

Alaska Board of Game
ADF&G Division of Wildlife Conservation

**Southeast Alaska
UNIT 4 BROWN BEAR
MANAGEMENT STRATEGY**



Joel Bennett

**Recommendations of a citizens and agency
brown bear management advisory team**

June 2000

STATE OF ALASKA

Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME

Frank Rue, Commissioner

DIVISION OF WILDLIFE CONSERVATION

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May 2000

Dear Reader,

During its fall 1998 meeting in Ketchikan, the Board of Game was presented with a variety of issues concerning brown bears of Admiralty, Baranof, and Chichagof islands. Given their complexity and effect on the interests of many people, the Board, along with the Alaska Department of Fish and Game's Division of Wildlife Conservation (ADF&G/DWC), decided to sponsor a broad group of citizens and agency representatives, and charge them with wrapping these issues into a Brown Bear Management Strategy. To make a two-year, multi-meeting story short, we did it. The attached document is the result.

Chairing this team was one of the most rewarding experiences of my professional life. About 15 members, representing the broadest possible array of interests, were able to achieve a high level of trust and frankness. As a result, we were able to keep our overriding goals – the continued abundance and health of a world-class brown bear population, and its enjoyment by a wide variety of people – unclouded by politics and preset agendas. The result, I believe, speaks for itself. As you peruse the strategy, notice the immense variety of thorny and potentially contentious issues that we were able to reach consensus on.

I refer you to the summary for an overview of the entire document, but here is the general gist of its main features:

- We recommend the most conservative human-caused mortality cap of any Alaskan bears, and have made this especially stringent for females, the reproductive heart of the population. This lessens the amount of regulatory restriction necessary on the average hunter, and allows more reliance on voluntary compliance.
- We've developed a win/win model for management zones that avoids habituation of bears and facilitates viewing without disallowing hunting.
- We recommend a roll-back of hunting guide numbers to about 1995 levels, and capping nonresident hunter effort at approximately present levels.
- We've recommended road management concepts, and applied them to Northeast Chichagof.
- We've put together a protective strategy for estuaries and fish streams particularly important to bears and people.
- We've developed guidelines for a wide variety of human uses that affect bears.
- We recommend bear population research for Northeast Chichagof and encourage ADF&G to seek funding for the same on south Admiralty.

These recommendations will eventually be sent to all management and political entities that have a stake in their implementation. But prior to that step, we now turn the management strategy over to you for review. If you have comments, please send them to Tom Paul by July 21, 2000. ADF&G/DWC, PO Box 240020, Douglas, Alaska 99824 Email: tom_paul@fishgame.state.ak.us.

All comments received will be compiled and disseminated along with the main document.

Thanks for your time and interest,



Greg Streveler, Chair
for the Unit 4 Brown Bear Management Team

Southeast Alaska
UNIT 4 BROWN BEAR
MANAGEMENT STRATEGY

by the
Unit 4 Brown Bear Management Team

A citizens and agency advisory team under the auspices of the Alaska Board of Game and supported by the Alaska Department of Fish & Game/Division of Wildlife Conservation and Federal Aid in Wildlife Restoration

June 2000

Table of Contents

<u>Unit 4 Brown Bear Management Team members</u>	iv
<u>Summary</u>	v-viii
<u>Introduction</u>	1
Background	1
Present situation	1
Map of Unit 4	2
The Unit 4 Brown Bear Management Team	3
Goals	3
Objectives	3
Management Strategy	5
<u>Section 1: Hunting regulation and management</u>	6
Introduction	6
Geographic scale of management	6
Overall population mortality guidelines	7
Female mortality	8
Wounding loss	9
Drawing permits	10
Subsistence	10
Guide and guided hunter levels	11
Spillover effects in other units	14
Reinstatement of state Big Game Commercial Services Board	14
Recommendations for future management actions	15
<u>Section 2: Management and mitigation of development activities and solid waste</u>	16
Introduction	16
Siting and management of industrial camps	16
Habitat impacts	17
Harassment of bears	18
Siting of recreation facilities	19
Recreational outfitter/guides	19
Road access management	20
Solid waste management	22
Defense of life or property kills	24

<u>Section 3: Viewing and tourism</u>	26
Introduction.....	26
Viewing opportunities encouraged on private lands as well as public lands.....	27
Brown Bear Special Use Zones for hunting and viewing.....	27
General guidelines for bear viewing.....	30
Viewing habituated bears.....	31
Tourism marketing guidelines/recommendations.....	33
Funding sources.....	33
<u>Section 4: Social, economic, and cultural aspects</u>	35
Introduction.....	35
Funding, staffing, and timely completion of Forest Service outfitter/guide analysis.....	35
State-federal cooperation in planning.....	35
Carrying capacity.....	36
Allocating use.....	36
Effects of private lands.....	37
Subsistence.....	37
Admiralty Island’s special status.....	38
Human/Bear High Use Zones and other areas meriting special attention.....	39
Community stability.....	42
Socio-economic impact analysis.....	43
Seymour Canal Zoological Area (SCZA).....	43
<u>Section 5: Research and monitoring</u>	44
Introduction.....	44
Population estimates.....	44
Monitoring outfitter/guide use.....	45
Monitoring the effects of roads.....	45
<u>Appendices</u>	47
Letters from Unit 4 Brown Bear Management Team with recommendations for action	
Lists of Guidelines Recommended by Unit 4 Brown Bear Management Team	

Unit 4 Brown Bear Management Team Members

<u>Member/alternate</u>	<u>Nominating Group(s)</u>
Bruce Baker/KJ Metcalf	Friends of Admiralty Island, Southeast Alaska Conservation Council
Jerry Barber	Sitka Fish and Game Advisory Committee
Steve Behnke/Jeff Sloss	Alaska Wilderness and Recreation Tourism Association
Bob Engelbrecht/Bob Janes	Alaska Visitors Association
Paul Grant/Joel Bennett	Admiralty Bear Association
Floyd Kookesh	Federal Southeast Subsistence Regional Advisory Council
Scott Newman/Dave Helmick	Petersburg Fish and Game Advisory Committee
Bob Hinman/Ron Somerville	Territorial Sportsmen
Paul Johnson/Mike Sofoulis	Southeast Alaska Guide Association, Alaska Professional Hunters Association
Marti Marshall	U.S. Forest Service
Mim McConnell	Port Alexander Fish and Game Advisory Committee
Ken Schoonover/Mike Deppner	Huna Totem Corporation
Greg Streveler, Chair	Alaska Board of Game
Jack Whitman	Alaska Department of Fish and Game
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Summary – Unit 4 Brown Bear Management Strategy

Upward trends in the number of brown bear hunting guides and bear harvest levels and increased tourism in Unit 4 during the past few years have raised questions about sustainability, hunt quality, and user conflicts. In July 1998, the Alaska Department of Fish and Game (ADF&G) published “Unit 4 Brown Bears Past, Present, and Future: A Status Report and Issues Paper” describing these and other Unit 4 brown bear management issues. In the fall of 1998 the U.S. Forest Service (USFS) began public involvement for a Saltwater Shoreline-based Outfitter/Guide Analysis that would establish limits on numbers of commercial recreation hunting and nonhunting guides in Unit 4. Also that fall, the Alaska Board of Game (BOG) heard a public proposal to make major changes in brown bear management in Unit 4. Public interest and support for dealing with brown bear management issues in a comprehensive manner was high.

The Unit 4 Brown Bear Management Team was created in January 1999 with 14 members (later 15) nominated by organizations representing the following interests: guided hunting, nonhunting guiding, nonhunting bear use, resident hunting, tourism, subsistence hunting, Native corporations, environmental interests, ADF&G, the BOG, and the USFS. Our purpose was to review issues of resource management and any human activities in Unit 4 that affect brown bears, such as hunting, viewing, human access, and habitat alteration; agree on brown bear management goals and objectives; determine what changes are needed in current management to meet those goals and objectives; develop key elements of a management strategy that reflects those changes; and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action. Members worked to find common ground on the issues and were committed to making all decisions by consensus if possible.

The team has agreed on the following elements of a comprehensive management strategy for brown bears in Unit 4. The strategy is organized in five sections by major management topics. This summary includes a list of the team’s recommendations for each section of the management strategy.

Section 1: Hunting regulation and management

The team recommends that annual mortality and nonresident harvest be capped at approximately the current levels and that ADF&G should produce and distribute public education and hunting ethics materials to try to reduce wounding loss and female mortality.

Biological management of brown bears should be by four major island populations (Admiralty, Baranof, Northeast Chichagof, and the rest of Chichagof). From the standpoints of harvest distribution and habitat information, however, a finer resolution is possible and desirable. Existing Guide Use Areas are the most realistic and useful geographical subunits for managing hunting guides

Annual human-caused mortality of all brown bears averaged over three years should not exceed 4% of each island’s population estimate. Annual human-caused mortality of females averaged over three years should not exceed 1.5% of each island’s population estimate. We recommend that the USFS maintain a moratorium on Unit 4 hunting guides until the appropriate analysis is

completed and through attrition reduce the number of hunting guides to a maximum of 20 over the long term.

If hunting needs to be restricted further in the future, the recommendations for future management actions include, in order of priority: voluntary guided harvest reductions, mandatory guided hunter reductions, season adjustments, nonresident drawing permits, resident drawing permits if resident harvest exceeds 70% of total harvest.

Section 2: Management and mitigation of development activities and solid waste

The team recommends agencies and the public adopt guidelines for mitigating the effects of land and resource development on bears. The guidelines address: siting and management of industrial camps, habitat impacts, harassment of bears, new road construction and access, and siting of recreation facilities.

We have recommended priorities for road closures and monitoring on Northeast Chichagof in comments to the USFS about road and travel access management in the Hoonah Ranger District. We asked ADF&G to promote and distribute its policy for dealing with bear-human conflicts more widely in an attempt to reduce defense of life or property kills (DLPs)

On the issue of solid waste and bears, the team has developed guidelines for managing food and solid waste in brown bear habitat. Costs of solid waste management are prohibitive for small communities. We have identified the need for better municipal ordinances and enforcement of proper handling of solid waste. We recognize the importance of identifying additional funding sources to help communities solve solid waste problems. We have asked the Southeast Conference to take a leadership role in convening a forum to identify and work toward regional solutions to community solid waste problems.

Section 3: Viewing and tourism

As tourism grows in Southeast Alaska, there is increasing demand for more bear viewing opportunities. Some team members argued strongly for more viewing areas to meet that demand. However, creation of new viewing areas on the Pack Creek or McNeil River models was opposed by other team members who feared that it would result in more areas being closed to hunting of bears. Rather than try to modify or diminish the existing bear viewing areas (such as Pack Creek) in any way, we propose a new management area concept that establishes new areas, "Brown Bear Special Use Zones," in which hunting and viewing are managed as equal in priority and compatible. A key objective in the management of such hunting/viewing areas would be to avoid habituating bears to people. The team devised guidelines for site selection and management of the special use zones but did not want to definitively recommend areas before in-depth field analysis is conducted. We recognize that particular geographic circumstances must exist to permit the necessary relationship between people and bears in such an area.

Among other recommendations on viewing, the team: developed guidelines for behavior and viewing tips for remote locations where bears are not habituated to people, endorsed ADF&G guidelines for site selection and management of areas where bears are habituated to people, and

recommended that, in addition to developing high quality viewing on public lands consistent with other resource considerations, agencies encourage high quality viewing on private lands. The team encourages the visitor industry and government agencies to examine available research on viewing satisfaction and jointly develop a set of guidelines for the responsible marketing of bear viewing in Alaska. Among the guidelines that should be considered are:

- Where possible, use photographs that show animals within their habitat.
- Develop language for operators to include in brochures to help set the viewing context.
- Work with media, journalists, and other promoters of Alaska to ensure their products set realistic expectations and promote responsible viewing.

Because the costs of developing, managing, and staffing viewing areas are high, a need exists for additional funding for brown bear and other wildlife management. The team supports establishing additional funding for management of brown bears and other wildlife through a fee which would be levied on nonhunting and nonfishing wildlife users, that is broad-based, that is fair and equitable (levied on both residents and nonresidents), and that is not levied through and partially absorbed by operators.

Section 4: Social, economic, and cultural aspects

The USFS Saltwater Shoreline-based Outfitter/Guide Analysis for the northern Tongass National Forest is the primary mechanism for regulating nonhunting human/bear interactions in Unit 4 in the immediate future. It will also have a great effect on social, economic, and cultural aspects of human use of bear country. As a result, the team believes strongly that the USFS should provide the necessary priority for funding and staffing to keep the outfitter/guide analysis on schedule. We also recommend that the USFS, the State of Alaska, and other entities developing land use, tourism, and other plans for the area, cooperate so that plans are compatible.

The team has made several recommendations regarding how carrying capacity is determined. Among them:

- Re-evaluate carrying capacities regularly and adjust them based on actual effects of use.
- Set carrying capacities below their apparent maximum limits.
- Allocate carrying capacity between commercial and noncommercial use and consider restricting some types of commercial use in some areas during certain times of the year.
- Consider the effects of existing private inholdings and impacts to subsistence when determining carrying capacity.

The team wants natural resource managers to recognize Admiralty Island's historical and current special status in regard to brown bears. We recommend the USFS complete a Comprehensive Admiralty Island Plan and work collaboratively with ADF&G by providing funding and other assistance for studies of brown bear populations, density, and behavior on Admiralty. We also recommend restrictions on construction of long-term tent camps and other infrastructure on Admiralty National Monument.

Particular areas and types of habitats like estuaries and anadromous fish streams have an attraction for both bears and humans. The team recognized that these "Human/Bear High Use Zones" may require additional management attention to ensure continued access by bears to these key habitats, and that human/bear interactions are not detrimental to either species. We

propose that in these areas which are important to bears and where human use is high and is causing problems or has the potential to cause problems, two tiers of management be implemented. Tier I with the most use and impacts would have commercial permit stipulations for group size and frequency and types of use. Noncommercial users would have a set of voluntary guidelines except in extreme cases. Tier II, areas with less immediate problems, would have voluntary guidelines for all users. Both types of areas would be closely monitored by managing agencies.

The health of Unit 4 bears is closely tied to the economic and social health of Southeast Alaska communities. Many residents, while welcoming new opportunities for economic growth, are trying to protect their communities' unique qualities and to preserve their way of life. It is important to ensure that local residents benefit directly from protecting bears. The team supports increased efforts to make sure that local residents benefit from commercial guiding and outfitting opportunities. We have recommended several ways that state and federal agencies can aid rural communities and promote community stability. Among them are: make community stability a cornerstone of carrying capacity decisions, and have agencies assist communities in planning for future growth. We also asked the USFS to complete a socio-economic impact analysis as part of its outfitter/guide analysis.

Section 5: Research and monitoring

Recommendations for research and monitoring are primarily directed to two agencies, ADF&G and the USFS. ADF&G should focus efforts on population assessment. Although the most compelling need for population data currently appears to be on Northeast Chichagof, interest in south Admiralty argues for an ADF&G pilot study there to see what is needed for a good population estimate. ADF&G should investigate ways to get more funding for a more complete population study on Admiralty.

The USFS needs to help fund ADF&G population work in Unit 4 and support research on Admiralty Island. In roaded areas, it is important that USFS management be actively involved in bear protection. This requires:

- identifying opportunities for bear viewing and deciding which of these should be managed for viewing opportunities,
- actively assisting ADF&G, through funding and other means, in the monitoring of the Northeast Chichagof bear population,
- monitoring human use trends,
- monitoring the distribution and frequency of DLP bear mortality,
- having a strategy for dealing with unacceptable levels of bear displacement or mortality.

Finally, a monitoring and compliance plan needs to be a part of the USFS Saltwater Shoreline-based Outfitter/Guide Analysis and Environmental Impact Statement (EIS) for the northern Tongass National Forest. There also needs to be some formalized method of testing the predicted effects once the plan is implemented.

Introduction

Background

The islands of Southeast Alaska's Game Management Unit 4 (Admiralty, Baranof, Chichagof, Kruzof, Yakobi and neighboring smaller islands) are home to one of the highest concentrations of brown bears in the world. The population density averages about one bear per square mile. They are the only island group in Southeast Alaska with persistent populations of brown bears. The estimated total population of Unit 4 is about 4,200 bears, which far exceeds the total brown bear population in the lower 48 states. All populations in Unit 4 except Northeast Chichagof are at high densities and Alaska Department of Fish & Game (ADF&G) biologists believe that they are currently stable. When estimates were last done on Northeast Chichagof in 1992, the population density was about 28% less than the density on Admiralty.

Recent genetic research has found that Unit 4 bears are profoundly different from other brown/grizzly bears in Alaska and the world. There has been some genetic interchange with mainland brown bear populations but the extent and frequency of that interchange during modern times is unknown.

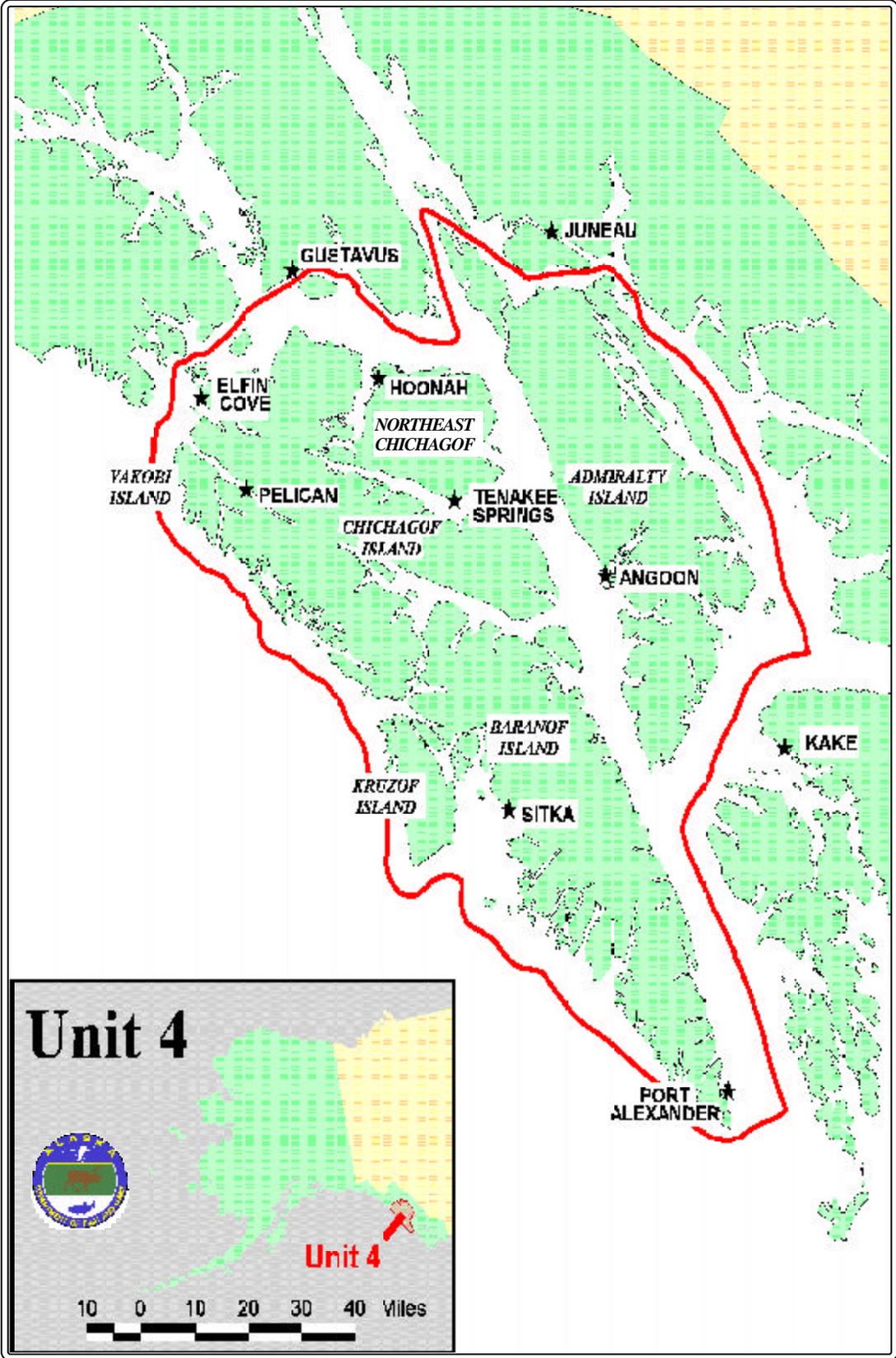
The bears of Unit 4 are one of the most charismatic and valuable wildlife species in Southeast Alaska. Hunters and wildlife viewers from many parts of the world have long been drawn to them, and interest continues to grow.

Present situation

Although brown bears generally appear to be doing well in Unit 4, the same human-caused pressures that led to their disappearance elsewhere are increasing in Southeast Alaska. Increased tourism, habitat loss, road construction, other development pressures, continued community garbage control problems, and unresolved management issues related to hunting all threaten the well-being of Unit 4 brown bears to varying degrees.

Upward trends in the number of brown bear hunting guides, bear harvest levels, and tourism in Unit 4 have for some time raised questions about sustainability, quality of experience, and user conflicts. In 1995 the Alaska Board of Game (BOG) convened a Southeast Brown Bear Committee to discuss the proliferation of bear hunting guides and make recommendations on nonresident hunting regulations to prevent overharvest. Adoption of the regulations was contingent on implementation by the U.S. Forest Service (USFS) of a moratorium on new bear hunting guide permits issued in northern Southeast Alaska. At that time the USFS indicated it was unable to limit the number of guide/outfitters without an extensive public planning process. As a result, the BOG chose to take no unilateral action.

In July 1998, ADF&G published "Unit 4 Brown Bears Past, Present, and Future: A Status Report and Issues Paper" describing these and other Unit 4 brown bear management issues. In the fall of 1998, the USFS began public involvement for an outfitter/guide capacity analysis that would establish limits on numbers of commercial recreation hunting and nonhunting guides in Unit 4. Also that fall, the BOG heard a public proposal to make major changes in brown bear regulations in Unit 4. Public interest and support for dealing with brown bear management issues in a comprehensive manner was high.



Recognizing that solutions imposed without broad public support are not likely to succeed, and that the complexity of brown bear management requires cooperation between agencies and the public, the BOG and ADF&G agreed to establish a broad-based stakeholders' management team to address Unit 4 brown bear management issues.

The Unit 4 Brown Bear Management Team

The Unit 4 Brown Bear Management Team was created in January 1999 with 14 members (later 15) nominated by organizations representing the following interests: guided bear hunting, non-hunting bear use, resident bear hunting, tourism, subsistence hunting, Native corporations, environmental interests, rural interests, ADF&G, the BOG, and the USFS. Our purposes were:

- to review issues of resource management and any human activities in Unit 4 that affect brown bears, such as hunting, viewing, human access, and habitat alteration;
- agree on brown bear management goals and objectives;
- determine what changes are needed in current management to meet those goals and objectives;
- develop key elements of a management strategy that reflects those changes; and
- convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

Members worked to find common ground on the issues and were committed to making all decisions by consensus if possible.

To comply with the Federal Advisory Committee Act, the team member from the USFS, Marti Marshall, did not participate in the formulation of recommendations to the USFS.

At its first meeting the team agreed on the following general goals and objectives:

Goals:

- Promote the long-term conservation and health of Game Management Unit 4 brown bear populations and their habitats.
- Develop recommendations to provide for a broad spectrum of public enjoyment and uses, both hunting and nonhunting, of Unit 4 brown bears that is sustainable over the long term.
- Improve communication among the public and agencies involved in brown bear management.

Objectives:

- 1) To review Unit 4 brown bear management issues and existing biological and human use data.
- 2) To make recommendations for biological and human use data needs to ensure that management decisions are based on the best possible information.
- 3) To cooperatively develop a management strategy for brown bears and their habitats in Unit 4 containing management objectives, recommendations, and solutions that recognize public desires and the mandates of state and federal agencies regarding Unit 4 brown bears.

The management strategy will address the following issues:

- appropriate hunter harvest and other mortality levels (including wounding) for Unit 4 brown bears
 - appropriate management solutions to guide use and other hunting/nonhunting allocation and compatibility issues
 - management of roads in Unit 4 for the benefit of both bears and humans
 - management of human activity and development to minimize displacement of bears from key habitat
 - maintenance and restoration of brown bear habitats and reduction of detrimental effects of development on bears
 - address solid waste management
 - information and education strategies for reducing unwarranted bear mortality and harrassment
 - guidelines for conditions that would trigger future management actions
- 4) To make timely recommendations on management strategies to the U.S. Forest Service.
 - 5) To recommend management strategies to the Board of Game by the year 2000 Region I Board of Game meeting.
 - 6) To make recommendations to other agencies and groups as appropriate.



Tom Paul

Management Strategy

The team organized recommendations that resulted from consideration of the above objectives into a comprehensive management strategy for brown bears in Unit 4. This document is the result. The strategy is organized in five sections by major management topic with background information, problem statement, and a short discussion of each issue preceding the team's recommendations.

Some of our recommendations have already been transmitted to agencies and other organizations. We did this in cases when timely comment on ongoing planning projects was essential, and when we wanted information to get out to the public and decision makers as quickly as possible. Copies of the letters containing the recommendations are included as appendices and are cross referenced with the recommendations in the strategy. All of our recommendations and actions are open to public review and comment. We will include all public comments received with this management strategy when it is submitted to the BOG, USFS, ADF&G, and other agencies and groups.

Section 1: Hunting management and regulation

Introduction

ADF&G has collected human-caused mortality data since 1961. The resulting database containing information on 3,621 Unit 4 bears shows a pattern of increased kill that peaked in the mid-1970s, declined, and then increased again to the current harvest level of about 140 bears annually. These data include 3,413 (94%) hunting kills and 208 bears (6%) that died from other human-related causes.

Spring seasons account for 67% of the annual hunter harvest and fall seasons the remaining 33%. More males than females are killed in the spring (76%) while fall harvests are nearly half females (43%). Because of the magnitude of the harvest, the actual number of females taken in the spring is usually greater than in the fall. This seasonal pattern is consistent from year to year and for all islands.

Since 1989, bear hunting has been administered by a registration permit system that provides information on actual hunting effort. Interest in bear hunting is high. Around 600 permits are issued annually with half the permittees reporting that they hunted. The majority of the kill is by nonresidents of the state. Southeast residents normally take less than 20% of the harvest. There is no significant difference in sizes, age classes, or sex ratios of bears taken by guided versus nonguided hunters. In recent years, Admiralty and Chichagof each have produced about 40% of the hunter kill and Baranof 20%. The Chichagof kill has increased more rapidly than other islands in response to human population growth and logging-related development. Chichagof's average annual harvest has now begun to exceed Admiralty's.

The fall 1999 bear harvest was the highest on record. The average fall harvest in recent years has been 33 bears but the 1999 hunter take was 48, with 22 from Baranof. Five additional bear mortalities from nonhunting causes were reported. The fall harvest ratio was 56% males and 44% females, about average. Although the harvest was higher, populations may be higher as well. Most of the settlements, hatcheries, and communities reported problems with bears. Sitka has problem bears which they have never had before. Hunters report seeing an increasing number of bears over the past few years. Nevertheless, the higher harvest is cause for concern.

The major issues dealt with by the team concerning hunting management and regulation were: geographic scale of management, overall population mortality guidelines, female mortality, wounding loss, drawing permits, subsistence, guide and guided hunter levels, spillover effects in other units, reinstatement of the state guideboard, and recommendations for future management actions. It is important to note that although there is team consensus on the recommendations of how hunting should be managed, not all team members endorse hunting of brown bears.

Geographic scale of management

Problem statement and discussion: A fundamental question for bear management is what geographic scale is most appropriate. Current ADF&G management is by island population. Some members of the team believe that managing by islands overlooks patterns of local over-harvest in portions of those areas. ADF&G population data have identified no discrete populations smaller than island-wide with the exception of Northeast Chichagof. Too little data

generally exist for areas smaller than islands to accurately identify population trends. However, by making some general assumptions, ADF&G could proportionately assign harvest levels to guide areas using such information as geographic information systems, harvest data, and habitat information.

From the perspective of biology, management by island appears to be the appropriate scale (except in the case of Northeast Chichagof), but the team agreed that biology can be trumped by sociological, economic, and other considerations. In some circumstances it will undoubtedly be necessary to reduce the management scale to accommodate and manage all uses.

Further discussion focused on the appropriate geographic scale for managing hunting guides. It was agreed that the existing Guide Use Areas work from the guides' perspective, but some team members had problems with lumping several bays together when dealing with other types of shoreline use that affect bears.

Recommendations (to ADF&G and the USFS):

- **From the perspective of bear biology, the smallest appropriate geographical scale for managing Unit 4 bears is by island, with the exception of Northeast Chichagof. However, from the standpoints of harvest distribution and habitat information, a finer resolution is possible and desirable.**
- **Existing Guide Use Areas are the most realistic and useful geographical subunits for managing hunting guides.**

Overall population mortality guidelines

Problem statement and discussion: Brown bears occur at lower densities and have lower reproductive potential than most big game species, and are slow to recover from high harvests. ADF&G has managed with a maximum 4% total human-caused mortality guideline for each island the past several years. (Human-caused mortality includes death from reported legal and illegal hunting, defense of life or property kills, road accidents, research losses, bears found dead of obvious human causes, and any other known human-caused mortality.) Compared to other areas in Alaska, which have a 5% or higher mortality guideline, this is a conservative figure. The Unit 4 guideline is based on population modeling that takes into account Southeast Alaska brown bears' particularly low reproductive rate. Data from Unit 4 indicate that a 4% human-caused mortality rate, or 2% females and 6% males, does not affect other model parameters and results in a long-term stable population. Known human-caused mortality for Admiralty and Baranof has not reached 4%, though that of Chichagof occasionally has.

The 1995 BOG Brown Bear Committee report recommended an even more conservative mortality rate, reducing the 4% rate to 3% to limit harvest to the 1995 level. Among the reasons for that recommendation were: poor confidence in population estimates, concerns about habitat loss, concern with the magnitude of unquantified wounding loss, and a desire to hold the harvest to the existing level which had been shown to be biologically safe over the long term.

The team discussed the possibility that low reproductive rates may indicate a population at a maximum and explored the idea that a higher mortality rate might result in a higher reproductive

rate. Research has not found any evidence that high population density limits bear reproduction. Although it may be true that killing more bears would increase reproductive rates, the team agreed it is dangerous to experiment to find out.

Other points made were: 1) reducing defense of life or property kills (DLPs) and other nonhunting human-caused mortality would increase the numbers of bears hunters could take; 2) the team needs to make a strong statement about how landfills and roading can increase nonhunting bear mortality.

In general we agreed that a 4% guideline for all known mortality was reasonable for Unit 4 provided managers had good, regularly-updated population estimates and female mortality was kept low (see below). Several team members thought 4% was still not conservative enough, particularly for Admiralty Island. Others were concerned that singling out Admiralty for special consideration would suggest that Baranof and Chichagof bear populations were not as important. It was recognized that the biological concern was no greater on Admiralty than the other islands, but Admiralty may merit more conservative management because of its special status as a National Monument. In the end, we decided Admiralty mortality guidelines would be the same as the other islands and management of other aspects of human use should be more conservative there if necessary. (See section on social, economic, cultural aspects.)

Recommendations (to ADF&G and BOG):

- **The present total documented human-caused mortality is acceptable given present population estimates but should be reallocated somewhat, where possible and necessary, among smaller management units. Total documented human-caused mortality averaged over three years shall not exceed 4% of each island (Admiralty, Baranof, Chichagof, and Northeast Chichagof) population estimate. (Population estimate = lower 95% confidence limit of the population estimate if an empirical estimate is available; if an empirical estimate is not available, then a habitat capability model population estimate will be used.)**
- **The success of any guidelines based on percentages of populations is contingent on population estimates being accurate. The team recognizes this and also recommends that ADF&G with the assistance of the USFS regularly monitor bear populations. (See Section 5: Research and Monitoring)**

Female mortality

Problem statement and discussion: Because brown bears produce so few offspring in a sow's lifetime, the most important demographic factor in maintaining a stable population of bears is limiting female mortality. After lengthy discussion, the team agreed that, even though annual human-caused mortality of females has not reached 2%, a strong statement about female harvest is necessary. The team agreed that good population data were essential to good management and that limiting mortality of the female segment of the population is important to maintaining bear populations at their current levels.

The 1995 bear committee recommendation for a surcharge on harvested females was also discussed. A surcharge would require legislation. Although surcharges (similar to trophy fees)

have been used in other countries for controlling harvest of females, the consensus of the team is that the immediate need in Unit 4 is for a video or other educational materials produced by ADF&G which would emphasize the importance of protecting sows.

We viewed a video called “Take a Closer Look” produced by the Yukon Fish and Game Association. Using bears filmed at McNeil River in Alaska, it describes ways hunters can select for male bears over female bears and older, larger bears over younger ones. Although the bears in the film look somewhat different from bears in Unit 4, the team thought the information was important enough for every bear hunter to watch. Initially we wanted to recommend that viewing of it be mandatory for Unit 4 bear hunters. At a later meeting some team members said making viewing mandatory may be premature as long as hunters receive ethics and other information. The team decided not to recommend making viewing a video mandatory for all hunters at this time but the video should be available to them. Mandatory viewing may be called for if other education and information efforts do not maintain female harvest within acceptable limits.

Recommendations (to ADF&G and BOG):

- **Total documented human-caused mortality of females averaged over three years shall not exceed 1.5% of each island (Admiralty, Baranof, Chichagof, and Northeast Chichagof) population estimate.**
- **Provide brochures and other information on brown bear hunting ethics and distinguishing bears’ age and sex to help minimize harvest of females.**
- **Inform all hunters who register that a video on distinguishing sex and age of bears exists and make it possible for them to view the video when they register for a Unit 4 brown bear hunt.**
- **Work on producing a video which uses footage of Unit 4 bears to help hunters distinguish sex and age of bears.**

Wounding loss

Problem statement and discussion: Wounding loss refers to bears that die from wounds inflicted by hunters but are not found and recovered by hunters after they are shot. The team heard estimates of the number of bears lost to wounding that ranged from 1 for every 7 bears killed in guided hunts to 1 for each bear killed by unguided hunters. ADF&G has no credible information on the magnitude of wounding loss and so does not typically include it as a factor in management equations or population modeling. ADF&G has been unable to determine how to measure it and doubts that it has a measureable effect on bear populations. Whatever the magnitude of wounding loss, the team agreed it is unacceptable and often preventable.

The team focused on ways to avoid and minimize wounding loss. It considered recommending that the BOG adopt a regulation ending hunts when a hunter shoots at a bear, whether or not the bear is hit. Questions were raised whether such a regulation would be enforceable because no one would admit to wounding or shooting at and missing a bear. If enforceability is problem, the BOG could pass a resolution rather than a regulation. In the end, the team decided the best approach is education, not regulation.

The team acknowledged that unguided resident hunters are more likely to wound and lose bears than guided hunters. However, most recommendations to minimize wounding loss are more easily implemented by guides. How can we implement measures that would affect resident hunters and what recommendations should we make for them? Suggestions included mandatory viewing of a video when hunters get permits, recommending a minimum caliber to be used in bear hunting, and issuing a card to hunters with a code of hunting ethics.

Recommendations (to ADF&G):

- **Wounding loss is essentially unmeasureable and probably a small fraction of total mortality but it is nonetheless ethically unacceptable. We recommend that:**
 - **ADF&G (in cooperation with others) prepare educational materials on bear hunting ethics and methods, including minimizing wounding loss and recommendations on minimum caliber sizes for hunting brown bears**
 - **ADF&G distribute this information to guided and non-guided hunters**

Drawing permits

Problem statement and discussion: During further review of recommendations from the 1995 report, the team decided that drawing permits are not needed in Unit 4 at this time. Harvests that approach or exceed the 4% overall and 1.5% female mortality guidelines provide “triggers” to indicate when permits or other management actions may be necessary. Crowding of hunters and others is another possible trigger for permits. If nonresident and resident drawing permits are necessary, the team decided to modify the 1995 recommendation of a 60/40 allocation of harvest between residents and nonresidents to a 70/30 allocation respectively. See also “Recommendations for future management actions” page 15.

Recommendations (to ADF&G and BOG):

- **When harvests exceed guidelines and voluntary or mandatory guide limits, nonresident client limits per guide, and season length restrictions are inadequate for protection of bear populations, institute nonresident drawing permits.**
- **If, after instituting nonresident drawing permits, harvests exceed guidelines, institute resident drawing permit hunts when resident harvest exceeds 70% of the harvest guidelines. Then allocate drawing permits 70% to residents and 30% to nonresidents.**

Subsistence

Problem statement and discussion: Although Native subsistence hunting of brown bears was once widespread, recent data collected by the ADF&G suggest that many of the traditional practices associated with brown bear hunting have been abandoned, and harvest levels and use of brown bears have declined among Southeast Alaska Natives. The BOG has determined that brown bear populations in Unit 4 are customarily and traditionally taken for subsistence and that an adequate annual harvest for subsistence uses is 5-10 bears. However, the BOG has not established a separate regulation for subsistence hunting of brown bears.

The team recommended provision for customary and traditional subsistence harvest be maintained.

Recommendation (to BOG and ADF&G):

- **5-10 bears is adequate annual harvest for subsistence needs.**

Problem statement and discussion: Recently the Federal Southeast Regional Subsistence Advisory Council (SERC) proposed that Federal Subsistence Board (FSB) regulations change the harvest interval for Unit 4 brown bears by federally qualified rural subsistence users. Residents of Unit 4 and Kake would be allowed to take a bear every 2 years should the proposal be passed. The team consensus on the proposal was that although we recognize the need for customary and traditional subsistence harvest of up to 10 bears a year in Unit 4 and the desire of SERC members for reasonable subsistence opportunities, we are not in favor of the proposal.

This is because:

- 1) the proposal includes all Unit 4 subsistence-eligible residents, most of whom do not hunt for customary and traditional purposes;
- 2) if a large number of those hunters take advantage of the proposal, harvest may exceed the team's recommended 4% harvest guidelines of island populations; and
- 3) the current "one bear every four years" regulation has not yet been maximized, either in terms of actual customary and traditional harvest or in terms of providing individuals the opportunity for subsistence hunting.

The team decided to recommend an alternative approach:

Recommendation (to SERC and FSB (see letters Appendices G and J) and ADF&G):

- **Instead of Federal Subsistence Board proposal 4, modify existing state and federal regulations which deal with cultural and educational uses, to achieve the desired expanded subsistence opportunity.**
- **ADF&G – if proposal 4 is enacted in federal regulations, closely monitor its effect on harvest and its potential for redistributing harvest between residents and nonresidents.**

At its March 2000 meeting the SERC did not take our recommendation and chose to endorse the proposal as originally written. We, therefore, forwarded our recommendation to the statewide FSB. At its May 2000 meeting the FSB rejected proposal 4.

Guide and guided hunter levels

Problem statement and discussion: The team is concerned about the proliferation of hunting guides and guided hunters in Unit 4. Over the past 10 years the number of active hunting guides quadrupled in Unit 4. The state currently cannot limit the number of guides operating in an area. The USFS has authority to permit guides operating on National Forest lands and currently has placed a moratorium on permitting additional guides in Unit 4, and capped the number of "service days" until its guide/outfitter analysis process is completed. However, since the team's recommendation last spring that the number of nonresident guided hunts be held to 144, the number of guided nonresident hunts in Unit 4 reached a new high of 154 last year. It is apparent that the moratorium will have to be made specific to the number of "client/hunts" allowed if it is to be effective. The team has recommended that the latter change be made immediately.

We heard presentations from ADF&G management biologists and a Kodiak bear hunting guide on how guided bear hunting is managed in Yukon Territory, on the Alaska Peninsula, and on Kodiak Island. Although these different management regimes appear to be working, the team decided the simplest and best alternative for Unit 4 is for the USFS to manage guide and guided hunter levels through its permitting authority. In order to 1) maintain brown bear populations; 2) promote economic viability of the guide industry; and 3) minimize conflicts with other users, including subsistence, and in consideration of historical use patterns, the team proposes maximum nonresident guided hunt levels for each Guide Use Area and a longterm goal for the number of hunting guides operating in Unit 4.

On the question of the overall number of hunting guides in Unit 4, the team has recognized the following reasons for justifying a recommendation for fewer hunting guides: 1) Reduces the effect on bears of a large number of guided hunters and the possibility of overharvest. 2) Improves the quality of the hunt by avoiding overcrowding in the field and avoids impacts to other users from overcrowding. 3) Because costs of operation are high and guides need a minimum number of clients to make it work, economic stability and keeping guiding a viable industry is best served with a lower number of guides. 4) Rural and community stability would be served with a stable guide industry. 5) Limiting guide numbers helps create incentives for stewardship of the resource.

Recommendations (to the USFS, see letters Appendices A and E):

- **Maintain the current moratorium on new hunting guides in Unit 4 until the outfitter/guide analysis for the northern Tongass National Forest is completed.**
- **Cap the number of guides at the current number (approximately 38); allow the number to decrease by attrition to 20 hunting guides maximum in Unit 4 over the long term. (This reduction will require coordination between USFS, ADF&G and the guiding industry.)**
- **Allocate outfitter/guide use on a “client/hunt,” not a “service-days,” basis.**
- **Maintain essentially the same number of nonresident hunters (guided and next-of-kin) as the current annual average (148 compared to a current level of 147) with some redistribution of effort among the Guide Use Areas and an adjustment to allow for next-of-kin hunting effort in some areas. (See table).**
- **Allocate guided hunts to the spring and fall seasons based approximately on ADF&G’s data of the historical percentage of use during the seasons.**

Recommendation for number of nonresident hunters by Guide Use Area

Guide Use Area	Current Average Historical Use (number of nonresident hunters)	Adjustment from current average use	Recommended total number of nonresident hunters	Rec. total number of non-resident guided hunters	Rec. total number of non-residents hunting with next-of-kin
4-01 SE Baranof	10		10	10	
4-02 SW Baranof	4	3	7	7	
4-03 Sitka Area	3	1	4	4	
4-04 NE Baranof	12		12	11	1
4-05 SW Admiralty	15		15	15	
4-06 South Admiralty	19	-2	17	16	1
4-07 SE Admiralty	6		6	5	1
4-08 North Admiralty	2		2	1	1
4-09 Seymour Canal	8		8	6	
4-10 NW Admiralty	9		9	9	
4-11 NE Chichagof	9		9	9	
4-12 Tenakee Inlet	14		14	14	
4-13 Hoonah Sound	22	-4	18	16	
4-14 SW Chichagof	4	2	6	6	
4-15 NW Chichagof	6		6	6	
4-16 North Chichagof	4	1	5	6	
Total	147	1	148	144	4

Explanation of table:

We took the historic use for each Guide Use Area and then made slight adjustments to the amount of allowed use based upon practical experience. Some areas are currently over-utilized, particularly during parts of the season, while other areas are under-utilized. This is an issue of crowding, not the ability of an area to produce bears. To account for this, an adjustment has been made to some areas based upon the experience of guides in those areas. This adjustment is

upward in areas that are under-utilized and downward in areas that are over-utilized. Four Guide Use Areas have had an average of one nonresident hunting with next-of-kin annually in recent years. In those areas we have recommended that the annual number of guided nonresident hunters be reduced by one to accommodate those nonresidents hunting with next-of-kin. Nonresidents also hunt with next-of-kin in other GUAs, but not on a consistent enough basis for us to recommend reducing the number of guided nonresident hunters.

We believe that this alternative will reduce pressure where overcrowding is the worst and allow this pressure to shift to areas which are currently under-utilized. There are no major adjustments recommended to historic use, though adjustments could be made on an area by area basis as experience is gained under the new system.

Spillover effects in other units

Problem statement and discussion: The team recognizes that if guide numbers are limited in Unit 4, the likelihood exists that guides unable to obtain permits there will choose to operate in other Game Management Units in Southeast Alaska. This “domino effect” is a concern because it can result in increased hunting pressure and overharvest in areas like mainland Southeast Alaska which have small, isolated bear populations. During the fall 1999 hunting season that scenario occurred in Unit 1A on the southern mainland. The USFS issued additional guide permits and the number of brown bears harvested by nonresidents increased significantly. Increasing the concern was the fact that seven of the eight bears taken in the unit were females. The team does not want its actions and recommendations for Unit 4 management to cause problems elsewhere. To head off a similar problem in the spring season we believe additional hunting guide permits should be limited until more is known about the mainland population.

Recommendations (to USFS, see letters Appendix H, and ADF&G):

- **USFS – Institute a moratorium on issuing additional permits to brown bear guides in the Unit 1 (Southeast Alaska mainland).**
- **ADF&G – develop regulatory options to take to the Board of Game in the absence of a moratorium or to complement it.**

Reinstatement of state Big Game Commercial Services Board

Problem statement and discussion: In the past a state agency, the Big Game Commercial Services Board, had authority to regulate guides, transporters, and their clients. That board was abolished by the legislature in 1993, leaving no state agency with the ability to deal with the effects of uncontrolled proliferation of guides. The BOG has asked that the legislature consider reinstating the board. The team discussed issues related to regulation of big game guiding in Unit 4, and came to the unanimous conclusion that the Big Game Commercial Services Board or an equivalent should be reinstated.

Recommendations (to Alaska Legislature, see letters Appendix F):

- **We endorse BOG resolution 98-127, submitted to the state legislature on October 26, 1998, requesting that the Big Game Commercial Services Board or an equivalent be reinstated.**

- **We respectfully request that the Resources committees of the House and Senate hold timely hearings on this subject.**

Recommendations for future management actions

Problem statement and discussion: Future conditions may require changes in management or regulations. ADF&G and BOG have many options for changing management and regulations to deal with management concerns. Recommendations for regulation changes may take the form of: delaying openings of the fall seasons; closing spring seasons early; eliminating the fall seasons; closing seasons in alternate years; restricting use of motorized vehicles for hunting including the possibility of restricting boat use; closing specific areas to hunting; limiting hunter numbers by a drawing permit system; or, reducing hunting opportunity for nonresidents. The team wanted to give guidance to the department and the board, as well as the USFS, on which options would best meet the team consensus on how hunting should be regulated.

Recommendations (to ADF&G, BOG, and USFS):

- **In the event that the 4%/1.5% total documented human-caused mortality guidelines are exceeded for one season or year, ADF&G will attempt to change the next year's outcome by obtaining voluntary harvest adjustment compliance from guides and hunters.**
- **In the event that the 4%/1.5% total documented human-caused mortality guideline calculated on a 3-year average is exceeded, management actions will be attempted according to the following priorities, to the degree that the time frame and/or scale of the management response is appropriate. It should also be recognized that these steps may not follow one another in order and that there may be a need to skip a step in the sequence.**
 - 1) **mandatory adjustment of number of guided hunters (USFS, assuming the agency can act in a timely fashion)**
 - 2) **season adjustments (ADF&G /BOG)**
 - 3) **institution of drawing permits for nonresidents on a Guide Use Area basis (ADF&G/BOG)**
 - 4) **institution of drawing permits for residents only after above management alternatives have been employed (ADF&G/BOG)**
- **All non-subsistence hunting by residents will be, when necessary, by registration permit, until and if the resident harvest exceeds 70% of the harvest guideline for the subpopulation. If resident harvest exceeds 70% of the harvest guideline, institute a resident drawing permit hunt (ADF&G/BOG).**
- **Consider all proposed regulatory actions or steps in the context of their effect on bear harvest in the entire Southeast Alaska region, not just Unit 4 (ADF&G/BOG, USFS).**
- **The USFS incorporate sufficient flexibility in its management planning and decisions to allow timely adjustments of guide or guided client numbers when requested by ADF&G.**

Section 2: Management and mitigation of development activities and solid waste

Introduction

Brown bears are animals of wild lands. History shows they do not do well in proximity to humans or extensive human settlement or natural resource development. Consequently, management of lands and human activity in brown bear country has a great effect on the welfare of brown bear populations. In Unit 4 most brown bear habitat is managed by the USFS. Native corporations own and manage large private tracts on Admiralty and Chichagof. The chief land management issues affecting bears in Unit 4 are loss and alteration of riparian habitat from logging and the disturbance that accompanies human settlement, development projects, and their associated roads. Habitat loss and disturbance of bears are distinct problems but because they typically accompany each other during resource development, solutions to them are often intertwined.

The team decided that the best way to address these issues is through recommended guidelines to be disseminated widely to the public and government entities involved in development projects and land management. We developed two sets of guidelines. One set deals with the mitigation of the effects of development on brown bears (see Appendix J). The other set provides recommendations for handling of solid waste in bear country (see Appendix K). The guidelines emphasize managing human activities to reduce bear-human conflicts. Fewer interactions should decrease the chances of injuries to humans as well as lessen the detrimental effects on bears. We believe that if the guidelines are adopted by the public, governments, companies, private land owners, and agencies managing public lands, the detrimental effects of development activities on bears can be greatly reduced. We acknowledge that implementation of most of these guidelines is not now enforceable and recommend that agencies consider establishing enforceable regulations for guidelines when and where needed.

The major issues dealt with by the Unit 4 Brown Bear Management Team concerning management and mitigation of development activities were: siting and management of industrial camps, habitat impacts, harassment of bears, siting of recreation facilities, recreational outfitter/guides, road access management, defense of life or property kills, and solid waste disposal.

Siting and management of industrial camps

Problem statement and discussion: Industrial camps and other development facilities (logging and mining camps, lodges, fish camps, fish hatcheries, tourist facilities, research and exploration camps, etc.) can cause problem interactions between bears and people because they often bring high levels of human activity to remote locations previously heavily used by bears. Camp personnel are often unused to working in bear country and unfamiliar with bear biology and behavior. The team endorsed the following guidelines for siting and managing camps, many of which have already been adopted with success by some camp managers such as those at Greens Creek mining camp on Admiralty in Unit 4.

Recommendations (to public at large and all government entities) (from Guidelines mitigating effects of development, Appendix J):

- **In siting and managing industrial camps**
 - **Industrial camp sites – Do not locate new construction for camp sites (permanent and seasonal) closer than 1 mile from sites of seasonal brown bear concentrations (anadromous salmon streams, estuarine sedge meadows, etc.).**
 - **Firearms – At large industrial camps (logging and mining camps, etc.), institute camp policies that discourage the carrying of personal firearms by all employees except foremen and security personnel.**
 - **Hunting, fishing, and backcountry recreation – Institute camp policies that prohibit hunting by industrial camp personnel at or near the camp site while employees are on duty status. Discourage fishing along anadromous salmon streams in areas of seasonal bear concentrations. Minimize hiking, berry picking, photography, and other outdoor activities outside the camp compound and particularly in areas of seasonal bear concentrations.**
 - **Feeding bears and littering – Attracting and habituating bears to human foods is one of the most significant causes of bear-human conflicts. It is illegal to feed bears. Institute camp policies that clearly prohibit leaving foods or other bear attractants in the field or work area. Rigorously enforce these policies.**
 - **Education – At all industrial camps and other facilities (lodges, fish camps, fish hatcheries, tour groups, research and exploration camps, etc.) routinely provide bear safety education to employees. This can be accomplished by inviting wildlife managers from state or federal agencies to periodically speak to camp staff or by using educational material from those agencies. In these bear safety programs, emphasize camp sanitation, basic bear biology and behavior, how to avoid contact with bears in the field, and what to do in case of a bear encounter.**

Habitat impacts

Problem statement and discussion: Impacts to bear habitat can take the form of loss of habitat or displacement of bears from habitat by human activity. Foremost among habitat issues concerning bears is the effect of development on anadromous fish streams and the riparian forest habitats associated with them. The major reason the ABC islands can support such dense populations of bears is the presence of salmon streams which provide a readily accessible, efficient way for bears to build their fat reserves. Bears use forests along streams for travel, for loafing between fishing sessions, and for hiding and escape cover from other bears and humans. Riparian forests also contain currants, devil's club berries, and salmonberries which bears eat.

ADF&G radio-telemetry research on Northeast Chichagof found that 39% of all bear use was within 500 feet of salmon streams during the peak period of salmon runs and that 15% more relocations were within the 500-foot buffer than within standard riparian buffers used by the USFS. Another study found that up to 65% of all bear use during fishing season on a different part of Chichagof was within 525 feet of salmon streams. In addition to the findings of ADF&G biologists, two panels of brown bear experts convened by the USFS during the Tongass Land

Management Plan Revision in 1996 and 1997 unanimously agreed with the importance of riparian old growth to bears and recommended that minimum 500-foot no-harvest, no-road buffers be established on all salmon streams around brown bear feeding areas in the Tongass. The team agrees that protection of bear foraging areas in riparian forest is important.

Recommendations (to land managers and management planners, from Guidelines mitigating effects of development, Appendix J):

- **Habitat impacts – Avoid construction of industrial facilities and recreational or homesite developments in areas of seasonal bear concentrations. Schedule short-term intensive human use of seasonal bear concentration sites to avoid peak periods of bear use.**

Results of ADF&G research on Admiralty and Chichagof, supported by independent bear experts, indicate that riparian old growth within 500 feet of anadromous fish streams is important to brown bears. Avoid logging of riparian old-growth forest adjacent to anadromous salmon streams within 500 feet of the stream at important brown bear foraging areas. Use the process for evaluating brown bear foraging sites set out in the “Tongass Forest Plan Implementation Clarification Papers” of August 1998 for determining whether 500-foot buffers should be placed on salmon streams when the USFS, in consultation with ADF&G biologists, implements this on National Forest lands.

Harassment of bears

Problem statement and discussion: From some public testimony the team heard anecdotal accounts of aircraft circling bears at low elevation apparently in attempts to view them. Most team members had personal experience of motorized transport disturbing or driving away bears. Bears can easily be stressed and displaced from critical habitats by noise and movement from motorized transportation. Those attempting to view bears closely from vehicles, boats, or aircraft are often unaware of the effects caused by such actions. ADF&G recommends helicopters remain 1,500 feet from mountain goats. Helicopters provoke similar responses in bears and mountain goats. The Alaska Visitors Association has already developed voluntary guidelines for its members doing flightseeing and wildlife viewing. We agree the guidelines would help reduce harassment.

Recommendation (from Guidelines mitigating effects of development, Appendix J):

- **Harassment of bears – Do not harass bears or chase them with motorized land vehicles, boats, or aircraft. Approach bears no closer than 500 feet and 1,500 feet by fixed-wing aircraft and helicopters, respectively. In regard to aircraft, the team endorses the Alaska Visitors Association “Best Management Practices – Flightseeing/Wildlife Viewing Guidelines”(see Appendix L).**

Siting of recreation facilities

Problem statement and discussion: Planning and development of recreation facilities has not always considered effects on bears or the potential for bear/human interactions. Team members brainstormed a list of recreational facilities that had the most potential for affecting bears and also causing problems between bears and humans. We agreed that although some unwelcome bear/human encounters are inevitable, many are preventable with planning that keeps bears as well as people in mind.

Recommendation (from Guidelines mitigating effects of development, Appendix J):

- **Recreation development – In the siting of cabins, trails, mooring buoys, campgrounds, picnic sites, floating lodges, and other recreational facilities, avoid displacing bears from critical habitats and avoid placing humans and bears in situations where the safety of either or both is at risk.**
 - **Trails – When planning or reconstructing recreational trails, avoid routing them over existing bear trails and through bear concentration areas as much as possible. For instance, avoid passing near or crossing anadromous fish streams at spots bears are likely to use for fishing.**
 - **Mooring buoys – Place mooring buoys away from shoreline areas bears use for foraging to avoid displacing bears from critical habitats during early morning and evening hours.**
 - **Floating lodges – Require permitted lodges to be located at least a mile from seasonal bear concentration areas (mouths of anadromous salmon streams, tide flats, sedge meadows, etc.) to avoid displacing bears from critical habitats**
 - **Cabins – Plan new recreational cabin locations with local bear use patterns in mind. Avoid locations near bear trails or fishing and foraging areas as much as possible.**
 - **Camping and picnicing sites – Locating campgrounds or picnic sites, with their associated garbage and food, in salmon stream drainages heavily used by bears is not advisable. Locate camping and picnic sites at least a mile from streams used by bears for fishing. Install, regularly empty, and maintain bear-proof food caches and trash bins. Monitor them for effectiveness.**

Recreational outfitter/guides

Problem statement and discussion: Although qualified and permitted commercial guides can play an important role in managing the human use of fish and wildlife populations and their habitats, commercially guided activities also have the potential for driving bears away from critical habitats and even altering those habitats over time. This is particularly true in regard to the size of guided groups and their frequency of use of an area. In our comments to the USFS on its Saltwater Shoreline-based Outfitter/Guide Analysis, we considered this a fundamental assumption that governs how the USFS allocates guide use in Unit 4. Other recommendations we made suggest specific ways the USFS can minimize disturbance from guide activities. (See also recommendations on Guide and guided hunter levels, pages 11-14, and Areas meriting special attention, pages 39-41.)

Recommendation (to the USFS, see letter Appendix A):

- **Minimize disturbance to bears. The number, timing, and location of bear and recreational outfitter/guides need to be managed to minimize disturbance to bears and their habitat.**

Road and access management

Problem statement and discussion: Roads are usually detrimental to bears because they increase the opportunity for human-induced mortality of bears through legal hunting, defense of life or property kills, and illegal killing. Once an area is roaded for one development activity, it often results in additional developments which increase human-bear interactions, and ultimately reduce the area's capability for supporting viable bear populations. In addition, poorly maintained or constructed roads can affect water quality and productivity of salmon streams. ADF&G research found that brown bears spent time farther away from salmon streams in logged and roaded areas than unroaded, unlogged drainages which may mean bears are not making optimal use of the salmon food source in heavily roaded and cut drainages. Road traffic near salmon streams or crossing streams near important bear feeding sites (shallows, gravel bars) may disrupt bears' use of those critical areas.

The team agreed to include a recommendation on new road construction and access in our guidelines for mitigating effects of development.

Recommendation (from Guidelines mitigating effects of development, Appendix J):

- **Road construction and access – Minimize road construction in brown bear habitat. Avoid construction of roads less than one mile from important seasonal concentration areas (anadromous salmon streams, berry fields, estuarine sedge flats, etc.). Where road construction in brown bear habitat is unavoidable, prohibit public and recreational access and strictly enforce the prohibition. Permanently remove roads when they are no longer necessary or make them impassable to motorized vehicles.**

Problem statement and discussion: Northeast Chichagof has the most extensive road system in Unit 4. Roads have been built in every watershed and the major roads are closely associated with major fish streams. ADF&G research there supports the view that increased human activity reduces brown bear numbers and habitat capability. Brown bear mortality on Northeast Chichagof in autumn was directly related to the total length of roads built on Northeast Chichagof during the period 1978 to 1989. An additional number of bears was likely killed illegally during that period as well. Problems with roadbed stability, erosion potential and/or impedance of fish passage on specific road segments on Northeast Chichagof have also been documented by ADF&G staff.

While the Unit 4 Brown Bear Management Team was meeting this past winter, the Hoonah Ranger District of the USFS began road access management planning on Northeast Chichagof. The team agreed that timely comment on road management planning was important and sent general and specific recommendations on the Northeast Chichagof road system in two separate letters to the USFS (see letters Appendices C and D).

In recommending specific road segments for closure, the team decided that the best candidates were those that were experiencing stability or erosion problems or that met one or more of the following criteria:

- 1) Are within old-growth reserves. These reserves were set up to protect old-growth dependent wildlife, including bears. To the extent they increase the risk of DLP and illegal kills of bears and may detrimentally affect habitat and stream quality and bears' use of critical habitats, existing roads in designated Old-Growth Habitat LUDS are inconsistent with the objectives of old-growth habitat management.
- 2) Access important bear habitat. Portions of these old-growth reserves, such as riparian areas and beach meadows, are particularly important to bears. Roads that access these would be especially good candidates for elimination.
- 3) Occupy the geographic connection between Northeast Chichagof and the rest of the island. Northeast Chichagof is linked to the rest of the island by a narrow waist that serves as an important corridor for faunal interchange. Roads can potentially impede animal movement through the corridor.
- 4) Are not connected to the main road system. Roads off the main system are not as important to local residents.

Although the team is concerned with the effects of roads on bears, we also acknowledge that roads are important to local people for subsistence, recreation, and access to private land. In addition, there is a growing demand for bear viewing areas in Southeast Alaska and areas accessible by road may have potential for becoming viewing sites. Many roads can remain open if they are well-monitored, maintained, and actively managed to minimize their effects on bears.

Recommendations to USFS on Northeast Chichagof road management (see letters, Appendices C and D):

- **In planning the road system, look at roads' effects on bears' use and access to critical bear habitat.**
- **Retain only the road mileage on Northeast Chichagof that can be well maintained and managed. Make any road reductions with the health of the brown bear population as a primary concern.**
- **Regularly and assiduously maintain roads left open to avoid washouts and other failures detrimental to water quality and fish habitat.**
- **Design access to minimize defense of life or property (DLP) kills and illegal kills. If problem roads or segments cannot be closed completely, road traffic may need to be closely regulated and in some cases limited. Consider seasonal closures and implement them in some areas. Evidence from radio-tagged and non-tagged brown bears over the past decade indicates that the illegal, indiscriminant killing of brown bears is nearly always associated with shooting them from roads.**
- **Site specific recommendations. Rank the following areas as priorities for closure, in the order presented:**
 - 1) All road segments from Tenakee Portage to Salt Lake Bay. Rationale: old-growth reserve, good bear habitat, important corridor, not hooked to main road system.

- 2) All road segments in the Seal Creek drainage. Rationale: old-growth reserve, good bear habitat, not hooked to main road system
- 3) Iyouktug/Wukukluk/Gypsum Creeks, all road segments not absolutely necessary to access private land. Rationale: important bear habitat in midst of large old-growth reserve, but on main road system and with existing visitor facilities
- 4) Head of Freshwater Bay, all road segments off the main trunk (#8508) Rationale: important bear habitat at edge of large old-growth reserve, but connected to main road system.

Close segments #85331, #8504, #8579, #85765, and #8576. We recommend closure of these particular road segments because of problems with roadbed stability, erosion potentials and/or impedance of fish passage, all of which have implications for brown bear habitat.

- **Leave roads open if they are particularly important to local people, or if they allow access to selected bear viewing areas. Because these roads will put people in proximity to bears, it is important that in roaded areas USFS management be actively involved in bear protection. This requires:**
 - identifying opportunities for bear viewing and deciding which of these should be managed for viewing opportunities,
 - actively assisting ADF&G, through funding and other means, in the monitoring of the Northeast Chichagof bear population,
 - monitoring human use trends,
 - monitoring the distribution and frequency of DLP bear mortality,
 - having a strategy for dealing with unacceptable levels of bear displacement or mortality.
- (See also recommendations in Research and monitoring section, pages 45-46.)
- **Consider developing bear viewing areas on the road system in locations acceptable to local residents. However, select sites for viewing areas and conduct viewing in the areas in such a way that the safety of bears and visitors is ensured. Viewing areas need to be designed so that bears are not disturbed from their natural activities or displaced from critical cover habitat or foraging and fishing locations.**

Solid waste management

Problem statement and discussion: Improper food storage, handling, and disposal are major causes of bear problems in Southeast Alaska. Landfills attract bears and teach them to seek human food. Cubs raised in a dump soon get chased out by larger bears, move into nearby towns, cause problems for people, and usually get shot. The problem is exacerbated by access to sources of food or garbage around residences or in wilderness camps. Many of the bears killed under DLP provisions are bears that have become food conditioned through improper human waste disposal methods.

The team approved guidelines for managing food and solid waste in brown bear habitat that will substantially reduce bear problems associated with food and solid waste if widely adopted and implemented.

Recommendations (to the public, companies, private land owners, municipalities, and agencies managing public lands, see Appendix K):

- **Adopt the following guidelines for managing food and solid waste**
 - **Locate solid waste disposal sites for communities and permanent field camps in habitats receiving the least use by bears. Avoid traditional movement routes and seasonal concentration areas (such as salmon spawning streams or productive berry areas).**
 - **The preferred alternative for disposal of organic products that may attract bears is incineration in a facility that meets Alaska Department of Environmental Conservation (DEC) standards for combustion residue (less than 5% unburned combustibles). In large urban communities or at regional disposal sites, daily landfill and burying is an acceptable alternative to reduce or eliminate attraction to bears provided that these facilities are secured by a bear-proof fence. Phase out existing open-pit sites that use surface burning for disposal and replace them with a system of daily incineration meeting the above standards or with daily landfill.**
 - **At large (more than 15 people), permanent (longer than one season) field camps, dispose of organic products by daily incineration in a fuel-fired incinerator that meets the above standards. Or, haul organic products daily to an DEC-approved regional disposal site. Use a bear-proof enclosure (building or fence) for temporary storage of organic products prior to incineration or backhaul. In cases where bear problems exist or are likely, surround these camps with a bear-proof fence. If entire camps cannot be fenced, then fence dining halls, kitchens, sleeping areas, and incinerators and allow no organic wastes to be left in vehicles.**
 - **At small, permanent facilities (e.g., lodges, weather stations) or large nonpermanent camps, practice daily segregation and storage of organic wastes and items such as cans and jars that are contaminated with organic waste in a bear-proof container for weekly backhaul to an approved disposal site. Keeping organic wastes frozen until shipping is a preferred storage technique. Alternatives are (1) incinerate organic waste and other combustibles in a locally fabricated incinerator meeting ADEC standards for residue, or (2) use garbage grinders with disposal to a sewer system (not appropriate for septic tank systems) to remove organic wastes, while incinerating or temporarily storing as above contaminated combustible and noncombustible wastes.**
 - **When storing food and organic wastes outdoors in bear habitat, use sealed bear-proof containers. Although it is not necessary to remove fish or game carcasses from the field, do not leave them at a central site or leave them at or near a campsite or other place with high potential for bear-human conflicts.**
 - **When in Alaska's backcountry, burn all combustibles and pack out all noncombustibles. Do not discard organic material along trails. Caution and common sense are required to reduce or eliminate bear attractants.**
 - **Require all new parks, roadside facilities, and temporary construction worksites located in bear habitat to have bear-proof garbage cans and regular garbage pickup. Phase this requirement into all existing facilities as soon as possible.**

- **Baiting and feeding bears and other wild game by photographers, tourists, hunters, or others is strictly prohibited except for trapping furbearers or hunting black bears consistent with regulations on black bear baiting.**
- **Handle bears currently accustomed to eating garbage on a case-by-case basis according to the ADF&G's guidelines for managing bear-human conflicts.**

Problem statement and discussion: Although bigger Southeast Alaska towns have largely solved the problems of solid waste handling and disposal of wastes once they have been collected from individual residences, most small communities have not. Stronger ordinances and more effective enforcement of ordinances would help solve those problems. But enforcement measures alone are not the answer.

A primary reason for the difficulty in solving solid waste problems in small communities is the cost. It seems clear to us that the best way to protect people and bears is for smaller communities to have the means to provide proper household garbage storage facilities and to join many of the larger places in shipping out or otherwise dealing collectively with food wastes. It is also clear that the only way for small places to afford this is to find additional funding and to take a broad regional approach to dealing with solid waste. Although team members agree that the agencies and organizations we represent would be glad to participate and assist in an effort to take a broad regional approach, there is a need for a group to take a leadership role. The team agrees that because of its prestige and longstanding interest in solving waste management problems in the region, the Southeast Conference is the most appropriate group to convene an effort to identify and work toward regional solutions. In a recent letter the team asked the Conference if it would be willing to take that role.

Recommendations (to the Southeast Conference, see letter Appendix I, and municipalities, state agencies and civic organizations):

- **That the Southeast Conference take a leadership role in convening an effort to identify and work toward regional solutions to community solid waste problems.**
- **Identify funding sources for assisting and encouraging municipal action in providing proper household garbage storage facilities in local communities.**
- **Encourage passage of municipal ordinances for the proper handling of solid waste, and improve effective enforcement of existing solid waste handling ordinances.**

Defense of Life or Property (DLP) kills

Problem statement and discussion: One effect of development activities in remote areas and problems with solid waste treatment is an increase in DLP kills of brown bears. DLP kills contribute to the total human-caused mortality guidelines that affect how many bears are available for annual hunter harvest. Although some DLP kills are undoubtedly justified, others may be unnecessary. Reducing the kinds of situations that lead to dangerous bear/human encounters is one part of the strategy to reduce DLPs. The team recognizes that another approach to this issue is to improve public information on learning to live with bears as development and encroachment occurs. We agree that the public needs to have better direction on dealing with and preventing DLP situations.

Recommendation (to ADF&G, Alaska Department of Public Safety, and municipalities - from Guidelines mitigating effects of development, Appendix J):

- **Promote and distribute the ADF&G policy for dealing with bear-human conflicts more widely. This policy emphasizes the prevention of conflicts through public information, reducing attractants (food, garbage), and nonlethal deterrence. In cases where immediate danger to an individual or his property exists, offending bears may be killed by any individual under provisions of the Defense of Life or Property (DLP) regulation (5 AAC 92.410). Employ this regulation only as a last resort. If a bear is killed under DLP provisions, and the taking was brought about by improper garbage storage or a similar attractive nuisance, the offender will be warned or cited. It is not legal to kill a bear to protect a hunter-killed game animal.**



Section 3: Viewing and tourism

Introduction

Viewing is nearly always considered a benign, "nonconsumptive" use of bears because, after being watched or photographed, bears remain to be viewed by others. However, viewing can have detrimental effects on bears and other wildlife. Wild bears unaccustomed to people will generally avoid them if they are aware of human presence. Sometimes that means bears will abandon important feeding or resting habitats. If the humans' presence is long-term and persistent, it can jeopardize a bear's well-being or even survival. Some bears never adapt to human activity or observation and may leave the area permanently. Bears which do become accustomed to human presence can also suffer detrimental effects from viewing, particularly if careless, ignorant, or misguided viewers teach bears to associate humans with food. These bears, called "food conditioned," typically lose their natural fear of humans and will often act aggressively toward them. It is easy in such situations for both bears and humans to feel threatened. In a typical year, two to five bears, which have become food-conditioned from garbage dumps, careless viewing or camping practices, illegal feeding, or other practices, are killed in Unit 4 because their boldness in pursuit of food threatens humans.

Viewing, then, is not without its effects on bears. What we may see as insignificant actions can have profound effects on the bears, especially if our individual actions are multiplied many times by other visitors over the course of a viewing season. Informed, considerate, and ethical viewing practices and management are essential for both bear and human safety.

The team heard presentations on the current and future issues and trends in tourism from team members representing the Alaska Visitors Association (AVA) and Alaska Wilderness Recreation & Tourism Association (AWRTA). Some of the points made in the presentations are:

- Many things about tourism in Southeast Alaska are changing very fast.
- Visitation is growing at 5% a year and wildlife viewing is one of the things people are most interested in.
- Three quarters of a million people are coming annually, and even if only a small percentage of these get out in wilderness it is a lot.
- The impact on bears and other wildlife resources can be great.
- Different sectors need to cooperate to deal with this pressure.
- "Wildlife that pays is wildlife that stays."
- Tourists, companies, outfitters, and communities that benefit are all part of an increasing constituency for wildlife.

So far, agencies have done little planning for future tourism, although that is beginning to change. There are not great conflicts between hunting and viewing yet, but both kinds of guides have a similar problem – providing a quality experience. The USFS shore-line carrying capacity analysis can only deal with a small slice of the issue because it doesn't deal with water-based activity. There needs to be a way of zoning the shoreline. We need some way of assuring quality to make it economical for guides of all kinds. We need to start building agreement about what kind of qualities we want to see in Southeast Alaska.

In a discussion about tourism, team members have identified some of the most relevant issues for brown bears. Tools are in place to control hunting use but not growth of the visitor industry. Television, publications, and advertising are a problem because they often raise wildlife viewing expectations that are hard to meet. We are in danger of promoting a zoo mentality. Advertising has to be more truthful and realistic. A range of alternatives for wildlife viewing is needed to accommodate not just wilderness tourists but large and mid volume tourism operations. We can't really just say no to tourism because it is happening, but we can identify ways to channel growth to appropriate ways and places, otherwise uncontrolled growth will go everywhere.

Viewing opportunities encouraged on private lands as well as public lands

Problem statement and discussion: The team discussed what recommendations to make in regard to bear viewing opportunities on private lands. Members noted some advantages of private sites are:

- 1) they give landowners some added incentive and reason for protecting bear habitat and bears;
- 2) they are a way to meet the apparent high demand for intensive bear viewing areas;
- 3) they reduce perceived and actual conflicts between hunting and viewing on public lands and may help retain hunting opportunity on public lands.

Some disadvantages to viewing areas on private lands are:

- 1) establishing more viewing areas on private lands may result in some reduction in overall hunting opportunity; and,
- 2) on private lands the public has little control over quality of experience and health and safety of bears and people.

Recommendation to agencies and land managers:

- **In addition to developing high-quality viewing on public lands consistent with other resource considerations, encourage high-quality viewing on private lands.**

Brown Bear Special Use Zones for bear hunting and viewing

Problem statement and discussion: As tourism grows in Southeast Alaska, there is increasing demand for more bear viewing opportunities. Some team members argued strongly for more viewing areas to meet that demand. However, creation of new viewing areas on the Pack Creek or McNeil River models was opposed by other team members who feared that it would result in more areas being closed to hunting of bears. It became clear as discussions progressed that a new, win/win management area concept might be possible in which both hunting and viewing are accepted, compatible uses, and much team effort was expended in that direction.

We considered several options, among them one proposal for a management area where hunting and viewing were both accommodated even though bears were habituated to humans, but segregated in time and space. Some team members thought such an area might too easily change into one like Pack Creek where hunting is prohibited. All agreed hunting of habituated bears would be a problem. Consequently, the idea was shelved.

After hearing presentations from biologists, guides, and refuge managers in Kodiak, McNeil River, Pack Creek, and other areas, the team determined that a key objective in the management

of such hunting/viewing areas would be to avoid habituating bears to people. Such an area would not depend for its success on the persistence of lineages of particular animals, but rather on a robust population available for viewing. Thus, hunting could be allowed so long as it did not reduce the population of viewable bears.

Rather than try to modify or diminish the existing bear viewing areas (such as Pack Creek) in any way, we propose a new management area concept that establishes new areas in which hunting and viewing are managed as equal in priority and compatible. In discussing what these hunting/viewing areas would look like, the team agreed to the following points:

- Habituation or the perception of habituation is a defining issue that the team agrees should be considered/addressed. (Relates to whole watersheds.)
- Dispersion vs. concentration of people affects habituation
- Team agrees to maintain existing hunting and viewing opportunities; and an increase in either should not come at the expense of the other.
- Education is an important component of both viewing and hunting.

In deciding what to call these areas some team members thought it was important that the name not suggest that either hunting or viewing was to be the primary use. "Brown Bear Special Use Zones" was chosen as the best description of their management.

A major difference between these hunting/viewing areas and other areas of Unit 4 where hunting and viewing both occur is the degree of management. In order to avoid habituating bears while accommodating regular viewing by numbers of people, it is necessary to have some type of active management program that regulates human use.

The best description of Brown Bear Special Use Zones is contained in the guidelines the team devised for managing them. Consequently, the team intends that the list of guidelines be adopted in its entirety by those agencies implementing Brown Bear Special Use Zones.

The team considered where in Unit 4 Brown Bear Special Use Zones would be appropriate but did not want to definitively recommend areas before in-depth field analysis was conducted, as we recognize that particular geographic circumstances must exist to permit the necessary relationship between people and bears in such an area. Among the areas suggested for consideration is Port Althorp, an area currently closed to hunting but which has not been used for organized viewing. The team agrees that if the BOG is convinced Port Althorp is a suitable location for designation as a Brown Bear Special Use Zone, the BOG consider reopening all of Port Althorp to hunting except the area of the salt chuck, provided habituation of bears in the salt chuck closed area can be avoided.

Recommendations (to BOG, ADF&G, USFS, and other implementing agencies)

- **The BOG further consider this concept and consider designating areas, such as the following, as Brown Bear Special Use Zones:**
 - **Hood Bay and Pybus Bay on Admiralty Island**
 - **Lake Eva on Baranof Island**

- Kadashan Bay and Port Althorp (keeping the salt chuck closed to hunting) on Chichagof Island

- **Guidelines for management of Brown Bear Special Use Zones – where bears are not habituated to people (also Appendix O):**

Guidelines for site selection

- 1) Areas should be sufficiently large but size should be chosen on a case-by-case basis
- 2) Areas should have several vantage points suitable for viewing at a distance, avoiding a single concentration point for viewers.
- 3) Areas should afford opportunities to see bear sign and a variety of habitat types as well as opportunities for viewing bears.

Management Guidelines

- 1) Areas are open to both hunting and viewing and managed to maintain or enhance viewing and hunting opportunities
- 2) Viewing is integrated with other existing uses, including hunting, boating, fishing, and trapping.
- 3) Areas are not closed to hunting although in some instances incentives may be adopted to encourage taking of large male bears
- 4) Areas are not closed to fishing or trapping for reasons other than resource concerns
- 5) Management is aimed at avoiding habituation through “at-a-distance” viewing
- 6) Management emphasis is on total outdoor experience that involves other values and other species which would prove attractive to visitors who are not totally focused on bears
- 7) Educational material should be developed by the agencies that emphasizes the goals of institutionalizing viewing ethics, and promoting more informal viewing opportunities that focus on the total outdoor experience and that avoid disturbing bears or altering their behavior.
- 8) Where permit stipulations are not required, voluntary compliance by operators will be encouraged to maintain smaller viewing group sizes and to avoid conflicts with hunters during hunting seasons.
- 9) When congestion reaches a point where major conflicts between viewing operators or other established users occurs, or are reasonably anticipated to occur, a viewing permit system will be initiated for that specific area limiting the sizes of parties, frequency of use, and time of utilization.
- 10) Where possible, innovative time and area zoning concepts will be used to maximize the public’s opportunities and keep users separate, while not infringing on established uses of the areas and resources, especially those uses of residents.
- 11) Management will strive to avoid activities that promote user group divisiveness. Use advisories and other public education to increase user groups’ awareness and tolerance of each other.

- 12) **The development of business opportunities will, where possible, be promoted in such a way as to encourage remote communities to participate to the maximum extent possible.**
- 13) **Management will be coordinated with ADNR and ADF&G management of permitted activities in adjacent marine and navigable waters.**

Problem statement and discussion: The team recognized there may be areas that do not fully meet the above site selection criteria such as area size or number of viewing points. Although such areas may be able to be managed to avoid habituation, they may also require that a suitably configured **small** area be closed to hunting to accommodate viewing. We agreed to recommend development and designation of such areas so long as they can be managed to avoid habituation. Kennel Creek on Chichagof Island is a possible example.

Recommendation (to the BOG and other implementing agencies):

- **The BOG further consider this concept and apply necessary regulations on a case-by-case basis.**

General guidelines for bear viewing

Problem statement and discussion: Much bear viewing in Unit 4 is opportunistic, informal, and unguided. Most of this type of viewing occurs where bears are not habituated to humans. Many members of the public, whether residents or visitors, are unfamiliar with bears' habits and needs and may benefit from guidance on the best and safest ways to view them. The Unit 4 Brown Bear Management Team recommends the following guidelines for bear viewing in Unit 4 and elsewhere in Southeast Alaska. We recognize that not all of these guidelines are appropriate for all situations, but believe that they still represent the best general approach to safe bear viewing.

Recommendation (to ADF&G and other agencies and tourism companies, also Appendix M):

- **ADF&G prepare for publication and widely distribute the following guidelines for behavior and viewing tips for remote locations where bears are not habituated to people.**
 - **Always remain far enough away from the bear so that your presence, if noticed, does not affect the animal's behavior. Use binoculars, spotting scopes, or other telescopic lenses to improve your view.**
 - **Bears are wild animals and you are viewing them in a remote area. Be prepared. Review current agency information and brochures on protection and how to deal with close encounters.**
 - **Always select a viewing position that does not make you vulnerable to a surprise approach by a bear.**
 - **Never directly approach a bear, allow it to move to you.**
 - **Avoid situations where your presence could startle a bear.**
 - **Avoid viewing from obvious bear trails.**

- **Never allow bears access to human foods.**
- **There is safety in numbers, stay with your group.**
- **If seen by a bear, avoid moving. Even minor movements will encourage wary bears to leave.**
- **Never use a motorized vehicle or boat to try getting close to a bear.**
- **Never run from an approaching bear; if you move away do it in a slow, deliberate manner.**
- **Show respect and courtesy to other bear viewers. Conduct your viewing in a way that doesn't detract from their experience. Don't mix booze with bears.**
- **Think wind, wind, wind. When possible always approach bears, or areas where bears are likely to be, from downwind.**
- **The best bear viewing is usually in the early morning or evening. Shoreline viewing is usually better during low tides.**
- **Small groups are less likely to disturb bears and so more likely to have better viewing. Keep your group size as small as possible.**

Viewing habituated bears

Problem statement and discussion: Although the team has not taken a position on recommending additional areas for intensive viewing of bears where bears become habituated to people, we recognize that such areas now exist, and that such areas may be developed on private or public lands in the future. The team believes that the success of these viewing areas and the safety of both humans and bears depends on their proper location and management.

Recommendations (to public and private developers and managers of viewing areas where brown bears are habituated to people):

- **The team endorses the following ADF&G site selection criteria for locations like Pack Creek where bears are habituated to people (also Appendix N):**

Though the team has no recommendation for any new or expanded areas for viewing of habituated bears, locations managed for viewing habituated bears must have the following attributes:

- **naturally occurring use by enough bears to provide a reasonable assurance that visitors will see bears;**
- **a field-of-view that promotes seeing bears at a safe distance;**
- **one or more viewing sites* that do not place the public in prime bear use areas;**
- **commitment by the land owner to keep the area in a status compatible with occupancy by bears;**
- **agency and landowner commitment to adequate funding of the program.**

***Viewing "sites" – specific spots in an area used by people to view bears, such as a pad, platform, blind, or tower.**

- **The team endorses the following ADF&G recommendations and guidelines for management of areas like Pack Creek where bears are habituated to people (also Appendix N):**
 - **Program management must be equally directed at providing public and bear safety and developing bears' habituation to humans.**
 - **Human use of the area must be secondary to the use by bears.**
 - **Increase control of human activities as the number of persons using the area and/or the regularity of viewing increases.**
 - **Minimize the size of the viewing site(s)* to that necessary to accommodate the group size; limit group size by the space limitations of the viewing site and by acceptance as indicated by bear behavior.**
 - **Limit viewing activities to designated viewing site(s).**
 - **Viewing site(s) must not be in areas regularly used by bears.**
 - **Never leave human foods accessible to bears; remove all organic waste when the group leaves.**
 - **Access each viewing site by a single trail.**
 - **Where possible, visually screen the approach and departure of visitors to the viewing site(s) from the bears, and make viewers at the site(s) unobtrusive.**
 - **Minimize the number of trips to and from the viewing site(s), and instruct groups to plan on only one round trip to and from the viewing site(s).**
 - **Minimize the number of groups viewing bears in space and time; a larger group size is generally preferable to an increased number of groups.**
 - **If possible, arrange for travel to and from the viewing site(s) to occur at the same time each day.**
 - **Except for access trails and viewing site(s), keep all other areas of bear sanctuaries free from human use.**
 - **Keep portions of each day visitor free to allow non-habituated bears a period of use without stress from humans.**
 - **Have persons knowledgeable in bear behavior accompany each group; a prime responsibility of this person will be controlling human activity.**
 - **In development of viewing site(s), accommodate visitor comfort and safety, especially to encourage human activities to remain within the prescribed area.**
 - **Keep records of bear use of the area; judge success of viewing programs by undiminished numbers and hours of use by bears; keep human use goals secondary.**
 - **Require those accessing a designated viewing area by boat and floatplane to maintain a constant speed and engine sound and maintain their direction as much as possible, consistent with safety and maintaining a reasonable distance from wildlife.**
 - **Use aircraft only for transportation to and from designated on-the-ground viewing areas and not for flightseeing in these areas.**

***Viewing “sites” – specific spots in an area used by people to view bears, such as a pad, platform, blind, or tower.**

Tourism marketing guidelines/recommendations

Problem statement and discussion: Team members along with members of the tourism industry met in subcommittee to deal with the issue of tourism marketing and the expectations for wildlife viewing it gives visitors. They developed the following problem statement and recommendations.

- 1) Alaska visitors and residents often have unrealistic expectations of wildlife viewing. These expectations are formed in part by such things as the national media, educational programs, documentaries, agency materials, and visitor marketing.
- 2) Alaska should provide leadership in fostering realistic expectations and wildlife viewing practices that avoid disturbing wildlife in their natural habitat.
- 3) Responsible marketing of brown bear viewing goes hand in hand with ethical behavior for viewing bears, and both need to be promoted by government agencies and industries.
- 4) Responsible marketing of bear viewing centers around the notion that marketing begins the educational message to visitors about realistic opportunities for observing wild bears in their natural setting. For instance, visitors should be informed that hunting is a traditional activity and will be occurring in some places and seasons where people view bears. (Hunters should also be informed that some places they hunt will be frequented at times by people viewing bears.)

Recommendation

- **The Unit 4 Brown Bear Management Team encourages continuation of ongoing visitor industry and government agency (ADF&G, USFS, Alaska Division of Tourism, ADNR) actions to jointly develop and promote a set of guidelines for the responsible marketing of bear viewing in Alaska. Among the guidelines that should be considered are:**
 - **Where possible, use photographs that show animals within their habitat.**
 - **Develop language for operators to include in brochures to help set the viewing context, focusing on the total experience of the outdoors rather than individual species.**
 - **Work with media, journalists, and other promoters of Alaska to ensure their products set realistic expectations and promote responsible viewing.**
 - **Include bear management strategies, discussion of diverse values and ethics in informational material for distribution to visitors.**

Funding sources

Problem statement and discussion: The costs of developing, managing, and staffing viewing areas are high. Development of new areas requires a long-term, large-scale commitment of funds. Neither ADF&G nor federal agencies are in position to make such funding and staffing commitments. Because most current funding for state wildlife management comes from taxes on hunting equipment, some team members believe that another source of funding should be found for managing and enhancing nonhunting activities. Other team members believe the visitor industry already pays its share of wildlife management in taxes and other fees.

Recommendation (to the Legislature, Congressional delegation):

- **The team supports establishing additional funding for management of brown bears and other wildlife, through a fee which would be levied on nonhunting, nonfishing wildlife users, that is broad-based, fair and equitable (levied on both residents and nonresidents). This fee should be directed at users rather than operators. The funding may take advantage of any state or federal funds that become available. Funds raised should be kept in-state and those federal funds that come from local uses should be used for management of local resources.**



Nonna Shtipelman

Section 4: Social, economic, and cultural aspects

Introduction

The team acknowledges that, as with other wildlife species, brown bear management is really the regulation of human activities to produce desired conditions for brown bears. Besides the aspects of human activity considered to this point in the management plan, there are social, economic and cultural elements that must be considered in the context of Unit 4 bears. For instance, an area's capacity for public use is as much a human social issue (based on expectations for encountering others, compatibility of uses, and economic considerations and consequences) as it is a biological issue. Besides carrying capacity, other social, economic, and cultural-based issues that we considered are: state-federal cooperation in planning, allocating use, effects of private lands, subsistence, Admiralty Island's special status, areas meriting special attention, community stability, and the need for a socio-economic impact analysis. Although most of these recommendations are directed to the USFS because its outfitter/guide carrying capacity analysis was the primary ongoing commercial/recreation/tourism planning process during the time we met, we intend them to be considered and adopted by other current and future agency planning efforts that affect Unit 4.

Funding, staffing, and timely completion of Forest Service outfitter/guide analysis

Problem statement and discussion: A critical part of the team's work has revolved around the recreational carrying capacity and allocation planning of the USFS Saltwater Shoreline-based Outfitter/Guide Analysis and EIS for the northern Tongass National Forest. The ability to manage much of the human use that affects bears in Unit 4 lies with the USFS and its commercial use permitting authority. Reduction of USFS funding in Southeast Alaska has recently brought into question whether that project will receive the staffing and funding resources necessary for it to be completed in a timely manner. We strongly support the work done to date by the USFS on the outfitter/guide analysis.

Recommendation (to USFS, see letter Appendix E):

- **Provide the necessary priority for funding and staffing to keep the saltwater shoreline-based outfitter/guide analysis on schedule.**

State-Federal-Industry cooperation in planning

Problem statement and discussion: The team is concerned that the land management and use planning efforts by different agencies be compatible. At the same time that the USFS is doing a Saltwater Shoreline-based Outfitter/Guide Analysis for the northern Tongass, the ADNR has begun work on a Northern Southeast Alaska Area Plan for state lands, including intertidal areas. An interagency/industry tourism planning steering group has been formed as well. It is crucial that all these efforts proceed cooperatively so that the results are compatible plans for the different but neighboring jurisdictions in the Unit 4 area.

Recommendation (to the USFS and State of Alaska, see letters Appendices A and B):

- **The USFS needs to develop its shoreline carrying capacities in cooperation with the State of Alaska to ensure that they are meaningful. To effectively manage human shoreline use, it is essential to cooperatively address both state intertidal land below mean high tide and federal intertidal land and upland above mean high tide. The USFS and the state have recognized this reality in their cooperative management of the Pack Creek estuary.**

Carrying capacity

Problem statement and discussion: Discussion of capacity related to the USFS Saltwater Shoreline-based Outfitter/Guide Analysis focused on what is a “reasonable” carrying capacity and whether the USFS should permit use to the level of an area’s maximum carrying capacity all the time. Team members noted that defining carrying capacity is not straight forward. It is difficult to know and understand the effects of use until you have some experience of them and so an area’s carrying capacity should be periodically reevaluated. There was consensus that the USFS needed to be cautious in setting carrying capacities for areas. The team agreed to the following points:

Recommendations (to the USFS, see letter Appendix A):

- **Re-evaluate carrying capacities on a regular basis and adjust them based on the impacts of actual use. Given the limited precision of brown bear population estimates, a limited understanding of the degree to which human activity disturbs bear behavior along shorelines, and the need to assess the compatibility between human uses, it is not prudent to unduly push carrying capacities to their apparent maximum limits.**
- **Do not base the seasonal total use on the daily maximum use (service days or groups) times the number of days in the season. Rather, make the seasonal total an “optimal” target that is a lower average number, so that when an area has reached its targeted carrying capacity, a user would find the maximum number of users or groups on some days but less than that number on other days. The balance used to find this “optimal” target will vary with specific sites, uses, and the experience the area is managed for.**
- **Proper determination and enforcement of carrying capacities over time means making a monitoring and compliance plan a part of the USFS action (see also page 45).**

Allocating use

Problem statement and discussion: In regard to allocation of use, the team discussed whether or not it should advocate closing areas to commercial use. Those tending to support that position argued that there is no problem with small numbers of guides and clients and occasional use of an area; rather, it is relentless ratcheting up toward high-volume commercial use that is the issue. Currently all of Unit 4 is open to commercial users. They noted some communities have already raised local privacy concerns in the face of large-scale tourism, and there is potential for commercial use to affect subsistence use in sensitive areas.

Those opposed to closing areas to commercial use said such use should not have negative connotations because in many places the way to have the least impact is through guided activity.

Some members of the public (local and nonlocal) rely on commercial entities to go afield so we need to be careful we are not closing off access to public just because they don't have the skills or wherewithal to get there. Other team members questioned whether this was a proper subject for the team to discuss because, they said, it makes no difference to brown bears whether they are disturbed by commercial or noncommercial users.

It became apparent that the issue was probably too philosophical and value laden to get team consensus. While deciding not to advocate the creation of commercial free zones, the team agreed that some areas of Unit 4 had a higher capacity for commercial use than others. We recommended that the USFS needs to take that into consideration when setting capacity levels and allocating use between commercial and non-commercial users. Some team members wanted to recommend providing for local use in determining carrying capacity. It was decided to add this to an item of the team's comments dealing with community stability.

Recommendations (to the USFS, see letter Appendix A)

- **Where capacity levels are set, establish allocations between commercial and noncommercial use.**
 - **Give consideration to providing small business opportunities for residents of local communities within the immediate area.**
 - **Manage areas for different capacity targets based on group size, length of stay, and type of use.**
 - **Manage certain areas for low levels of use.**
 - **Some areas may be considered off-limits for certain types of commercial activity and/or during certain times of the year. Such restrictions may be applied when commercial activity or other uses cause adverse impacts, and reasonable alternative locations are available to accommodate the commercial use.**

Effects of private lands

Problem statement and discussion: USFS decisions need to reflect the fact that private inholdings represent a significant non-permitted/non-regulated use of the shoreline. For example, a lodge can create a base of operation that at times dominates a bay. Non-guided hunts out of such a facility can account for a substantial use of nearby national forest shorelines.

Recommendation (to the USFS, see letter Appendix A):

- **When determining shoreline carrying capacity, it is essential to consider the effects of existing private inholdings and those of potential inholdings that will be created by conveyance of Native Allotments, most of which could become sites for lodges (three pending allotments in Mitchell Bay, one pending in Whitewater Bay, one pending in Windfall Harbor, and one pending in Little Pybus Bay).**

Subsistence

Problem statement and discussion: Subsistence harvest and use of many resources, not only bears, may be affected by other activities depending on the location, timing, and magnitude of

the other activities. We want to be sure carrying capacity analysis and planning considers effects on subsistence.

Recommendation (to USFS, see letter Appendix A):

- **Consider impacts to subsistence when determining carrying capacity. The Revised Forest Plan directs the agency to minimize "adverse impacts to subsistence users" when authorizing outfitter/guide operations. (see Revised Forest Plan at 4-41, REC122 II.4.d(2)(f)).**

Admiralty Island's special status

Problem statement and discussion: The team spent a good deal of time discussing appropriate management of Admiralty Island bears. Some team members believe strongly that National Monument designation gives Admiralty Island a special status which requires special management of its resources. As mentioned elsewhere in this document, the team was split over whether more conservative mortality guidelines should be applied to Admiralty or if singling out Admiralty for special consideration would suggest that Baranof and Chichagof bear populations were not as important. It was recognized that the biological concern was no greater on Admiralty than the other islands, but Admiralty may merit more conservative management because of its special status as a National Monument. The question is, "How should Admiralty's special status be recognized?"

A team subcommittee was established to brainstorm a list of possible ways the team could recommend that the USFS recognize Admiralty's special status. Among the items were: reduced numbers of commercial groups, group sizes, and encounters permitted on Admiralty; restricting or prohibiting permanent tent camps and other floating or shoreline facilities; establishing areas of non-motorized use and commercial free zones; managing by smaller subunits than elsewhere in Unit 4.

After considerable discussion the team found consensus on the following points:

- The management and legislative history of Admiralty make it apparent that the island must be considered special when it comes to brown bear management.
- The team believes the USFS needs to take essential actions to meet what it sees is its legislated obligation to "protect" bears.

Recommendations (to USFS, see letter Appendix A):

- **First, the USFS must complete a Comprehensive Admiralty Island Plan through a public process which addresses, among other concerns, the steps the agency has taken to fulfill its statutory mandate, and the measures that will be taken to account for future changes in bear populations, habitats, and hunting pressures.**
- **Second, the USFS must demonstrate its commitment to bear protection by working collaboratively with the ADF&G and by providing funding and other assistance to the ADF&G for its studies of brown bear populations, density, and behavior (see also page 45).**

- **In addition, the USFS should consider, and where appropriate adopt, the following specific measures to assure that Admiralty’s special status in relation to the rest of GMU 4 is recognized:**
 - **Restrict or prohibit long-term tent camps;**
 - **Restrict or prohibit shore-based utilities, attachments, or other support for floating camps or lodges.**

By advocating these specific measures for Admiralty Island National Monument, the team is **not** suggesting that they are inappropriate for the rest of GMU 4. They may well be necessary management tools for any area in the Unit. The team believes, however, that these measures could be particularly useful in allowing the USFS to meet its legal obligation to provide special protection for brown bears on Admiralty Island.

Human/Bear High Use Zones and other areas meriting special attention

Problem statement and discussion: Particular areas and types of habitats have an attraction for both bears and humans. Estuaries and anadromous fish streams are the most prominent of these. Bears depend on them primarily as a source of foods and humans frequent them for many types of recreation. The team recognized that these “Human/Bear High Use Zones” may require additional management attention to ensure continued access by bears to these key habitats, and that human/bear interactions are not detrimental to either species.

We defined these zones as: “Areas with enough human use to generate actual or potential problems, including biological problems, relative to bears.” The level of human use and the need for management varies from area to area and will likely change with time. It seemed most useful to group the high use zones in two tiers with two sets of management guidelines based on level of use.

Recommendation (to USFS, ADF&G, and other resource management agencies):

- **Manage estuary and fish stream areas in human bear high-use zones on a two-tier basis according to the following definitions, stipulations, and guidelines (see matrix below)**

Tier I: “Areas with consistently good bear habitat with repetitive and frequent human use sufficient to generate immediate management concerns (amount of use may vary by location).” Limited to areas where action is needed immediately because human use is currently high and the effects of high use are imminent or evident. Boundaries of these areas are delineated exactly.

The list of high-use Tier I areas should include, but probably not be limited to:

- **Lake Eva estuary (Baranof Island) – near heavily used Lake Eva trail**
- **Mud Bay (Chichagof Island) – near Pt. Adolphus high-use area, has landing strips**
- **Head of Idaho Inlet, Trail River estuary (Chichagof Island) – heavily used**

Outfitter/guides permitted for these areas would have the following stipulations required as condition of their permit. Group size, number of groups, and timing guidelines would also be required but would be site-specific and circumstance-specific. For non-commercial use, the following would be treated as voluntary guidelines except in extreme cases.

Stipulations and guidelines - in effect for certain specific seasons or time periods

- **No campfires, barbecues, and picnics.** In order to minimize habituation to human food, and to minimize congestion in areas that may negatively impact bears, campfires, barbecues, and picnics would be required to be held outside these Tier I areas.
- **No camping in estuary areas (salt flats and forest fringe) or along salmon streams.** Camping would be allowed only outside of the estuary areas to minimize disturbance of bears and for the safety of campers.
- **No transport by airplanes, 4-wheelers, jet boats, or helicopters within the estuaries proper.** These types of transportation modes would be required to land outside of the estuary and have visitors walk in, in order to minimize disturbances on bears.

Tier II: “Areas with consistently good bear habitat where human use is not immediately a problem but has the potential to be a problem and is approaching the level of Tier I areas.” This list is primarily an agency tool and does not directly change on-the-ground management, but it gives notice to the public that Tier I status is likely unless voluntary guideline compliance is working. Boundaries of these areas are approximate.

The list of high-use Tier II areas should include, but probably not be limited to:

- **Green’s Creek** (Admiralty Is.) – close proximity to Juneau, potential for growth
- **Red Bluff Bay streams** (Baranof Is.) – increasing service days, near several lodges
- **Pybus Bay streams** (Admiralty Is.) – lodge in bay, heavily hunted, increasing service days

For commercial operators in Tier II areas, the above stipulations and guidelines become voluntary rather than permit conditions. Operators’ permits also do not yet have group size, number of groups, and timing restrictions. Managing agencies will monitor these areas closely and issue notices to operators and the public to avoid disturbing bears at critical times such as during salmon runs.

Conditions that may change classification of high use areas:

The following are conditions that may change voluntary guidelines to mandatory stipulations in human/bear high use zones. Each location must ultimately be analyzed on a case-by-case basis, but these “triggers” serve to guide managers in making decisions.

- **Increased use** (both commercial and non-commercial) – This may be documented in Outfitter/Guide Actual Use Report data base compilation by the USFS, documented reports of crowding by upland land managers, or other sources.
- **Change in mode of access** – For example, from non-motorized to motorized or saltwater-based to land-based access.
- **Reports or documented cases of visitors’ conflicts with bears.**
- **Evidence of use/abuse.**
- **Management concerns** – usually generated by one of the above categories.

Management Matrix for "Human/Bear High Use Zones"

Type of area	Commercial Users	Non-commercial Users
Tier I	Permit stipulations, Active management	Voluntary guidelines except in extreme cases
Tier II	Permit guidelines, Monitoring by agencies	Voluntary guidelines
Elsewhere in Unit 4	Permit guidelines	Voluntary guidelines

Problem statement and discussion: In discussing the USFS Saltwater Shoreline-based Outfitter/Guide Analysis, the team recognized that some “hot spots” of use would need to be managed by smaller areas than Guide Use Areas.

Recommendations (to the USFS, see letter Appendix A):

- **Although it makes sense to use state designated Guide Use Areas (GUAs) to determine carrying capacities, evaluate whether particular areas within the GUAs merit special attention. Special attention could include lower use limits, more monitoring, smaller management units (no smaller than GUAs for the management of hunting guides), or perhaps closures to certain types of use. The USFS seems to assume that users will spread out naturally throughout the GUAs. This is not necessarily the case. The agency also seems to assume that users will be satisfied to spread out to avoid other users and that all areas within a GUA will support the same quality of experience. Explain this assumption.**
- **Put a monitoring plan in place to verify assumptions used in developing carrying capacities.**
- **Work with communities and individuals to identify the “special areas” that Southeast Alaska communities and residents have identified as being important for a number of uses, including recreation and tourism. Set carrying capacity targets for these areas which respond to community and resident needs. These steps are needed to comply with the direction in the Revised Forest Plan to minimize "[a]dverse impacts to popular or highly-valued local areas with outfitter/guide operations" when authorizing outfitter/guide operations. (see Revised Forest Plan at 4-41, REC122 II.4.d)(2)(c)).**

- **Manage human use by smaller subunits, if necessary and workable, to minimize user conflicts, promote research, or respond to management, bear population, or overcrowding issues.**

Community stability

Problem statement and discussion: The health of Unit 4 bears is closely tied to the economic and social health of Southeast Alaska communities. Many residents, while welcoming new opportunities for economic growth, are trying to protect their communities' unique qualities and to preserve their way of life. It is important to ensure that local residents benefit directly from protecting bears.

Economic change in Southeast communities is creating both new threats and opportunities for local residents. On one hand traditional fishing and logging opportunities are declining. At the same time rapid growth of tourism is creating new pressures for change. Residents of small communities have expressed concern that large, nonlocal companies with greater access to capital and the ability to react more rapidly to new economic opportunities may be awarded all the available commercial use capacity in an area before local residents can get involved.

The team supports increased efforts to make sure that local residents benefit from commercial guiding and outfitting opportunities.

Recommendation (to USFS, see letters Appendices A and B, and other agencies):

- **Make community stability a cornerstone of USFS carrying capacity decisions. Consider two measures to provide for small business opportunities in recreation and tourism in the Unit 4 area:**
 - 1) **allocating a certain number of group days in each area to businesses with less than a certain number of employees; and**
 - 2) **allow for the gradual, slower-paced planning and developing of tourism and related activities in rural communities by allocating, before carrying capacity is reached, a certain number of group days in community home ranges to businesses owned by local community residents.**
- **State and federal agencies can aid rural communities in transition by:**
 - 1) **assisting them in planning for future growth;**
 - 2) **seeking management objectives, recommendations, and solutions that recognize community desires;**
 - 3) **providing local communities ample opportunity to comment on proposed issuance of permits. These include outfitter/guide permits as well as resource use applications;**
 - 4) **referring requests for information on area-specific activities to that local area's currently permitted outfitter/guides, if such referrals are in accordance with community plans.**

Socio-economic impact analysis

Problem statement and discussion: An analysis of socio-economic impacts is important for any major land management planning and allocation decisions. In the case of the USFS Saltwater Shoreline-based Outfitter/Guide Analysis, questions we believe need answers include:

- Are existing outfitters already using the entire commercial allocation in some areas?
- Is there room for additional growth in others?
- What impacts would result if the full allocation of outfitter/guide permits are given out in any one area?
- Will there be more impacts in other areas?
- Will guides be displaced into less desirable areas?
- What is the level of outfitter/guide activity that is authorized in areas planned for future timber sales?

Recommendation (to USFS, see letter Appendix A):

- **Complete a socio-economic impact analysis as part of the environmental document. Add information to the planning document that shows how the proposed carrying capacity and outfitter/guide allocations will affect current and future businesses.**

Seymour Canal Zoological Area (SCZA)

Problem statement and discussion: In the Tongass Land Management Plan, the USFS has proposed management of a “Seymour Canal Zoological Area” that includes establishing zones where commercial guiding would not be allowed, and limiting the number of daily visitors allowed (commercial and noncommercial) into various portions of the SCZA. The USFS believes such regulations are necessary to prevent visitor use rising to unacceptable levels and provide a spectrum of viewing and wilderness experience. More individuals addressed this issue than any other during team public comment periods. Most comments were opposed to the USFS proposed action. The team heard public testimony from several tourism guides that disagreed with the idea of commercial-free zones in the area. Guides believe they are positive factors in the regulation of human use in the SCZA and not the problem. Guides also told us that airplane noise is a problem and that proposed limits on visitor numbers are too low. Given the complexity of the issues, our desire to deal with other issues in the time available, and the ongoing USFS public process, we decided to defer to the USFS public process and not make any recommendations for SCZA management.

Recommendation:

- **The team has no recommendation on SCZA management.**

Section 5: Research and monitoring

Introduction

Because the team's mortality guidelines and other regulatory recommendations are tied to a percentage of bear populations in Unit 4, having reliable population estimates is critical to good management. The capture/relocation method in which bears are radio-collared then relocated is the one typically used by ADF&G on Unit 4 bears. That method is expensive, however, and quite intrusive on the bears so other techniques such as DNA identification through hair samples and tetracycline biomarkers have been investigated. Initial results are that those methods have problems that seem to rule them out for Unit 4 work at this time. DNA identification is limited by availability of expertise to do analysis of samples. The tetracycline biomarkers method has not been tested on brown bears and seems to need a larger sample size than we could get in a study area here.

Monitoring permitted outfitter/guide and other recreational use of estuaries and other critical bear habitat, the effects of roads DLPs and other nonhunting mortality are also recognized as important research and monitoring issues. Other research the team considered important to continue was genetic work on both Unit 4 and neighboring mainland bears and studies of bear/human interactions in viewing areas and elsewhere. We have not made any recommendations about these research subjects, however.

Population estimates

Problem statement and discussion: Previous population work in Unit 4 has been done on northern Admiralty and Northeast Chichagof. The team was initially divided about where priorities for future population studies should be placed. Some team members believe south Admiralty Island should be a priority. With more certain population information on south Admiralty, their concerns about excessive harvest in localized portions of the island may be alleviated.

ADF&G has immediate management concerns about Northeast Chichagof, where human-caused mortality is at or near the management limit. ADF&G's immediate plans are for a mark/resight population study on Northeast Chichagof and a smaller pilot study to begin population work on south Admiralty. ADF&G doesn't have enough money to do both areas equally well. Any mark/resight population study requires a minimum of two to three years to get a good estimate. After much discussion the team ended up supporting ADF&G's priority.

The concern of some team members about priorities for population work is driven by a great deal of public interest in south Admiralty National Monument, uncertainty about the population there, and the USFS process and responsibility for setting guide limits. They raised the question of why the USFS isn't contributing money to a study. Because a study on south Admiralty would help complete the population picture the team urged ADF&G to think larger about the problem and look for additional funding from the legislature and others for bear studies. The team agreed to draft a letter to the USFS asking it to contribute as well.

Recommendations (to ADF&G and the USFS):

- **Although the most compelling need for population data currently appears to be on Northeast Chichagof, interest in south Admiralty argues for an ADF&G pilot study there to see what is needed for a good population estimate.**
- **ADF&G should investigate ways to get more funding for a more complete population study on Admiralty.**
- **USFS needs to help fund ADF&G population work in Unit 4 and support research on Admiralty Island. (See also recommendation under Admiralty Island's special status, pages 38-39.)**

Monitoring outfitter/guide use

Problem statement and discussion: The definition of carrying capacity for outfitter/guides and other recreational use may change over time as more is learned about an area and the effects of use on bears and other resources. We also thought it important to monitor whether or not permitted guides comply with limits on group size and number of visits and other permit requirements

Recommendation (to the USFS, see letter Appendix A):

- **A monitoring and compliance plan needs to be a part of the Saltwater Shoreline-based Outfitter/Guide Analysis EIS. It is essential for the public and agencies to understand how the capacity limits will be monitored. If limits are exceeded, how will that be detected and corrected? There also needs to be some formalized method of testing the predicted effects once the plan is implemented. (See also recommendation under Carrying capacity, page 36)**

Monitoring the effects of roads

Problem statement and discussion: In its comments on road and travel access management on Northeast Chichagof, the team noted that roads that are left open will put people in proximity to bears. Research has demonstrated a positive correlation between an increase in road mileage on Northeast Chichagof and an increase in non-hunting mortality there. We recommended that in areas where roads are left open the USFS, in conjunction with ADF&G, needs to monitor the effects of the roads on bears. The USFS also needs to have a plan for mitigating detrimental effects on bears.

Recommendation (to USFS, see letter Appendix C, and ADF&G)

- **In roaded areas it is important USFS management be actively involved in bear protection. This requires:**
 - **identifying opportunities for bear viewing and deciding which of these should be managed for viewing opportunities,**
 - **actively assisting ADF&G, through funding and other means, in the monitoring of the Northeast Chichagof bear population,**
 - **monitoring human use trends,**

- **monitoring the distribution and frequency of DLP bear mortality,**
- **having a strategy for dealing with unacceptable levels of bear displacement or mortality.**
- **(See also recommendations on Road and access management, pages 20-22)**

Appendices

Letters from Unit 4 Brown Bear Management Team with recommendations for action

- Appendix A – May 6, 1999 to US Forest Service, comments on Draft Chatham Area Saltwater Shoreline-based Recreation Carrying Capacity Analysis and Proposed Action for Saltwater Shoreline-based Outfitting and Guiding on the Chatham Area
- Appendix B – February 17, 2000 to US Forest Service, scoping comments for Saltwater Shoreline-based Outfitter Guide Analysis EIS for the Chatham Area
- Appendix C – December 9, 1999 to US Forest Service, on Access and Travel Management planning for the Hoonah Ranger District
- Appendix D – February 1, 2000 and April 25, 2000 letters to US Forest Service, on Access and Travel Management planning for the Hoonah Ranger District
- Appendix E – December 9, 1999 to US Forest Service, on supporting funding and staffing for Saltwater Shoreline-based Outfitter Guide Analysis EIS for the Chatham Area and maintaining the moratorium on granting new hunting guide permits for Unit 4
- Appendix F – February 14, 2000 letters to House and Senate Resources Committees of Alaska Legislature, on holding hearings on the subject of reinstating the Big Game Commercial Services Board
- Appendix G – February 18, 2000 letter to Federal Southeast Subsistence Regional Advisory Council and April 10, 2000 letter to Federal Subsistence Board with comments on Federal Subsistence Board proposal number 4
- Appendix H – March 21, 2000 letter to USFS, asking for a moratorium on issuing additional permits to brown bear hunting guides in Unit 1A and possibly all of Unit 1; and March 30, 2000 reply from USFS
- Appendix I – March 22, 2000 letter to Southeast Conference, on community solid waste issue

Lists of Guidelines recommended or endorsed by Unit 4 Brown Bear Management Team

- Appendix J – Guidelines for mitigating effects of development on brown bears
- Appendix K – Guidelines for managing food and solid waste in brown bear habitat
- Appendix L – Alaska Visitors Association “Best Management Practices – Flightseeing/Wildlife Viewing Guidelines”
- Appendix M – Guidelines for behavior and viewing tips for viewing of solitary bears or family groups of bears in remote locations where bears are not habituated to humans
- Appendix N – ADF&G site selection and management guidelines for areas like Pack Creek where bears are habituated to people
- Appendix O – Guidelines for site selection and management of Brown Bear Special Use Zones

Appendix A OF ALASKA

TONY KNOWLES, GOVERNOR

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May 6, 1999

Fred S. Salinas, Assistant Forest Supervisor
Chatham Area, Tongass National Forest
204 Siginaka Way
Sitka, AK 99835

Subject: "Draft Chatham Area Saltwater Shoreline-based Recreation Carrying Capacity Analysis" and
"Proposed Action for Saltwater Shoreline-based Outfitting and Guiding on the Chatham Area"

Dear Mr. Salinas:

The purpose of this letter is to convey the Unit 4 Brown Bear Management Team's comments regarding your agency's August 1998 Draft Chatham Area Saltwater Shoreline-Based Recreation Carrying Capacity Analysis and the associated Proposed Action for Saltwater Shoreline-based Outfitting and Guiding on the Chatham Area. The team, formed under the auspices of the Alaska Board of Game, represents a variety of shoreline users in state Game Management Unit 4, which includes Admiralty, Baranof, and Chichagof (ABC) islands.

The purpose of the Brown Bear Management Team is to review issues of resource management and any human activities in Unit 4 that affect brown bears, such as hunting, viewing, human access, and habitat alteration; agree on brown bear management goals and objectives; determine what changes are needed in current management to meet those goals and objectives; develop key elements of a management strategy that reflects those changes; and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

The following are our specific recommendations for revision of the Draft Carrying Capacity Analysis and Proposed Action.

- 1. Cooperation with the State.** The Forest Service needs to develop its shoreline carrying capacities in cooperation with the State of Alaska to ensure that they are meaningful. To effectively manage human shoreline use, it is essential to cooperatively address both state intertidal land below mean high tide and federal intertidal land and upland above mean high tide. The Forest Service and the state have recognized this reality in their cooperative management of the Pack Creek estuary.
- 2. Groups.** The term "group" needs to be defined more clearly. As currently defined, a group includes up to 12 or more people. A group under this definition could include anywhere from one to an infinite number of people. Clearly, a single recreational user does not have the same impact as a group of 72 passengers from a medium-size cruise ship. Groups should be defined as small, medium, or large; the range in the size of these groups should be specified; and the allocation of group days should differ depending on the size of the groups, the objectives for the Land Use Designation (LUD) of the area in question, and the compatibility between existing uses.
- 3. Explanation of carrying capacity criteria.** There needs to be further explanation of how the four kinds of carrying capacity criteria – ecological, physical, facility, and social – are actually applied in the carrying capacity analysis. The revised Tongass Forest Plan requires the Forest Service to consider

whether "[t]he affected ecosystem(s) have the capability to accommodate the expected kinds of activities and amounts of use without degradation of ecosystem composition and structure." (see revised Forest Plan at 4-41, REC122 II.4.d)(2)(a)). Certain sensitive wildlife species, such as brown bear, may be impacted by higher levels of recreation and tourism activities. Some important bear habitats may require lower carrying capacity figures.

4. Management area size and monitoring. For carrying capacity limits to be meaningful on the ground, the following considerations need to be incorporated:

- a. Manage human use by smaller subunits, if necessary and workable, to minimize user conflicts, promote research, or respond to management, bear population, or overcrowding issues.
- b. A monitoring and compliance plan needs to be a part of the plan/environmental document. It is essential for the public and agencies to understand how the capacity limits will be monitored. If limits are exceeded, how will that be detected and corrected? There also needs to be some formalized method of testing the predicted effects once the plan is implemented.

5. Areas managed for less than maximum social or recreation carrying capacity. Setting initial carrying capacity limits prior to authorization of actual use tends to be somewhat theoretical. Therefore carrying capacities should be re-evaluated on a regular basis and adjusted based on the impacts of actual use. Given the limited precision of brown bear population estimates, a limited understanding of the degree to which human activity disturbs bear behavior along shorelines, and the need to assess the compatibility between human uses, it is not prudent to unduly push carrying capacities to their apparent maximum limits.

The seasonal total use should not be based on the daily maximum use (service days or groups) times the number of days in the season. Rather, the seasonal total should be an "optimal" target that is a lower average number, so that when an area has reached its targeted carrying capacity, a user would find the maximum number of users or groups on some days but less than that number on other days. The balance used to find this "optimal" target will vary with specific sites, uses, and the experience the area is managed for.

6. Allocation of use. Where capacity levels are set, allocations between commercial and non-commercial use should be established. Consideration should be given to providing small business opportunities for residents of local communities within the immediate area. Areas should be managed for different capacity targets based on group size, length of stay, and type of use. Certain areas should be managed for low levels of use. Some areas may be considered off limits for certain types of commercial activity and/or during certain times of the year. Such restrictions may be applied when commercial activity or other uses cause adverse impacts, and reasonable alternative locations are available to accommodate the commercial use.

7. Nonresident hunter and hunting guide levels. To 1) maintain brown bear populations; 2) promote economic viability of the guide industry; and 3) minimize conflicts with other users, including subsistence, and in consideration of historical use patterns, the team recommends that:

- a) the allowable number of authorized bear guides be reduced by attrition to no more than 20; and,
- b) the total number of nonresident hunters be as per Alternative 2 of the Southeast Alaska Guide Association's proposal. See following table and discussion.

- c) allocation between spring and fall seasons will be based approximately on ADF&G data of historical breakdown between those season.

Guide Use Area	Current Average Historical Use (number of nonresident hunters)	Adjustment from current average use	Recommended total number of nonresident hunters	Rec. total number of non-resident guided hunters	Rec. total number of non-residents hunting with next-of-kin
4-01 SE Baranof	10		10	10	
4-02 SW Baranof	4	3	7	7	
4-03 Sitka Area	3	1	4	4	
4-04 NE Baranof	12		12	11	1
4-05 SW Admiralty	15		15	15	
4-06 South Admiralty	19	-2	17	16	1
4-07 SE Admiralty	6		6	5	1
4-08 North Admiralty	2		2	1	1
4-09 Seymour Canal	8		8	6	
4-10 NW Admiralty	9		9	9	
4-11 NE Chichagof	9		9	9	
4-12 Tenakee Inlet	14		14	14	
4-13 Hoonah Sound	22	-4	18	16	
4-14 SW Chichagof	4	2	6	6	
4-15 NW Chichagof	6		6	6	
4-16 North Chichagof	4	1	5	6	
Total	147	1	148	144	4

We took the historic use for each Guide Use Area and then made slight adjustments to the amount of allowed use based upon practical experience. Some areas are currently over-utilized, particularly during parts of the season, while other areas are under-utilized. This is an issue of crowding, not the ability of an area to produce bears. To account for this, an adjustment has been made to some areas based upon the

experience of guides in those areas. This adjustment is upward in areas that are under-utilized and downward in areas that are over-utilized.

Four Guide Use Areas have had an average of one nonresident hunting with next-of-kin annually in recent years. In those areas we have recommended that the annual number of guided nonresident hunters be reduced by one to accommodate those nonresidents hunting with next-of-kin. Nonresidents also hunt with next-of-kin in other GUAs, but not on a consistent enough basis for us to recommend reducing the number of guided nonresident hunters.

We believe that this alternative will reduce pressure where overcrowding is the worst and allow this pressure to shift to areas which are currently under-utilized. There are no major adjustments recommended to historic use, and additional adjustments could be made on an area by area basis as experience is gained under the new system.

8. **Minimize disturbance to bears.** The number, timing, and location of bear and recreational outfitter/guides need to be managed to minimize disturbance to bears and their habitat.
9. **Admiralty Island National Monument status.** In 1901, President Roosevelt endorsed a bear sanctuary for Admiralty Island. In 1932, a bear management plan for the island was issued by the Alaska Game Commission and the U.S. Forest Service. The plan gave bears a high priority in the management of the island. In 1978, the Alaska Board of Game's ABC Management Plan specified the primary management goal of hunting brown bears under "aesthetically pleasing" conditions. In 1978, President Jimmy Carter, in Proclamation 4611, stated "Unusual aspects of the island ecology include its exceptional distribution of animal species, including dense populations of brown bear. The island is an outdoor living laboratory for the study of bald eagle and Alaskan brown bear." These and numerous other historical statements concerning Admiralty's special status were reinforced when Congress passed ANILCA in 1980, giving a large portion of Admiralty Island national monument status.

Under Sec. 503 (c) of ANILCA the U.S. Forest Service was directed to "protect objects of ecological...and scientific interest." 16 USC Sec. 431. The legislative history of ANILCA makes clear that one of the primary resources Congress considered in giving Admiralty Island National Monument and Wilderness status was its brown bear population. Both the language of the act and the legislative history reinforce the view that Admiralty Island must be considered "special", when it comes to brown bear management.

In order to determine whether the Forest Service has met its obligation to "protect" brown bears as mandated in Sec. 503 of ANILCA, the team believes that two essential actions must be taken.

- 1) First, the USFS must complete a Comprehensive Admiralty Island Plan through a public process which addresses, among other concerns, the steps the agency has taken to fulfill its statutory mandate, and the measures that will be taken to account for future changes in bear populations, habitats, and hunting pressures.
- 2) Second the USFS must demonstrate its commitment to bear protection by working collaboratively with the Alaska Department of Fish and Game and by providing funding and other assistance to the Alaska Department of Fish and Game for its studies of brown bear populations, density, and behavior.

In addition, the USFS should consider, and where appropriate adopt, the following specific measures to assure that Admiralty's special status in relation to the rest of GMU 4 is recognized:

- Restrict or prohibit long-term tent camps;
- Restrict or prohibit shore-based utilities, attachments, or other support for floating camps or lodges.

By advocating these specific measures for Admiralty Island National Monument, the team is not suggesting that they are inappropriate for the rest of GMU 4. They may well be necessary management tools for any area in the Unit. The team believes, however, that these measures could be particularly useful in allowing the USFS to meet its legal obligation to provide special protection for brown bears on Admiralty Island.

- 10. Effects of private lands.** Forest Service decisions need to reflect the fact that private inholdings represent a significant non-permitted/non-regulated use of the shoreline. For example, a lodge can create a base of operation that at times dominates a bay. Non-guided hunts out of such a facility can account for a substantial use of nearby national forest shorelines.

When establishing shoreline carrying capacity, it is essential to consider the effects of existing private inholdings, and those of potential inholdings that will be created by conveyance of Native Allotments, most of which could become sites for lodges (three pending allotments in Mitchell Bay, one pending in Whitewater Bay, one pending in Windfall Harbor, and one pending in Little Pybus Bay).

- 11. Areas meriting special attention.** While it makes sense to use state designated Guide Use Areas (GUAs) to determine carrying capacities, the Forest Service should evaluate whether particular areas within the GUAs merit special attention. Special attention could include lower use limits, more monitoring, smaller management units, or perhaps closures to certain types of use. The Forest Service seems to assume that users will spread out naturally throughout the GUAs. This is not necessarily the case. The agency also seems to assume that users will be satisfied to spread out to avoid other users and that all areas within a GUA will support the same quality of experience. This assumption needs to be explained. A monitoring plan also needs to be in place to verify assumptions used in developing carrying capacities.

Southeast Alaska communities and residents all have "special areas" which are important for a number of uses, including recreation and tourism. The Revised Forest Plan directs the Forest Service to minimize "[a]dverse impacts to popular or highly-valued local areas with outfitter/guide operations" when authorizing outfitter/guide operations. (see Revised Forest plan at 4-41, REC122 II.4.d)(2)(c)). To comply with this direction the agency should work with communities and individuals to identify these special areas and to set carrying capacity targets which respond to community and resident needs.

- 12. Community stability.** Community stability should be a cornerstone of carrying capacity decisions. To provide for small business opportunities in recreation and tourism in the Unit 4 area, two measures should be considered:

- 1) allocating a certain number of group days in each area to businesses with less than a certain number of employees; and
- 2) allow for the gradual, slower-paced planning and developing of tourism and related activities in rural communities by allocating, before carrying capacity is reached, a certain number of group days in community home ranges to businesses owned by local community residents. Such a program could

be initiated in the spirit of the Small Business Administration or the Small Sales Timber Salvage Program.

- 13. Socio-economic impact analysis.** As part of the environmental document, the Forest Service should complete a socio-economic impact analysis. Information needs to be added to the planning document that shows how the proposed carrying capacity and outfitter/guide allocations will affect current and future businesses. Questions in need of answers include: are existing outfitters already using the entire commercial allocation in some areas? Is there room for additional growth in others? What impacts would result if the full allocation of outfitter/guide permits are given out in any one area? Will there be more impacts in other areas? Will guides be displaced into less desirable areas? What is the level of outfitter/guide activity that is authorized in areas planned for future timber sales?
- 14. Subsistence.** Impacts to subsistence must also be considered when determining carrying capacity. The Revised Forest Plan directs the agency to minimize "adverse impacts to subsistence users" when authorizing outfitter/guide operations. (see Revised Forest plan at 4-41, REC122 II.4.d(2)(f)).

Sincerely,



Greg Streveler, Chair
for members of the Unit 4 Brown Bear Management Team

Bruce Baker,	Friends of Admiralty, SEACC, Sitka Conservation Society
Jerry Barber,	Sitka Fish and Game Advisory Committee
Steve Behnke,	Alaska Wilderness and Recreation Tourism Association
Bob Engelbrecht,	Alaska Visitors Association
Paul Grant,	Admiralty Bear Association
Dave Helmick,	Petersburg Fish and Game Advisory Committee
Bob Hinman,	Territorial Sportsmen
Paul Johnson,	Southeast Alaska Guide Association, Alaska Professional Hunters Association
Mim McConnell,	Port Alexander Fish and Game Advisory Committee
Ken Schoonover,	Huna Totem Corporation
Jack Whitman,	Alaska Department of Fish and Game
Eruk Williamson,	Alaska Board of Game

cc: Governor Tony Knowles
Rick Cables, Regional Forester, USDA Forest Service Region 10
Jim Caplan, Deputy Regional Forester, USDA Forest Service Region 10
Tom Puchlerz, Forest Supervisor, Tongass National Forest
Marti Marshall, Recreation Specialist, USFS Chatham Area
Frank Rue, Commissioner, Alaska Department of Fish and Game
John Shively, Commissioner, Alaska Department of Natural Resources
Marty Rutherford, Deputy Commissioner, Alaska Department of Natural Resources
Wayne Reglin, Director, ADF&G Division of Wildlife Conservation
Lori Quakenbush, Chair, Alaska Board of Game

Appendix B OF ALASKA

DEPARTMENT OF FISH AND GAME BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

February 17, 2000

Julie Schaefers, Team Leader
Sitka Assistant Forest Supervisor, TNF
Outfitter Guide Analysis
PO Box 21628
Juneau, Alaska 99802

Re: Saltwater Shoreline-based Outfitter Guide Analysis

Dear Ms. Shaefers:

The purpose of this letter is to convey the Unit 4 Brown Bear Management Team's comments regarding the Saltwater Shoreline-based Outfitter/Guide EIS. The Unit 4 Brown Bear Management Team previously commented on the August 1998 Draft Chatham Area Saltwater Shoreline-Based Recreation Carrying Capacity Analysis and Outfitter/Guide EA on May 6, 1999.

We are disappointed that the Forest Service has decided that State/Federal cooperation and opportunities for local business are outside the scope of this EIS. We would like to provide some additional information showing why the Forest Service needs to reconsider this decision.

State and Federal cooperation

In the recent scoping notice, the Forest Service indicates that it will not consider State waters and tidelands in its EIS because "the Forest Service does not have authority to manage State waterways." This statement fails to acknowledge the agency's responsibility to work cooperatively with the State and other federal agencies to manage saltwater-based tourism in the Tongass as clearly spelled out by directions in the National Environmental Policy Act (NEPA) and the current Forest Plan (TLMP).

We laud the ongoing cooperative state-federal planning of shorelines in Unit 4. The thrust of this letter is to ensure that the Forest Service adheres to federal NEPA direction for describing in the EIS both the anticipated impacts of past, present, and reasonably foreseeable actions and the cooperative state-federal shoreline planning.

According to NEPA, activities on State waters and tidelands are actions, which "when viewed with other proposed actions, have cumulatively significant impacts and should therefore be discussed in the same impact statement." NEPA requires that the agency "include reasonable alternatives not within the jurisdiction of the lead agency," such as restricting uses on State tidelands and waters.

NEPA provides further that "[Federal] agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements..." NEPA further directs the agency to consider the environmental consequences of "possible conflicts between the proposed action and the objectives of Federal, regional, State, and local land use plans, policies, and controls for the area concerned." Clearly NEPA encourages the kind of cooperation needed between the Forest Service, State, and the Corps of Engineers regarding recreation and tourism planning in Southeast Alaska.

Julie Schaefers, Team Leader
Saltwater Shoreline-based Outfitter Guide Analysis
February 17, 2000
Page 2

In addition, TLMP directs the agency to “cooperate and coordinate with National, state, and local agencies in providing a balance of outdoor recreation opportunities throughout Southeast Alaska;” to “[p]rovide recreation opportunities on National Forest System lands in concert with, and supplemental to, those opportunities which are located on other land ownerships and jurisdictions,” and “[c]ooperatively participate with local communities and user groups when implementing recreation development projects.

Opportunities for small, locally-owned businesses

Maintaining small business opportunities in recreation and tourism is of utmost importance for Southeast Alaska communities. There are a number of ways the Forest Service could help in this regard. For instance, allocating a certain number of visitor days in community home ranges to businesses owned by local community residents.

We respectfully disagree with the Forest Service that such potential actions are outside the scope of the EIS. The Forest Service itself indicates one of its agency goals is to assist local rural communities in their economic development. The notice refers to section 1307 of ANILCA which states that the Secretary “shall give preference to persons whom he determines, by rule, are local residents” in “selecting persons to provide any type of visitor service for any conservation system unit [CSU], except sport fishing and hunting guiding activities.” Somehow, the Forest Service uses this as a mandate to avoid this issue. On the contrary, this section of ANILCA can be interpreted to direct the Forest Service to give preference to local residents in providing visitor services. We urge you to construct an EIS alternative that follows this interpretation.

Thank you for considering these comments.

Sincerely,



Greg Streveler, Chair
Unit 4 Brown Bear Management Team

cc: Tom Puchlerz, Tongass Forest Supervisor
John Shively, Commissioner, Alaska Department of Natural Resources
Frank Rue, Commissioner, Alaska Department of Fish and Game
Ginny Fay, Director, Alaska Division of Tourism
Marti Marshall, Recreation Specialist, Tongass National Forest, Sitka

Appendix C OF ALASKA

DEPARTMENT OF FISH AND GAME BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

December 9, 1999

Paul Matter, District Ranger
Hoonah Ranger District
USDA Forest Service
Chatham Area
PO Box 135
Hoonah, Alaska 99829

Dear Mr. Matter:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group representing diverse interests in northern Southeast Alaska. Members work to find common ground on the issues and are committed to making all decisions by consensus if possible. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4 that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

In that role, the Unit 4 Brown Bear Management Team submits the following general comments on road "Access and Travel Management" planning for the Hoonah Ranger District. Because of the island-like characteristics of Northeast Chichagof, the fact that all major salmon stream drainages are currently roaded, and that brown bears there are nearly a discrete population, the team believes that the welfare of brown bears needs to be one of the priority considerations of the Forest Service when it decides on long term management of roads in the Hoonah District.

In planning the road system the Forest Service should look at roads' effects on bears' use and access to critical bear habitat. ADF&G research found brown bears spent time farther away from salmon streams in logged and roaded areas than unroaded, unlogged drainages which may mean bears are not making optimal use of the salmon food source in heavily roaded and cut drainages. Road traffic near salmon streams or crossing streams near important bear feeding sites (shallows, gravel bars) may disrupt bears' use of those critical areas. The Forest Service needs to realistically evaluate how many road segments and how much mileage it can afford to maintain over the long term. Roads remaining open need to be regularly and assiduously maintained to avoid washouts and other failures detrimental to water quality and fish habitat.

The Forest Service should consider effects on bears from roads and design access to minimize defense of life and property (DLP) kills and illegal kills. If problem roads or segments cannot be closed completely, road traffic may need to be closely regulated and in some cases limited. Seasonal closures should be considered and implemented in some areas. Evidence from radio-tagged and non-tagged brown bears over the past decade indicates that the illegal, indiscriminant killing of brown bears is nearly always associated with shooting them from roads.

To the extent they increase the risk of DLP and illegal kills of bears and may detrimentally affect habitat and stream quality and bears' use of critical habitats, existing roads in designated Old-Growth Habitat LUDS are inconsistent with the objectives of Old-Growth Habitat management. We recommend closing (decommissioning) roads or road segments on Northeast Chichagof Island that are in TLMP Old-Growth Habitat LUD management prescriptions including those in the Port Frederick-Tenakee Inlet portage area.

There is a growing demand for bear viewing areas in Southeast Alaska. Areas accessible by road may have potential for becoming viewing sites. The Forest Service should consider developing bear viewing areas on the road system in locations acceptable to local residents. However, sites for viewing areas should be selected and viewing in the areas done in such a way that the safety of bears and visitors is ensured. Viewing areas need to be designed so that bears are not disturbed from their natural activities or displaced from critical cover habitat or foraging and fishing locations.

At a later date the Unit 4 Brown Bear Management Team will provide specific recommendations for closing (decommissioning) existing road segments.

In regard to the recreation planning now underway in the Hoonah Ranger District, the Forest Service also needs to make the welfare of brown bears one of the priority considerations in the development of a Recreation Master Plan. Siting of cabins, trails, mooring buoys, and other recreational facilities needs to avoid displacing bears from critical habitats and to avoid placing humans and bears in situations where the safety of either or both is at risk. Putting campgrounds or picnic sites, with their associated garbage and food, in salmon stream drainages heavily used by bears is not advisable. Past recreation projects have not always been sensitive to this consideration. For instance, a large segment of the trail to Wukuklook Beach was built over a heavily used bear trail along a salmon stream. The team will have further comments about recreational planning in the future.

Thanks for the opportunity to comment.

Sincerely,



Greg Strevler

Chair, Unit 4 Brown Bear Management Team

cc: Fred Salinas
Marti Marshall
Frank Rue
Diana Cote
✓Tom Paul

Appendix D OF ALASKA

DEPARTMENT OF FISH AND GAME BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

February 1, 2000

Paul Matter, District Ranger
Hoonah Ranger District
USDA Forest Service
Chatham Area
PO Box 135
Hoonah, Alaska 99829

Dear Mr. Matter:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group representing diverse interests in northern Southeast Alaska. Members work to find common ground on the issues and are committed to making all decisions by consensus if possible. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4 that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

In a December 1, 1999, letter to you, the Unit 4 Brown Bear Management Team submitted general comments on road "Access and Travel Management" planning for the Hoonah Ranger District. The purpose of this letter is to provide additional specific recommendations for road management, including a strategy for considering road closures.

We encourage the U.S. Forest Service to retain only the road mileage on NE Chichagof that can be well maintained and managed. Any road reductions should be made with the health of the brown bear population as a primary concern.

CLOSURES

The best candidates for closure are roads that:

1) Are within old growth reserves.

These reserves were set up to protect old-growth dependent wildlife, including bears. ADF&G recommends that old growth reserves be unroaded to provide an extra measure of protection of wildlife.

2) Access important bear habitat.

Portions of these old-growth reserves, such as riparian areas and beach meadows, are particularly important to bears. Roads that access these would be especially good candidates for elimination.

3) Occupy the geographic connection between NE Chichagof and the rest of the island.

NE Chichagof is linked to the rest of the island by a narrow waist that serves as an important corridor for faunal interchange. Roads can potentially impede animal movement through the corridor.

4) Are not connected to the main road system.

Roads off the main system are not as important to local residents.

Using these criteria, we rank the following areas as priorities for closure, in the order presented:

1) All road segments from Tenakee Portage to Salt Lake Bay.

Rationale: old-growth reserve, good bear habitat, important corridor, not hooked to the main road system.

2) All road segments in the Seal Creek drainage.

Rationale: old-growth reserve, good bear habitat, not hooked to main road system

3) Iyouktug/Wukukluk/Gypsum Creeks, all road segments not absolutely necessary to access private land.

Rationale: important bear habitat in midst of large old-growth reserve, but on main road system and with existing visitor facilities

4) Head of Freshwater Bay, all road segments off the main trunk (#8508)

Rationale: important bear habitat at edge of large old-growth reserve, but connected to main road system.

In addition, we recommend closure of particular road segments because of problems with roadbed stability, erosion potentials and/or impedance of fish passage, all of which have implications for brown bear habitat: #85331, #8504, #8579, #85765, and #8576.

ROADS TO LEAVE OPEN

On the other hand, we recommend that roads remain open if they are particularly important to local people, or if they allow access to selected bear viewing areas. Because these roads will put people in proximity to bears, it is important that in roaded areas the Forest Service management be actively involved in bear protection. This requires:

- identifying opportunities for bear viewing and deciding which of these should be managed for viewing opportunities,
- actively assisting ADF&G, through funding and other means, in the monitoring of the NE Chichagof bear population,
- monitoring human use trends,
- monitoring the distribution and frequency of defense of life & property bear mortality, and
- having a strategy for dealing with unacceptable levels of bear displacement or mortality.

Thanks for the opportunity to comment.

Sincerely,



Greg Streveler
Chair, Unit 4 Brown Bear Management Team

cc: Fred Salinas

Appendix D OF ALASKA

DEPARTMENT OF FISH AND GAME

BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

April 25, 2000

Paul Matter, District Ranger
Hoonah Ranger District
USDA Forest Service
Chatham Area
PO Box 135
Hoonah, Alaska 99829

Dear Mr. Matter:

The Unit 4 Brown Bear Management Team resubmits its recommendations for Hoonah Ranger District road closures, originally submitted in our letters of December 9, 1999 and February 1, 2000 during the scoping phase of your "Access and Travel Management Planning". Please consider the comments in those letters to be our response to your proposed action as well.

Sincerely,



Greg Strevler, Chair
Unit 4 Brown Bear Management Team

Appendix E OF ALASKA

DEPARTMENT OF FISH AND GAME BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

December 9, 1999

Tom Puchlerz
Forest Supervisor
Tongass National Forest
Federal Building
Ketchikan, Alaska 99901

Dear Mr. Puchlerz:

The Unit 4 Brown Bear Management Team (BBMT), of which your agency is a part, is making good progress toward its objective of creating a draft bear management plan for presentation to the appropriate agencies by fall 2000. This deadline is especially important as it relates to the Alaska Board of Game, which meets to consider Southeast Alaska issues during fall 2000, and then not again for two years.

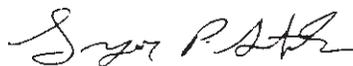
A critical part of the BBMT's work revolves around the recreational carrying capacity and allocation planning being carried out by the Forest Service under the direction of Marti Marshall and others. Unit 4 brown bear management planning was resumed during 1998 when it became evident that the Forest Service was well along in this process, which has the potential to determine limits to guided brown bear hunting activity in the unit. It has been a priority of the BBMT to participate in and expedite that process.

We strongly support the work done to date by Ms. Marshall's group, and hope that it can be given the necessary priority for funding and staffing to keep it on schedule. For our purposes, it is critical that the draft EIS be out for public comment by spring.

We also request that until the Forest Service action pursuant to the carrying capacity and allocation decision becomes final, your agency maintain the moratorium on granting new bear hunting guide permits for Unit 4. That form of use is, in the BBMT's view, already at unsustainably high levels. Any increase before thorough contextual analysis would in our view be ill-advised.

Thank you for your consideration of these requests, and for your agency's crucial participation in the BBMT's work to date.

Sincerely,



Greg Strevler
Chairman
Unit 4 Brown Bear Management Team

cc Fred Salinas, Assistant Forest Supervisor
Diana Cote
Tom Paul

Appendix F

PO Box 94
Gustavus, Alaska 99826

February 14, 2000

The Honorable Rick Halford
Chairman, Resources Committee
Alaska State Senate
State Capitol
Juneau, Alaska 99801-1182

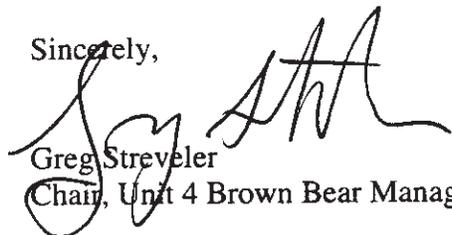
Dear Chairman Halford:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group established by the Alaska Board of Game, representing diverse interests in northern Southeast Alaska. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4, (Admiralty, Baranof-Kruzof, Chichagof-Yakobi islands) that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

At its January 6-7, 2000 meeting, the team discussed issues related to regulation of big game guiding in GMU 4, and came unanimously to the conclusion that the Big Game Commercial Services Board or an equivalent should be reinstated. To that end, we endorse Alaska Board of Game resolution 98-127, submitted to you on October 26, 1998, (appended).

We respectfully request that your committee hold hearings on this subject during the present legislative session.

Sincerely,



Greg Streveler
Chair, Unit 4 Brown Bear Management Team

attachments

Cc: Senator Robin Taylor
Senator Jerry Mackie
Senator Kim Elton

Appendix F

PO Box 94
Gustavus, Alaska 99826

February 14, 2000

The Honorable Bill Hudson and Beverly Masek
Co-Chairs, Resources Committee
Alaska House of Representatives
State Capitol
Juneau, Alaska 99801-1182

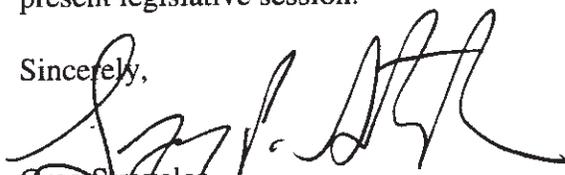
Dear Co-Chairs Hudson and Masek:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group established by the Alaska Board of Game, representing diverse interests in northern Southeast Alaska. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4, (Admiralty, Baranof-Kruzof, Chichagof-Yakobi islands) that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

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We respectfully request that your committee hold hearings on this subject during the present legislative session.

Sincerely,



Greg Sreyeler
Chair, Unit 4 Brown Bear Management Team

attachments

Cc: Representative Albert Kookesh
Representative Ben Grussendorf
Representative Beth Kertula

Appendix G OF ALASKA

DEPARTMENT OF FISH AND GAME BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

February 18, 2000

William Thomas, Chair
Federal Southeast Regional Subsistence Advisory Council
PO Box 5196
Ketchikan, Alaska 99901

Dear Chairman Thomas and Regional Council members:

The Unit 4 Brown Bear Management Team has the following comments on Federal Subsistence Board proposal number 4 which would change the harvest interval for Unit 4 brown bears by federally qualified rural subsistence users. Residents of Unit 4 and Kake would be allowed to take a bear every 2 years should the proposal be passed. The team recognizes the need for customary and traditional subsistence brown bear harvest of up to 10 bears a year in Unit 4 and it recognizes the desire of Regional Council members for reasonable subsistence opportunities. However, the team is not in favor of the proposal as presently written for the following reasons:

- It is too broadly applied to all Unit 4 federally qualified subsistence-eligible residents and therefore open to abuse by those who are not using it for subsistence.
- The proposal may cause harvest to exceed the team's recommended 4% harvest guidelines in island subpopulations if a large number of federally qualified subsistence hunters take advantage of the proposal.
- The current "one bear every four years" regulation has not yet been maximized either in terms of actual harvest for subsistence purposes or in terms of providing individuals the opportunity for subsistence hunting of brown bears.
- Existing regulations already allow experienced hunters to serve as back-up for novice or student hunters as often as they want to.
- If there is an additional concern that there are too many bears in portions of Unit 4, there are other ways to deal with this issue.

If after considering the above points, the Council still believes a regulatory change is necessary, we suggest it consider modifying and adopting one of the following existing regulations, or a combination of the two, to achieve the desired expanded subsistence opportunity. We believe this solution would avoid the drawbacks of the existing proposal. If the council chooses this approach, the Unit 4 Brown Bear Team will make necessary recommendations to the Alaska Board of Game to adopt parallel regulations for subsistence harvest on non-federal lands in Unit 4.

1) Special Provision authorization in current Federal Subsistence Management Regulations for Units 1-5 for harvesting "outside open seasons and harvest limits if the harvested wildlife will be used for food in traditional religious ceremonies which are part of funerary or mortuary cycles, including memorial potlatches..."

William Thomas, Chair
Federal Southeast Regional Subsistence Advisory Council
February 18, 2000
Page 2

Modify to include ability to harvest during existing open seasons and add cultural and education purposes as additional reasons.

2) Current state regulation 5 AAC 92.034 Permit to Take Game for Cultural Purposes: "The commissioner may issue a permit for the taking of game, including deer, moose, caribou, black bear, mountain goat, and furbearers, for the teaching and preservation of historic or traditional Alaska cultural practices, knowledge, and values, only under the terms of a permit issued by the department upon application. A permit may not be issued if the taking of the game can be reasonably accommodated under existing regulations."

Adopt as a federal regulation and modify it to include brown bear in Unit 4.

Thanks for the opportunity to comment.

Sincerely,



Greg Streveler, Chair
for the Unit 4 Brown Bear Management Team

cc: Floyd Kookesh, City of Angoon
Fred Clark, USFS Subsistence Coordinator

DEPARTMENT OF FISH AND GAME
BOARD OF GAME

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

April 10, 2000

Mitch Dementieff, Chair
Federal Subsistence Board
c/o U.S. Fish and Wildlife Service
1011 East Tudor Road, Stop 121
Anchorage, AK 99503

Dear Chairman Dementieff:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group representing diverse interests in northern Southeast Alaska. Members work to find common ground on the issues and are committed to making all decisions by consensus if possible. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4 that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

We respectfully resubmit the enclosed letter detailing the Game Management Unit 4 Brown Bear Management Team's concerns regarding proposal 4 which we previously submitted to the Southeast Regional Council for its March meeting. Apparently, these views were not placed before the SERC by staff or the chair at its council meeting in March. Please give these concerns your careful consideration as you decide whether to pass this proposal.

Sincerely,



Greg Streveler, Chair
Unit 4 Brown Bear Management Team

Attachments

Appendix H OF ALASKA
STATE

DEPARTMENT OF FISH AND GAME
BOARD OF GAME

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

March 21, 2000

Tom Puchlerz, Forest Supervisor
Tongass National Forest
Federal Building
618 Mission Street
Ketchikan, AK 99901-6591

Jeremiah Ingersoll, District Ranger
Ketchikan Ranger District/Misty Fjords National Monument
3031 Tongass Avenue
Ketchikan, AK 99901-5743

Dear Mr. Puchlerz and Mr. Ingersoll:

The Unit 4 Brown Bear Management Team is a public/agency stakeholders' group representing diverse interests in northern Southeast Alaska. Team members represent interests such as big game guides, resident hunters, nonhunting recreation, the wildlife viewing/tourism industry, environmental groups, subsistence, Native corporations, and two agencies including the Forest Service (Marti Marshall) and ADF&G. Members work to find common ground on the issues and are committed to making all decisions by consensus if possible. The purpose of the team is to review issues of resource management and any human activities in Southeast Alaska's Game Management Unit 4 that affect brown bears, develop a management strategy for brown bears, and convey the strategy to the appropriate resource management agencies and regulatory boards with recommendations for their action.

The purpose of this letter is to request on behalf of the Unit 4 Brown Bear Management Team that the Forest Service institute a moratorium on issuing additional permits to brown bear guides in Unit 1A, and if possible on the entirety of Unit 1 (Southeast Alaska mainland). Although the Brown Bear Management Team focuses on Unit 4 issues, the team recently examined spill-over issues such as the effects of limiting big game hunting guides in Unit 4 and increased nonresident, guided brown bear hunts in other portions of Southeast Alaska. The problem now seems to be especially acute in Unit 1A, where the Forest Service recently issued additional guide permits and the number of brown bears harvested by nonresidents increased significantly. Given the number of guides and their planned brown bear hunts in Unit 1A, the Unit 4 Brown Bear Management Team believes that the harvest is probably not sustainable in the long-term and that a limit must be set on the number of guides on the Southeast mainland. It is arguable that there are already too many permitted guides in Unit 1A, from the standpoints of industry stability and proper wildlife management.

Letter to: Tom Puchlerz, Forest Supervisor and Jeremiah Ingersoll, District Ranger

March 21, 2000

Page 2

Over the past few years, big game guides, ADF&G, and Forest Service staff have suggested it is likely that the present moratorium on additional guides in Unit 4 would cause a "domino effect" when guides with no access to Unit 4 move to the mainland. Apparently, that has now occurred and we can expect more guides to obtain permits to hunt in areas with small, isolated brown bear populations. ADF&G and the Board of Game can and will restrict nonresident hunters first if there are indications of overharvest. These actions could include emergency orders to close the hunting season, changing and restricting the hunting seasons for nonresidents, or imposing a drawing (lottery) hunt for nonresidents. These are unpopular actions and they do not contribute to stability in the guiding industry. On behalf of the Unit 4 Brown bear Management Team, I ask that you please give serious consideration to our request for a moratorium on new brown bear guides in Unit 1A.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. Streveler".

Greg Streveler, Chair

Unit 4 Brown Bear Management Team

 **Appendix H**

Forest
Service

Alaska Region
Tongass National Forest

Ketchikan - Misty Fiords
Ranger District
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Ketchikan, AK 99901
(907) 225-2148

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File Code: 2720 (153)

Date: March 30, 2000

Mr. Greg Streveler
Unit 4 Brown Bear Management Team
P.O. Box 25526
Juneau, Alaska 99802-5526

Dear Mr. Streveler:

During the fall 1999 brown bear season, guided hunters took eight sows from Game Management Unit 1A, within Misty Fiords National Monument. The Alaska Department of Fish and Game (ADF&G) and several local guides have expressed concern that this exceeds a sustainable harvest level, and have asked the Forest Service to limit permits issued for this year's hunt.

We share a concern for sustaining bear populations and a wilderness hunting experience in Misty Fiords. In partnership with ADF&G, and at the written request of the guides themselves, we will process applications for two brown bear hunts each for our six returning permittees. We have not received any requests from new guides, and at this point, lack the funds, personnel, and time to process additional applications if any were received.

We hope that by limiting permitted guides to a total of twelve hunts (six guides, two hunts each) this year, we can address the concerns brought forward in the letters we've received and assist ADF&G, at their request, in their management of the resource. We also hope that this will help alleviate the need for additional regulatory action, and provide the guides an opportunity to continue offering quality hunts with some certainty that the hunt will not be cancelled by emergency order.

We also recognize that a collaborative planning effort is needed to establish the capacity of the area and the wildlife to support guided hunting. Such a process is currently underway for Game Management Unit 4. At this time, we have neither the personnel nor the financial resources to launch such a study for Unit 1. Until we do, we will continue to set appropriate limits on a year to year basis through close cooperation with ADF&G and the guides.

We appreciate the spirit of partnership in which the guides and ADF&G biologists have approached this issue, recognizing the complex jurisdictional and regulatory issues involved. We all share the same goal – to provide a sustainable, high-quality wilderness hunting experience over the long term. Please feel free to contact me at (907) 228-4100, or Karen Brand at (907) 228-4108 or kbrand@fs.fed.us.



Mr. Streveler

p. 2

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremiah C. Ingersoll". The signature is written in a cursive style with a large initial "J".

JEREMIAH C. INGERSOLL
District Ranger

Cc: Forest Supervisor
Staff Officer, Public Services
Staff Officer, Ecosystems

DEPARTMENT OF FISH AND GAME**BOARD OF GAME**

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
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March 22, 2000

Bob Ward, President
Southeast Conference
213 3rd Street, Suite 124
Juneau, Alaska 99801

Dear Mr. Ward and Southeast Conference members:

I am writing on behalf of the Unit 4 Brown Bear Management Team. The Unit 4 Brown Bear Management Team is an interagency and stakeholder group charged with addressing the future of bears on the ABC islands. We include a wide range of groups with interests in bear management, including hunters, tourism operators, and conservation groups. Over the past year we've been listening to a variety of experts and community residents, and identifying problems related to the future of bears in Southeast Alaska. The team has determined that one of the major causes of bear problems in communities, and of unneeded bear kills, are garbage dumps.

Landfills attract bears and teach them to seek human food. Cubs raised in a dump soon get chased out by larger bears, move into nearby towns, cause problems for people, and usually get shot. Many of the bears killed under defense of life and property provisions are bears that have become food conditioned through improper human waste disposal methods.

Although bigger Southeast Alaska towns have largely solved these problems, most small communities have not. It seems clear that the best way to protect people and bears is for smaller communities to join many of the larger places in shipping out or otherwise dealing collectively with food wastes. It is also clear that the only way for small places to afford this is to take a broad regional approach.

The Southeast Conference has had a longstanding interest in solving waste management problems in the region and seems to be the most appropriate group to convene an effort to identify and work toward regional solutions. Our group, and the agencies and organizations we represent, would be glad to participate and assist. Would the Southeast Conference be willing to take a leadership role in such an effort?

Letter to Bob Ward, and Southeast Conference members

March 22, 2000

Page 2

Enclosed are some background materials and two recent reports on the problems. Please contact Tom Paul at ADF&G 465-4358 for more information.

Sincerely,



Greg Streveler, Chair
for the Unit 4 Brown Bear Management Team

Attachments

- 1 Exerpt from "Conflict Resolution on the Last Frontier: Keeping bears wild and people safe in Southeast Alaska" – Kurt Yusi, Davidson College 1999 (summarizes current solid waste situation in several Southeast Alaska communities).
- 2 Garbage in Bear Country – Glenn Miller ADEC presentation to Unit 4 Brown Bear Management Team, Nov. 1999
- 3 Table of cost estimates for shipping solid waste on a regional scale – Glenn Miller, ADEC
- 4 Unit 4 Brown Bear Management Team draft recommendations for Guidelines for Solid Waste and Bears – March 2000
- 5 List of Unit 4 Brown Bear Management Team members

Appendix J

UNIT 4 BROWN BEAR MANAGEMENT TEAM GUIDELINES FOR MITIGATING EFFECTS OF DEVELOPMENT ON BROWN BEARS – APRIL 2000

The Unit 4 Brown Bear Management Team recommends the following guidelines for reducing the effects of development on brown bears. The guidelines emphasize managing human activities to reduce bear-human interactions. Fewer interactions should decrease the chances of injuries to humans as well as lessen the detrimental effects on bears. Although implementation of most of these guidelines is not now enforceable, we believe that if they are adopted by the public, companies, private land owners, and agencies managing public lands, the detrimental effects of development activities on bears can be greatly reduced. Agencies should consider establishing enforceable regulations for guidelines when and where needed.

In siting and managing industrial camps

- Industrial camp sites – Do not locate new construction for camp sites (permanent and seasonal) closer than 1 mile from sites of seasonal brown bear concentrations (anadromous salmon streams, estuarine sedge meadows, etc.).
- Firearms – At large industrial camps (logging and mining camps, etc.), institute camp policies that discourage the carrying of personal firearms by all employees except foremen and security personnel.
- Hunting, fishing, and backcountry recreation – Institute camp policies that prohibit hunting by industrial camp personnel at or near the camp site while employees are on duty status. Discourage fishing along anadromous salmon streams in areas of seasonal bear concentrations. Minimize hiking, berry picking, photography, and other outdoor activities outside the camp compound and particularly in areas of seasonal bear concentrations.
- Feeding bears and littering – Attracting and habituating bears to human foods is one of the most significant causes of bear-human conflicts. It is illegal to feed bears. Institute camp policies that clearly prohibit leaving foods or other bear attractants in the field or work area. Rigorously enforce these policies.
- Education – At all industrial camps and other facilities (lodges, fish camps, fish hatcheries, tour groups, research and exploration camps, etc.) routinely provide bear safety education to employees. This can be accomplished by inviting wildlife managers from state or federal agencies to periodically speak to camp staff or by using educational material from those agencies. In these bear safety programs, emphasize camp sanitation, basic bear biology and behavior, how to avoid contact with bears in the field, and what to do in case of a bear encounter.

Road construction and access:

Minimize road construction in brown bear habitat. Avoid construction of roads less than one mile from important seasonal concentration areas (anadromous salmon streams, berry fields, estuarine sedge flats, etc.). Where road construction in brown bear habitat is unavoidable, prohibit public and recreational access and strictly enforce the prohibition. Permanently remove roads when they are no longer necessary or make them impassable to motorized vehicles.

Habitat impacts:

Avoid construction of industrial facilities and recreational or homesite developments in areas of seasonal bear concentrations. Schedule short-term intensive human use of seasonal bear concentration sites to avoid peak periods of bear use.

Results of ADF&G research on Admiralty and Chichagof islands, supported by independent bear experts, indicate that riparian old growth within 500 feet of anadromous fish streams is important to brown bears. Avoid logging of riparian old-growth forest adjacent to anadromous salmon streams within 500 feet of the streamside at important brown bear foraging areas. Use the process for evaluating brown bear foraging sites set out in the “Tongass Forest Plan Implementation Clarification Papers” of August 1998 for determining whether 500 foot buffers should be placed on salmon streams when the Forest Service, in consultation with ADF&G biologists, implements this on National Forest lands.

Harassment of bears:

Do not harass bears or chase them with motorized land vehicles, boats, or aircraft. Approach bears no closer than 500 feet and 1,500 feet by fixed-wing aircraft and helicopters, respectively. In regard to aircraft, the team endorses the Alaska Visitors Association “Best Management Practices – Flightseeing/Wildlife Viewing Guidelines”.

Bear-human conflicts:

Promote and distribute the ADF&G policy for dealing with bear-human conflicts more widely. This policy emphasizes the prevention of conflicts through public information, reducing attractants (food, garbage), and nonlethal deterrence. In cases where immediate danger to an individual or his property exists, offending bears may be killed by any individual under provisions of the Defense of Life and Property (DLP) regulation (5 AAC 92.410). Employ this regulation only as a last resort. If a bear is killed under DLP provisions, and the taking was brought about by improper garbage storage or a similar attractive nuisance, the offender will be warned or cited. It is not legal to kill a bear to protect a hunter-killed game animal.

Recreation development:

In the siting of cabins, trails, mooring buoys, campgrounds, picnic sites, floating lodges and other recreational facilities, avoid displacing bears from critical habitats and avoid placing humans and bears in situations where the safety of either or both is at risk.

- Trails –When planning or reconstructing recreational trails avoid routing them over existing bear trails and through bear concentration areas as much as possible. For instance, avoid passing near or crossing anadromous fish streams at spots bears are likely to use for fishing.
- Mooring buoys – Place mooring buoys away from shoreline areas bears use for foraging to avoid displacing bears from critical habitats during early morning and evening hours.
- Floating lodges – Require permitted lodges to be located at least a mile from seasonal bear concentration areas (mouths of anadromous salmon streams, tide flats, sedge meadows, etc.) to avoid displacing bears from critical habitats
- Cabins – Plan new recreational cabin locations with local bear use patterns in mind. Avoid locations near bear trails or fishing and foraging areas as much as possible.
- Camping and picnicing sites – Locating campgrounds or picnic sites, with their associated garbage and food, in salmon stream drainages heavily used by bears is not advisable. Locate camping and picnic sites at least a mile from streams used by bears for fishing. Install and regularly empty and maintain bear-proof food caches and trash bins. Monitor them for effectiveness.

Appendix K

UNIT 4 BROWN BEAR MANAGEMENT TEAM GUIDELINES FOR MANAGING FOOD AND SOLID WASTE IN BROWN BEAR HABITAT – APRIL 2000

The Unit 4 Brown Bear Management Team has approved the following guidelines for managing food and solid waste in brown bear habitat. Adoption of these guidelines by the public, companies, private land owners, municipalities, and agencies managing public lands will substantially reduce bear problems associated with food and solid waste.

- Locate solid waste disposal sites for communities and permanent field camps in habitats receiving the least use by bears. Avoid traditional movement routes and seasonal concentration areas (such as salmon spawning streams or productive berry areas).
- The preferred alternative for disposal of organic products that may attract bears is incineration in a facility that meets Alaska Department of Environmental Conservation (ADEC) standards for combustion residue (less than 5% unburned combustibles). In large urban communities or at regional disposal sites, daily landfill and burying is an acceptable alternative to reduce or eliminate attraction to bears provided that these facilities are secured by a bear-proof fence. Phase out existing open-pit sites that use surface burning for disposal and replace them with a system of daily incineration meeting the above standards or with daily landfill.
- At large (more than 15 people), permanent (longer than one season) field camps dispose of organic products by daily incineration in a fuel-fired incinerator that meets the above standards. Or, haul organic products daily to an ADEC-approved regional disposal site. Use a bear-proof enclosure (building or fence) for temporary storage of organic products prior to incineration or backhaul. In cases where bear problems exist or are likely, surround these camps with a bear-proof fence. If entire camps cannot be fenced then fence dining halls, kitchens, sleeping areas, and incinerators and allow no organic wastes to be left in vehicles.
- At small permanent facilities (e.g., lodges, weather stations) or large nonpermanent camps, practice daily segregation and storage of organic wastes and items such as cans and jars that are contaminated with organic waste in a bear-proof container for weekly backhaul to an approved disposal site. Keeping organic wastes frozen until shipping is a preferred storage technique. Alternatives are (1) incinerate organic waste and other combustibles in a locally fabricated incinerator meeting ADEC standards for residue, or (2) use garbage grinders with disposal to a sewer system (not appropriate for septic tank systems) to remove organic wastes, while incinerating or temporarily storing as above contaminated combustible and noncombustible wastes.
- When storing food and organic wastes outdoors in bear habitat use sealed bear-proof containers. Although it is not necessary to remove fish or game carcasses from the field, do not leave them at a central site or leave them at or near a campsite or other place with high potential for bear-human conflicts.

- When in Alaska's backcountry burn all combustibles and pack out all noncombustibles. Do not discard organic material along trails. Caution and common sense are required to reduce or eliminate bear attractants.
- Require all new parks, roadside facilities, and temporary construction worksites located in bear habitat to have bear-proof garbage cans and regular garbage pickup. Phase this requirement into all existing facilities as soon as possible.
- Baiting and feeding bears and other wild game by photographers, tourists, hunters, or others is strictly prohibited except for trapping furbearers or hunting black bears consistent with regulations on black bear baiting.
- Handle bears currently accustomed to eating garbage on a case-by-case basis according to the ADF&G's guidelines for managing bear-human conflicts.

Appendix L

Alaska Visitors Association

Best Management Practices – Flightseeing/Wildlife Viewing Guidelines

Alaska provides a rich environment that supports a wide variety of wildlife. Many of these animals, particularly Dall sheep, mountain goats, bears, moose and caribou inhabit the mountains, forested valleys and tundra areas of the state over which tour operators fly. While most of our customers enjoy seeing and photographing wildlife, getting too close is disruptive and stressful to these animals, and also makes them less visible for future flightseeing.

In order to encourage sensitivity to wildlife species of every kind, to ensure their continued viability and to maintain high-quality viewing opportunities for future visitors, the Alaska Visitors Association and its members have consulted with local, state and federal agencies in developing the following set of guidelines regarding air transportation and flightseeing associated with wildlife. AVA recognizes that particular species and regions of the state may require greater specificity for wildlife-associated flight standards:

- Consistent with aircraft passenger safety, pilots shall take avoidance measures to prevent close overflights of individual animals or groups of animals. However, ad hoc alterations of regular flight paths to try and avoid incidental sightings of animals is not required;
- Hovering near, herding, harassing or driving wildlife in any way must never be allowed. If an animal, or group of animals, shows signs of disturbance, run or take flight, the pilot is too close;
- Operators will consult with local wildlife authorities to ensure that flight paths avoid known sensitive wildlife areas, including kidding and calving areas, dens, nest sites, haulouts, rookeries and seabird colonies during critical time periods;
- All flight operators shall comply with FAA restrictions and will consult with wildlife agency recommendations for wildlife flightseeing; and
- Consistent with aircraft and passenger safety, operators should establish flightseeing routes that will provide for regular and consistent aircraft operations, which will encourage habituation and minimal disturbance to wildlife.

It is incumbent on tour operators and air taxis to help educate visitors about the importance of adhering to these guidelines. We want Alaska visitors to enjoy their flight and understand, as well as appreciate, the need for responsible flight behavior around wildlife.

Appendix M

UNIT 4 BROWN BEAR MANAGEMENT TEAM GUIDELINES FOR BEAR VIEWING – April 2000

The Unit 4 Brown Bear Management Team recommends the following guidelines for bear viewing in Unit 4 and elsewhere in Southeast Alaska that we consider important for the safety of both humans and bears. We recognize that not all of these guidelines are appropriate for all situations, but believe that they still represent the best general approach to safe bear viewing.

Guidelines for behavior and viewing tips for remote locations where bears are not habituated to people

- Always remain far enough away from the bear so that your presence, if noticed, does not affect the animal's behavior. Use binoculars, spotting scopes, or other telescopic lenses to improve your view.
- Bears are wild animals and you are viewing them in a remote area. Be prepared. Review current agency information and brochures on protection and how to deal with close encounters.
- Always select a viewing position that does not make you vulnerable to a surprise approach by a bear.
- Never directly approach a bear, allow it to move to you.
- Avoid situations where your presence could startle a bear.
- Avoid viewing from obvious bear trails.
- Never allow bears access to human foods.
- There is safety in numbers, stay with your group.
- If seen by a bear, avoid moving. Even minor movements will encourage wary bears to leave.
- Never use a motorized vehicle or boat to try getting close to a bear.
- Never run from an approaching bear; if you move away do it in a slow, deliberate manner.
- Show respect and courtesy to other bear viewers. Conduct your viewing in a way that doesn't detract from their experience. Don't mix booze with bears.
- Think wind, wind, wind. When possible always approach bears, or areas where bears are likely to be, from downwind.
- The best bear viewing is usually in the early morning or evening. Shoreline viewing is usually better during low tides.
- Small groups are less likely to disturb bears and so more likely to have better viewing. Keep your group size as small as possible.

Appendix N

ADF&G SITE SELECTION AND MANAGEMENT GUIDELINES FOR AREAS LIKE PACK CREEK WHERE BEARS ARE HABITUATED TO PEOPLE

Guidelines for site selection of viewing areas where bears are habituated to people

Locations selected to be managed for public bear viewing must have the following attributes:

- naturally occurring use by enough bears to provide a reasonable assurance that visitors will see bears;
- a field-of-view that promotes seeing bears at a safe distance;
- one or more viewing sites* that do not place the public in prime bear use areas;
- commitment by the land owner to keep the area in a status compatible with occupancy by bears;
- agency and land-owner commitment to adequate funding of the program.

*Viewing “sites” – specific spots in an area used by people to view bears, such as a pad, platform, blind, or tower.

Guidelines for management of viewing areas where bears are habituated to people

- **Program management must be equally directed at providing public and bear safety and developing bears’ habituation to humans.**
- **Human use of the area must be secondary to the use by bears.**
- **Increase control of human activities as the number of persons using the area and/or the regularity of viewing increases.**
- **Minimize the size of the viewing site(s)* to that necessary to accommodate the group size; limit group size by the space limitations of the viewing site and by acceptance as indicated by bear behavior.**
- **Limit viewing activities to designated viewing sites*.**
- **Viewing sites* must not be in areas regularly used by bears.**
- **Never leave human foods accessible to bears; remove all organic waste when the group leaves.**
- **Access each viewing site* by a single trail.**
- **Where possible, visually screen the approach and departure of visitors to the viewing site(s)* from the bears, and make viewers at the site(s)* unobtrusive.**
- **Minimize the number of trips to and from the viewing site(s)*, and instruct groups to plan on only one round trip to and from the viewing site(s)*.**
- **Minimize the number of groups viewing bears in space and time; a larger group size is generally preferable to an increased number of groups.**
- **If possible, arrange for travel to and from the viewing site(s)* to occur at the same time each day.**

- **Except for access trails and viewing site(s)*, keep all other areas of bear sanctuaries free from human use.**
- **Keep portions of each day visitor free to allow non-habituated bears a period of use without stress from humans.**
- **Have persons knowledgeable in bear behavior accompany each group; a prime responsibility of this person will be controlling human activity.**
- **In development of viewing sites*, accommodate visitor comfort and safety, especially to encourage human activities to remain within the prescribed area.**
- **Keep records of bear use of the area; judge success of viewing programs by undiminished numbers and hours of use by bears; keep human use goals secondary.**
- **Require those accessing a designated viewing area by boat and floatplane to maintain a constant speed and engine sound and maintain their direction as much as possible, consistent with safety and maintaining a reasonable distance from wildlife.**
- **Use aircraft only for transportation to and from designated on-the-ground viewing areas and not for flightseeing in these areas.**

*Viewing “sites” – specific spots in an area used by people to view bears, such as a pad, platform, blind, or tower.

Appendix O

UNIT 4 BROWN BEAR MANAGEMENT TEAM GUIDELINES FOR SITE SELECTION AND MANAGEMENT OF BROWN BEAR SPECIAL USE ZONES –APRIL 2000

Guidelines for site selection

- 1) Areas should be sufficiently large but size should be chosen on a case-by-case basis
- 2) Areas should have several vantage points suitable for viewing at a distance, avoiding a single concentration point for viewers.
- 3) Areas should afford opportunities to see bear sign and a variety of habitat types as well as opportunities for viewing bears.

Guidelines for management

- 1) Areas are open to both hunting and viewing and managed to maintain or enhance viewing and hunting opportunities
- 2) Viewing is integrated with other existing uses, including hunting, boating, fishing, trapping, etc.
- 3) Areas are not closed to hunting although in some instances incentives may be adopted to encourage taking of large male bears
- 4) Areas are not closed to fishing or trapping for reasons other than resource concerns
- 5) Management is aimed at avoiding habituation through “at-a-distance” viewing
- 6) Management emphasis is on total outdoor experience that involves other values and other species which would prove attractive to visitors who are not totally focused on bears
- 7) Educational material should be developed by the agencies that emphasizes the goals of institutionalizing viewing ethics, and promoting more informal viewing opportunities that focus on the total outdoor experience and that avoid disturbing bears or altering their behavior.
- 8) Where permit stipulations are not required, voluntary compliance by operators will be encouraged to maintain smaller viewing group sizes and to avoid conflicts with hunters during hunting seasons.
- 9) When congestion reaches a point where major conflicts between viewing operators or other established users occurs, or are reasonably anticipated to occur, a viewing permit system will be initiated for that specific area limiting the sizes of parties, frequency of use, time of utilization, etc.
- 10) Where possible, innovative time and area zoning concepts will be used to maximize the public’s opportunities and keep users separate, while not infringing on established uses of the areas and resources; especially those uses of residents.
- 11) Management will strive to avoid activities that promote user group divisiveness. Use advisories and other public education to increase user groups’ awareness and tolerance of each other.
- 12) The development of business opportunities will be, where possible, promoted in such a way as to encourage remote communities to participate to the maximum extent possible.
- 13) Work with ADNR and ADF&G regarding permitted activities in adjacent marine and navigable waters.