.

C: More important than looking at alternative ranges of harvest might be to look at the spread in panelist scores.

C: One panelist suggested that TLMP should develop an alternative that is somewhere below the lowest acreage harvested (572,300 acres in Alternative 5). This alternative should recommend 300 year rotation, block retention, etc., and these factors are what would decrease the harvest level.

C: Alternative 7 (1,556,900) and Alternative 9 (1,402,800) maximize timber harvest. Probably could not harvest much more than this considering existing regulations. For Alternative 7 will accomplish what timber harvest is possible while remaining legal. Could create a new alternative, but must be within current acreage harvested bounds (between 572,300 and 1,556,900).

Q: Why?

C: For alternatives that currently have a 100 year rotation, if increased the rotation to 200 year or 300 year rotation, would provide greater benefit to murrelets.

C: Other recommended mitigation would be to implement the reserve system.

C: When considering Alternatives 3 and 5, a problem is the difference in our confidence in reserves specified during the TLMP process (by VPOP, etc.) vs. the retention that would be applied under the matrix system. (Alternatives 3,4,5,6).

Q: Is there an alternative that includes reserves and the matrix combination with harvest per VCU limited to 25%?

A: Alternatives 5 and 6 provide combinations with a mixed matrix approach.

Q: Why is there no alternative with extended rotation and reserve system?

A: There was such an alternative, but has not been brought forward in the planning process. It was dropped from consideration within the last two months.

C: We feel that such an alternative would provide the USFS with the best combination, and provide an avenue to help determine whether the matrix system works, while at the same time providing for the protection that the reserves system provides.

Q: We've got Alternatives with 33% retention plus reserves, why not have an Alternative that combines long rotation plus reserves?

C: The fact is that a third of watershed would be lost to harvest if applied long rotation, plus reserves, plus riparian, estuary and beach buffers.

C: It is important to remember that a 33% retention includes beach, estuary and riparian buffers, the 33% retention is not necessarily additional old growth habitat in a block (i.e. contiguous old growth habitat).

C: The reserve system applied so far is the HCA strategy. Don't know if it is possible to modify this strategy at this point. Over the long term, we need to know if we can provide habitat in the matrix with extended rotation.

C: If we select an alternative that has only extended rotation in the matrix with not reserves, may learn that the matrix management system doesn't work. So without reserves, would lose.

C: Therefore, the best alternative is Alternative 3 plus extended rotation at 200, and preferably 300 years. Also, implement the condition that retains 25% of old growth per VCU. Also include alternative harvest methods to decrease even-aged management/ encourage alternative methods.

C: Alternative 5 with uneven aged management and extended rotations would be good additional alternative to build and consider.

C: It may be more useful to have some variation in rotation age. retain some in 100 year rotation. some in 200 year, some in 300 year. Having some left in 100 would allow to go back into second growth areas sooner. decreasing the need to harvest new areas.

C: Recommend that the Forest needs to set up experiments that answer some of the questions regarding the value of different harvest methods, the value of the matrix system and the reserve system, etc.

C: Silviculturalists say that second growth is more productive at the first re-entry, no one knows what happens after this.

C: Important recommendation: establish experiments as part of TLMP to try to determine effects of different methods. The next plan revision is in 10 years, by then you could learn alot. THINK LONG TERM!

C: It doesn't matter what the length of time between the plans is, if you don't set up these experiments now, in 10 more years, we still won't have any better information.

C: Need to try different approaches. learn what works best for a variety of species.

C: We currently have no idea what percentage of the harvest will occur in uneven-aged management in those alternatives that it is part of.

Q: Adaptive management was initially discussed alot, but not reflected in any of the alternatives - Why?

C: Reflecting on the majority of our discussion. it seems like we don't know alot. Now, as part of planning process, would be an excellent time to incorporate some approaches that allow us to learn more regarding our management approaches.

STANDARD AND GUIDELINES DISCUSSION

Standard and Guideline A:

C: The inventory requirement is impractical to implement. Can we identify how use this type of information would be used? It is not clear enough. There is no background information. and. most importantly this standard and guideline does not trigger a decision. Unless it is re-worked to include more clear direction. eliminate.

C: On the other hand, if it is at least in the document, it gives biologists some support. From a monetary standpoint, because the dollars are limited, information for information's sake needs to be put in perspective. We need to ask ourselves whether or not that information will ever be used for anything, and if it is the best way to spend the limited funding.

C: Once a unit is in the unit pool. sooner or later it will be cut (within 100 years).

C: On other hand, the information might be valuable over time, just must be put within the context of other needs.

C: Let's use and example - if a sale area has 125 sale units. what needs to be done in that area for murrelets? Shouldn't have to do 8 surveys to determine occupancy, but might want to go in July (which has been shown to be the best time to conduct dawn watches) to gather information

C: What is needed most is habitat information! Is there not a way to accomplish some habitat work as part of standard and guide? Can we stratify and randomly sample a unit pool?. We probably can't do all units, but some sort of random sampling might work.

C: There is still too much lack of clarity in standard and guideline direction. What is meant by most recent protocol'? It is these types of things that are too unclear, too open to different interpretation.

C: Currently we are sampling high volume old growth because that is where we are harvesting timber. We are currently directed to conduct sampling (dawn watches) in areas where timber harvest will occur.

Q: Are these the only areas where inventory should be conducted?

Q: We need habitat information, what will be the best way to gather this? Which of the methods in the proposed standards and guidelines should be used to collect the kind of habitat information we need'?

Q: Within VCU's , if only 25% POG can be harvested, could we construct a survey that would pinpoint areas that would remain unharvested over several entries? and survey in these areas?

C: We need absolutely standardized inventory guidelines, but in addition, we need a forest-wide, well-coordinated habitat study - led by FSL or some other entity.

C: We must use the standards and guidelines to get the habitat information that we need. We cannot collect for information sake.

C: Again, I will reiterate the most important need is habitat information. (All panel members agreed).

Q: Can this be accomplished within the standards and guides as they are currently written? A: Probably not, need to be more specific.

C: S/G B is more clear - can accomplish this because it is more clear.

Q: What initiated dawn watches that began several years ago? A: Probably the listing potential.

C: I suggests that we eliminate S/G A.

C: Other panelists recommend expanding S/G A. Include/recommend more regional direction and coordination. Example from Pacific Northwest • efforts for spotted owl varied widely from district to district. Until Pacific Northwest Research Station involved, efforts were too haphazard. Need people who are involved in study design. etc. They appointed regional coordinators. etc.

C: Need to include language that leaves room for districts to go out and get habitat information. Still need to conduct project level inventories to determine distribution (rather than occupancy). Maybe we should encourage this type of language instead of language suggesting that we need to determine occupancy.

C: Need to make someone (Chris Iverson?) the control point. Also need to coordinate with other agencies. This coordination is very important.

C: Our change to S/G A should read as follows: Conduct (3 .g. project-level) inventories to assess murrelet nesting habitat use and evaluate potential impacts of a proposed project on mm-relets. Use standardized protocol. Coordinate within and across administrative areas through the Regional TES Coordinator and in cooperation with other agencies.

C. For S/G C - Cooperate and coordinate with state and other Federal agencies to better understand the life history requirements and distribution of the marbled mm-relet. Every;one agrees this OK

C: For S/G B - Leave it the same as written in proposed S/G's.

C: It may not be of much consequence in that not many are generally nests found.

Q: What about a case where egg shells are found? Should the same guidelines be implemented? What about reporting of nests? How do you insure that other than biologists are required to report nests they find (for example, biologists on contract EIS)? What about timber fallers? Is it worth putting anything in the S/G's ?

C: This implies that we must provide fallers enough information that we could be confident in information they provided.

Q: Would the timber sale administrator be the individual responsible for reporting nesting trees cut'?

A: No , that person would not see it, it would be a faller that would be logical person to report

C: Need to figure out a way to record information on failed nests to provide additional habitat information.

Q: Implement the 600' buffer if any nest is found because of what we know about nest site fidelitv. Should maintain all nests. or at least monitor them?

C: Should eliminate the last two sentences in S/G B.

Q: Have we made it so complicated that district people will no longer be able to make decisions?

C: If you a had good habitat study. might find that you don't really need inventories. Might find that. for example, murrelets are nesting in the areas already protected.

Q: If this is the case will it be possible to go back and change the S/G's?

C: At this point there was some additional discussion about whether project level inventories are best way to determine more about habitat use? Went back to previous recommendation to encourage a coordinated habitat study.

Q: Any additional standards and guides that the panel wishes to recommend?

C: Might want to recommend something in regard to LTF's placement. Should place in the site of least importance to the murrelets in the area. LTF's do impact bays with bark accumulation/changes to fish populations, therefore we could expect some impact to murrelers.

C: Should consider both the disturbance associated with LTF's (generally short-term). and debris accumulation (could be longer-term impact

This was end of discussion. Meeting ended at about 4:30pm.

Silent Observer's Summary of the Marbled Murrelet Panel

Defining the Task

The Marbled Murrelet panel was comprised mostly of individuals familiar with Alaska, which helped them to work smoothly through the defined task as outlined by the TLMP team. They appeared to work very fast and efficiently together. They completed the first rating prior to 5:00 p.m. on the first day. They all appeared very informed on the subject of the Marbled Murrelet prior to being drawn together.

Group Interaction

This group communicated effectively. A summary of their levels of participation is reflected in a table below with a couple of dominant individuals. One individual in my opinion could have been more objective; however, overall I don't feel that had any impact or influence over the others. One of the participants was an observer who had very low but some interaction with the group on day two. The facilitator and the presenter are also considered members and their participation is reflected below. One of the dominant members could have been perceived as the facilitator if one did not know who was assigned which roles. The Silent Observer offered no input on subject at any time. The Silent Observer and Facilitator had a brief discussion regarding the process during a morning break on the second day. The scribe's participation was very limited. The scribe did an excellent job of capturing important points and appeared to perform the job at hand with dedication and thoroughness.

Level of Participation by Individual Panel Members:

	<u>Day One</u>	<u>Day Two</u>
Member A	High	Average
Member B	Average	Medium
Member C	Very High	Very High
Member D	Low	Very low
Member E	Average	Very High
Member F	Average	Low
Member G	Low	Low
Member H	Low	Very Low

Overall, good thought-provoking questions were discussed. Discussion was good, based on extended knowledge with some critical assumptions. This panel seemed to provide a good setting for decisions. There appeared to be a desire to spell out what is needed for the Murrelet with an interest in being specific. Discussion included a review of the current standards and guidelines (S&Gs) with recommended changes.

Evaluation of the Role of the Silent Observer

I joined the group at 11:00 a.m. on the first day and left at 3:15 p.m. I was with them the entire time on day two. The silent observer is an important role and seemed to be appreciated by this group with expressions of thank you by several members at panel end.

SUMMARY BEFORE

Panel Name: Marbled Murrelet

Tongass Land Management Plan Revision -- Panel Assessments

December 5 and 6, 1995

Alternative 1							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	80	90	90	80			85
II	20	10	10	20			15
III	0	0	0	0			0
IV	0	0	0	0			0
V	0	0	0	0			0

Alternative 2							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	10	50	20			20
II	15	40	30	50			34
III	70	40	20	20			38
IV	15	10	0	10			9
V	0	0	0	0			0

Alternative 3							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	10	20	70	60			40
II	60	50	20	30			40
III	30	30	10	10			20
IV	0	0	0	0			0
V	0	0	0	0			0

Alternative 4							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	20	30	80	40			43
II	70	50	20	30			43
III	10	10	0	20			10
IV	0	0	0	10			3
V	0	0	0	0			0

Alternative 5							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	25	50	85	40			50
II	75	50	15	40			45
III	0	0	0	10			3
IV	0	0	0	10			3
V	0	0	0	0			0

Alternative 6							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	5	20	70	30			31
II	25	60	20	30			34
III	70	20	10	30			33
IV	0	0	0	10			3
V	0	0	0	0			0

Alternative 7							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	10	40	10			15
II	20	20	30	20			23
III	70	60	20	30			45
IV	10	10	10	30			15
V	0	0	0	10			3

Alternative 8							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	10	70	30			28
II	40	60	20	40			40
III	50	30	10	20			28
IV	10	0	0	10			5
V	0	0	0	0			0

Alternative 9							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	15	40	20			19
II	20	30	30	40			30
III	50	50	20	30			38
IV	30	5	10	10			14
V	0	0	0	0			0

SUMMARY AFTER

Panel Name: Marbled Murrelet

Tongass Land Management Plan Revision -- Panel Assessments

December 5 and 6, 1995

Alternative 1							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	80	90	90	80			85
II	20	10	10	20			15
III	0	0	0	0			0
IV	0	0	0	0			0
V	0	0	0	0			0

Alternative 2							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	10	40	20			18
II	15	40	30	50			34
III	70	40	30	20			40
IV	15	10	0	10			9
V	0	0	0	0			0

Alternative 3							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	10	20	75	60			41
II	60	50	20	30			40
III	30	30	5	10			19
IV	0	0	0	0			0
V	0	0	0	0			0

Alternative 4							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	20	20	65	40			36
II	45	50	25	30			38
III	35	30	10	20			24
IV	0	0	0	10			3
V	0	0	0	0			0

Alternative 5							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	25	40	75	40			45
II	60	60	25	40			46
III	15	0	0	10			6
IV	0	0	0	10			3
V	0	0	0	0			0

Alternative 6							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	5	10	60	30			26
II	35	40	25	30			33
III	60	40	15	30			36
IV	0	10	0	10			5
V	0	0	0	0			0

Alternative 7							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	0	30	10			10
II	10	20	30	20			20
III	70	60	20	30			45
IV	20	20	20	30			23
V	0	0	0	10			3

Alternative 8							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	10	60	30			25
II	40	40	30	40			38
III	55	40	10	20			31
IV	5	10	0	10			6
V	0	0	0	0			0

Alternative 9							
Evaluator	1	2	3	4	5	6	Mean
Outcomes							
I	0	5	40	20			16
II	20	25	30	40			29
III	50	50	20	30			38
IV	30	20	10	10			18
V	0	0	0	0			0

BEFORE-AFTER MEANS COMPARISON

Outcomes	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternative 5		Alternative 6		Alternative 7		Alternative 8		Alternative 9	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
I	85	85	20	18	40	41	43	36	50	45	31	26	15	10	28	25	19	16
II	15	15	34	34	40	40	43	38	45	46	34	33	23	20	40	38	30	29
III	0	0	38	40	20	19	13	24	3	6	33	36	45	45	28	31	38	38
IV	0	0	9	9	0	0	3	3	3	3	3	5	15	23	5	6	14	18
V	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0