

ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672

4918 HRES HB 93 (FILE 1) - HB 93 (FILE 2)

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#### 4. RECREATIONAL RIVERS

Legislation is pending that would designate six rivers on land owned by the State in the Matanuska-Susitna Borough as recreational rivers. These six waterways are: Talchulitna, Doshka, Little Susitna, and Talkeetna Rivers, and Alexander and Lake Creeks. The thrust of the legislation is to preserve land along these waterways for long-term public access and to give priority for recreational uses (boating, snowmobiling, camping, hunting, fishing). Opponents suggest that even though resource development could be allowed, the recreation priority would restrict such development.

A. Which option listed below do you prefer?

- 88% Support public-use designation with a priority for recreation      Total answers: 1054  
12% Oppose public-use designation with a priority for recreation

B. Although this legislation does not restrict the use of power boats on these waterways, would you support or oppose restrictions (i.e., horsepower limits, no-wake zones, special use areas) on the use of power boats on these rivers?

- 72% Support      28% Oppose      Total answers: 1048

#### 5. EAGLE RIVER SKI RESORT

Rogner Touristik/Eagle Valley Resort, Inc. is in the process of developing a \$230 million ski resort on 93 acres of land off Hiland Road. The ski runs would be located within the boundaries of Chugach State Park. The project is anticipated to start construction in the summer of 1988 with a final total project completion date of 1991. According to representatives of the developer, 600 jobs will be created for the three-year construction period. Additionally, the developers anticipate that the operating period will provide 1200 direct jobs. The developer has \$50 million in private financing and is working on financing for the remaining \$180 million. Due to the current American economic climate, it is anticipated that financing will be done in America rather than in European markets. Some discussion has been generated as to whether or not the State of Alaska should provide some form of financial assistance for this project. Please review the options listed below and check the ONE which best describes your thoughts on the financing package for this project:

- 41% No state financial participation, should be privately financed  
28% State financial participation by use of guaranteed loans  
1% State grants      Total answers: 1043  
30% State financial participation for roads and utilities

#### 6. MOTOR VEHICLES

Should individuals registering motor vehicles be required to present proof of insurance before that vehicle can be registered in Alaska?

- 82% Yes      18% No      Total answers: 1067

#### 7. GAMBLING

Do you feel Alaskan local governments should have the option of deciding whether gambling should be legalized within their boundaries?

- 56% Yes      44% No      Total answers: 1076

## 8. SPEED LIMIT

Should Alaska raise the state speed limit from 55 miles per hour to 65 miles per hour?

49.6% Yes

50.4% No

Total answers: 1066

## 9. CONCEALED WEAPONS

Alaska law does not presently allow the carrying of a concealed weapon. Would you support or oppose legislation which would allow individuals over 21 to apply for a permit to carry a concealed firearm if the permit were issued by the Department of Public Safety after a review of the application and person's record and payment of fee by the applicant?

41% Support

59% Oppose

Total answers: 1073

## 10. UNIVERSITY/COMMUNITY COLLEGE

The University's Board of Regents voted to merge the University of Alaska and the state community college systems. Do you support a separate community college system in Alaska or do you support a merged University system?

40% Separate community college system

41% Merged university system

19% No opinion

Total answers: 1037

## 11. CAPITAL IMPROVEMENTS

What ONE capital improvement project (i.e. road, sewer, water, school, park, etc.) do you feel our district needs? Please be as SPECIFIC as possible (name of road, name of school, location of water/sewer systems, etc.). PLEASE LIMIT YOURSELF TO THE ONE PROJECT THAT YOU FEEL SHOULD HAVE THE HIGHEST PRIORITY FOR FISCAL YEAR 1989. Project:

THE HILAND ROAD BRIDGE PROJECT IS THE NUMBER ONE PROJECT MENTIONED BY RESPONDENTS.

## 12. GENERAL COMMENTS

TOO VARIOUS TO MENTION -- MANY COMMENTS ON ALASKA'S CURRENT ECONOMIC SITUATION.

FROM: REPRESENTATIVE RANDY PHILLIPS -- 465-4949 (in session) 694-4949 (at home)

DISTRICT 15 TELECONFERENCE & HEARING SCHEDULE FOR REMAINDER OF 1988 SESSION

Monday, March 21, 1988 - TELECONFERENCE

7:00 p.m. - Muldoon Elementary School, 515 Cherry, Anchorage  
Chugiak-Eagle River Library, 11801 Business Boulevard, Eagle River

Saturday, April 9, 1988 - HEARING

11:00 a.m. - Muldoon Elementary School  
4:00 p.m. - Chugiak-Eagle River Library

Monday, April 25, 1988 - TELECONFERENCE

7:00 p.m. - Muldoon Elementary School  
Chugiak-Eagle River Library

Monday, May 2, 1988 - TELECONFERENCE

7:00 p.m. - Muldoon Elementary School  
Chugiak-Eagle River Library

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SCHOOL FOUNDATION/MUNICIPAL ASSISTANCE/REVENUE SHARING INFORMATION

For your review, I am providing information on three programs which effect your local property tax rate.

School Foundation: This program provides state funds to school districts for operating costs and the program has a direct impact on your real property taxes. During 1985 when the Anchorage School District experienced a funding shortfall from this program, local property taxes were increased to cover the shortfall.

Municipal Assistance: State money from this program is distributed to municipalities and does impact property taxes. Your municipal real property tax statement contains information as to the impact of this program on your local property taxes.

Revenue Sharing: State money from this program provides aid for roads, health facilities and hospitals, and volunteer fire departments.

The chart below provides information on the impact of these programs.

<u>Program</u>	<u>Year</u>	<u>Anchorage Operating Budget</u>	<u>State Aid Amount</u>	<u>Percentage State Aid is of Anchorage School District or Municipality of Anchorage Operating Budget</u>
School Foundation	1985	\$233,400,000	\$136,700,000	59%
	1986	\$221,730,588	\$154,495,000	70%
	1987	\$242,000,000	\$159,300,000	66%
	1988*	\$249,900,000	\$163,900,000	65%
Municipal Assistance and Revenue Sharing	1985	\$216,500,000	\$ 53,800,000	25%
	1986	\$214,900,000	\$ 58,000,000	27%
	1987	\$196,417,130	\$ 44,886,820	23%
	1988*	\$190,643,270	\$ 46,167,880	24%

These operating budget figures do not include any capital project funding. Information on dollar amounts supplied by Municipality or School District.

\*projected for 1988

## ORIGIN OF THIS STUDY AND ACKNOWLEDGEMENTS

This study of the economics of wilderness dependent recreation industries has its origin in discussions in February 1988 with several state legislators who deal with issues related to economic development, tourism, and natural resources. Those legislators are Representatives, Johnny Ellis, Pat Pourchot, and Senator Arliss Sturguluski.

These three legislators had open minds. They played a useful role in urging me to document what had been observations orally presented. In so doing, they helped to bring about the closer look at the recreation industry that this study seeks to achieve. In doing this study, I learned some things I would have never believed, so I hope the study returns the favor. Recognition is also due to Ned Farquar, an assistant to Representative Cotton. Mr. Farquar posed a question that helped to bring one issue related to recreation in Southcentral Alaska into sharper focus.

I should acknowledge that I am a fishing guide and an attorney, not an economist or social scientist, and that much of my work has been for conservation and recreational interests. I was also special counsel to the Senate State Affairs Committee when it dealt with subsistence in 1985 and 1986. My experiences and values may induce bias on my part, which I have attempted to limit.

Finally, this study is dedicated to a few humorous, creative and intelligent gentlemen I never knew, but who like much of America's wilderness, are long since deceased. This study is dedicated to the gentlemen of the Fife and Drum Corps of the Continental Army and the music that they played after the Battle of Yorktown in 1781. When the sword passed, they displayed their faculties. The Army formed two lines. The defeated British marched between them to sail home. And, the Corps played "The World is Turned Upside Down".

Jeff Parker

## I. EXECUTIVE SUMMARY

This study focuses on the economics and marketing practices of wilderness dependent recreation industries in Alaska. By "wilderness" the study means only the character of the land, rather than a legal designation. The study is applicable to many public policy issues involving natural resource management, including economic, social, political and governmental issues. In general, this study bears upon matters related to jobs, commerce, resource development, recreation, the recreation industry, the marketing of that industry, Native concerns about the industry and wilderness recreation, and the management of state agencies dealing with natural resources and recreation industries.

The primary question this study seeks to address is:

- o From an economic perspective only and for purposes of resolving many natural resource issues, how can the diverse recreational industry best be characterized so that issues related to it and natural resources can be wisely decided?

This study assumes, and then supports the assumption, that the recreation industry in Alaska can be characterized as having two major sectors. One can be termed an "access-service dependent recreation industry", and the other can be termed a "wilderness dependent recreation industry". Both sectors are probably much broader than many policy makers realize.

This study reveals that the wilderness dependent recreation industry appears to be incredibly efficient in producing jobs and commerce, and that wilderness and appropriately named conservation designations are highly marketable and are good business.

In attempting to answer the primary question, other questions arose.

- o How do these two sectors relate to functions of supply and demand?
- o How much of Alaska's wilderness is marketed and is marketable by the recreation industry?
- o To whom is Alaska's wilderness marketed and marketable?
- o How is Alaska's wilderness marketed and marketable?
- o How productive of jobs and commerce is the wilderness dependent recreation industry?

- o What can the State do to assist marketing, creation of jobs and commerce, and resolution of conflict between rural and non-rural interests concerning the wilderness dependent recreation industry?
- o What sort of balance should the State seek, if any, between the various types of wilderness dependent recreation industries?

Although this study does not fully answer these questions, by raising and addressing them the study has many public policy implications. It also has implications for public officials, for positions they have taken and for positions they should be taking.

Because the study relies mostly on data related to the sport fishing economy and the industries within it, the conclusions reached by the study can be best applied to that economy. Sport fishing is the largest segment of wilderness based recreation. However, as stated above, the study concerns far more than just recreational fishing industries.

The study reaches numerous conclusions. Among them are:

(1) That second only to the oil industry, the best sector of the Alaska economy in which to most efficiently stimulate jobs and commerce may be wilderness dependent recreation industries.

(2) That to do so the state should undertake a sophisticated program to protect, promote and in many instances regulate wilderness dependent recreation industries.

(3) That in areas of marketable wilderness, wilderness dependent recreation industries are incredibly efficient in producing commerce and jobs.

(4) That the commerce and jobs produced in the wilderness dependent recreation industries on the Nushagak River compares favorably with that of the Kenai Peninsula recreation industry.

(5) That in the advertising practices of the recreational fishing industry, wilderness is highly marketable and is, in fact, the most marketed commodity after fish.

(6) That in the advertising practices of the recreational fishing industry, conservation designations are highly marketable to non-residents so long as the designation is consistent with what the recreational consumer seeks to purchase.

(7) That there is an economic and social carrying capacity in wilderness dependent recreation areas and that when the carrying capacity is surpassed through overcompetition and

overcrowding, price structure within the industry erodes and total commerce declines substantially.

(8) That Native interests, recreational interests, economic interests, industry interests, and conservation interests will all be served by identifying such carrying capacities in areas of marketable wilderness.

(9) That the recreation industry in Alaska can be divided into an "access and service dependent industry" and a "wilderness dependent industry" and that each element is probably much broader than many policy makers realize.

(10) That with respect to the functions of supply and demand, the economic productivity of the access-service dependent recreational industry is probably governed more by the function of demand.

(11) That the economic productivity of the wilderness dependent recreational industry is probably supply limited.

(12) That common sense observations that "there is plenty of wilderness in Alaska" beg important questions, such as:

- (a) How much of it is marketed and marketable?,
- (b) To whom is it marketed and marketable?,
- (c) How is it marketed and marketable?,
- (d) How productive of jobs and commerce should it be?,
- (e) What can the state do to assist marketing, creation of jobs and commerce, and resolution of conflicts over resource allocation?, and
- (f) What sort of balance should the state seek, if any, between various sectors of the wilderness dependent recreation industry?

(13) That within the present market for wilderness recreation, most of Alaska's marketable wilderness is probably within the coastal drainages in southcentral Alaska, the Bristol Bay drainages, Kodiak Island, southeast Alaska, Prince William Sound and perhaps some of the western Alaska drainages.

(14) That there are important distinctions between the resident based sport fishing industry and the nonresident based sport fishing industry with respect to species preference, crowding and wilderness, and that those distinctions have economic and resource management implications.

(15) That within the current market for wilderness based recreation, the most salable commodity is the combination of world class rainbow trout fisheries, in conjunction with salmon and resident stock fisheries, located in a wilderness setting that is neither overcrowded or overcompetitive and that is within

a marketable conservation designation.

(16) That there are some indications that the sport fishing lodge industry is seeking to market a Native cultural experience in conjunction with a fishing experience, and that such attempts in marketing may provide opportunities for Native employment in the bush and for maintaining traditional and contemporary Native culture as a viable entity.

(17) That the marketing practices and price structure within the wilderness dependent fishing lodge industry indicate that Alaska has a near monopoly on marketable wilderness fisheries, and that as marketable wilderness fisheries disappear elsewhere, this monopoly is likely to become increasingly economically valuable.

(18) That where wilderness cannot be used to promote quality sport fisheries existing in a non-wilderness setting, the market requires a price reduction of one third to two thirds for otherwise comparable recreation and services.

(19) That, therefore, the interstate and international economic competition for angler dollars is not only between businesses operating in Alaska and businesses operating elsewhere, but it is also between resource management agencies of the respective governments as to which can maintain the most economically productive sport fisheries and recreational experiences.

(20) That the Susitna drainage confronts policy makers with especially complex problems because it contains access-service dependent sport fishing industries in the lower portions of several streams and wilderness dependent sport fishing industries on the upper portions of several streams.

(21) That regardless of issues of boundaries and resource management, the marketing data suggests that more marketable designations for the proposed recreational rivers in the Susitna drainage might be: (a) "Susitna Wilderness Trout and Salmon Reserve" for some upper river areas where the industry is wilderness dependent and markets trout, salmon and wilderness, and (b) "Alaska Salmon Sport Fishery Reserve" for some lower river areas where the industry is access-service dependent, more crowded, less expensive, and markets only salmon.

(22) That if several of the proposed recreation rivers can be characterized as access-service dependent on the lower reaches, and wilderness dependent on the upper reaches, then the boundary, regardless of name, should support the marketing of the different industries in the respective areas.

(23) That improper identification of areas for the proposed

Susitna timber sale risk a net, long term, loss of total commerce and possibly of jobs, and that a more sound economic policy would be to protect, promote and enhance the marketability of existing wilderness dependent recreational industries in the area through a variety of state actions.

## II. ANALYSIS

### A. INTRODUCTION

#### 1. Purposes of the Study

There are several purposes of this study. One is to see what can be said about commerce, jobs, marketing practices, price structure, competition, and the nature of the market within the recreation industry in Alaska. For the most part that information relates to a variety of industries that are in the sport fishing economy.

Another purpose is to make some observations about the breadth and character of the recreation industry as it relates to the functions of supply and demand.

A third purpose is to provide a more sharply focused understanding of the recreation industry, so that interest groups that deal with natural resource issues may improve their effectiveness and decision makers may improve their decisions.

A fourth purpose is to fertilize public debate over natural resource issues. Such debates frequently contain three kinds of information that are the grist of public decisions. All interest groups submit subjective beliefs and value judgments. Agencies submit biological, natural resource and economic information. And, well organized and financially well supported economic interests are capable of submitting their own economic and natural resource information. All of this informational "grist" has important roles. This study attempts to supplement those roles with some objective information about the economics of the a portion of the recreation industry and about market practices. Based on that information, this study makes observations, reaches conclusions, and submits a number of logical deductions, in order to fertilize public debate and add yeast to the brew.

A final purpose of this study is to promote not only economic discussion of commerce and jobs in the recreation industry, but also to promote conservation of resources upon which it depends. The conclusions reached by this study also have implications in the areas of taxation, Native concerns, agency management, the promotion, regulation and protection of the recreational industry, and politics.

#### 2. Assumptions, Supply and Demand, and Questions Addressed

For the purposes of this study, it was assumed, and later supported by the data, that recreation industries, which is often thought of as only the tourist industry, can be divided into two large classes.

One class of recreation industries depends on conservation of resources and depends in varying degrees on development of inexpensive services, access, and accommodations. This class can be characterized as composed of "access-service dependent" recreation industries. Some examples are:

- (a) the cruise ship industry in southeast Alaska and Glacier Bay National Park,
- (b) sportfisheries on the Kenai River system, on several streams near Fairbanks, and on the lower portions of numerous streams along the Parks Highway, the Sterling Highway, and on west side of the Susitna,
- (c) Alyeska ski resort,
- (d) most visitor use of Denali National Park and Chugach State Park,
- (e) recreational snowmachining,
- (f) cross country skiing,
- (g) much of the unguided hunting, hiking, fishing, boating, and photography in areas accessible from the road system,
- (h) the Seward Salmon derby,
- (i) in a historical sense the Anchorage Fur Rendevous in that it was and to some extent still is conservation dependent, and
- (j) the retail sales, lodging, transportation, insurance and construction industries that support all of the above.

The other class of recreation industries depends on conservation of resources but depends in varying degrees on lack of development of inexpensive services, access and accommodations. This element can be characterized as a "wilderness dependent" recreation industry. (I use "wilderness" not in terms of federally designated wilderness, but only to connote the character of the land.) Some examples of this element are:

- (a) much of the private aircraft industry,
- (b) most of the lodge, guide, outfitter, and air-taxi industries, regardless of whether the recreational use is for guided or unguided fishing, hunting, boating, hiking, and other recreational pursuits,
- (c) the tourist and recreational use of Wood-Tikchik State Park, McNeil River Brown Bear Sanctuary, Katmai National Park and Preserve, the Gates of the Arctic National Park, and Noatak National Preserve,
- (d) most guided and unguided big game hunting,
- (e) the big game meat processing industry,
- (f) the Iditarod Sled Dog Race,
- (g) a portion of the motorized and non-motorized recreational boating in Prince William Sound, and

(h) the retail sales, lodging, transportation, insurance and construction industries that support all of the above.

One distinction between the two classes appears to be in how they relate to the functions of supply and demand. The access-service dependent recreation industry is governed more by demand than supply. As demand for access, services and accommodations increases, the market will seek to provide them. For example, there appears to be market demand for a new downhill ski resort, so the market is apparently going to build one. Similarly, if there is a market demand for a new Denali National Park, then the market is likely to result in paving the road into McCarthy and building services and accommodations there in Wrangell-St. Elias National Park.

In contrast, the wilderness dependent recreation industry can be characterized as supply-limited. There is no shortage of wilderness in this state, but that observation begs important questions such as:

- (a) How much of it is marketable?
- (b) To whom is it marketable?
- (c) How can it be marketed?
- (d) How productive of jobs and commerce can it be?
- (e) What can the State do to assist marketing, creation of jobs and commerce, and resolution of conflicts over resource allocation concerning this element of the recreation industry?
- (f) What sort of balance should the State seek, if any, between various sectors of the wilderness dependent recreation industry?

## B. METHODOLOGY

In order to address the above questions this study --

(1) analyzes the price structure and marketing practices by approximately 60 Alaska sportfishing businesses, and 15 non-Alaska sportfishing businesses, as reflected in two tourist-oriented catalogues identified below, and

(2) relies upon existing economic data on the commercial value, job production and market characteristics of various sectors of the recreation industry as reflected in two recent economic studies, of which one is of the wilderness dependent guide, lodge, air taxi and outfitter industries in the Nushagak River drainage, and the other is of the economics of the sport fishing industry in southcentral Alaska.

The two catalogues I used to analyze marketing practices are

"Frank Amato's Alaska Angling Guide - 1988" and the Fly Shop Catalogue from Redding, California. Amato's publication is on sale now at newsstands throughout the country. It contains 49 advertisements that are by Alaska sport fishing businesses and that contain verbal content and artwork (usually photos) that are analytically useful in answering the questions addressed in this study. The Fly Shop Catalogue, serves a more limited clientele (fly fisherman) and promotes 27 internationally significant fishing services throughout the world, of which 12 are in Alaska. In addition to verbal content and artwork, the Fly Shop Catalogue contains price information for all advertising services, which Amato's publication does not.

Sport fishing publications, rather than other recreational publications, were selected for two reasons. First, sport anglers are the largest group of non-resident consumers in what is defined above as the wilderness dependent recreation industry. Second, by selecting sport fishing advertising it is possible to test the consistency of conclusions reached from the marketing analysis against conclusions reached in the two economic studies, since the southcentral economic study focuses solely on sport fishing and the Nushagak study focuses on guides, lodges and air-taxi operators for whom the bulk of the clientele were sport fishers.

The two economic studies utilized in this study are the "Southcentral Alaska Sport Fishing Economic Study", available from the Alaska Department of Fish and Game, and the "Commercial Recreation Service Providers Study of the Nushagak", available from the Bristol Bay Coastal Resource Service Area Board in Dillingham. Both studies were done on contract for those agencies, and the former was specifically requested by the Alaska Legislature in order to facilitate answering questions such as those addressed here.

The two economic studies are not as comparable in format, terminology and design as was desirable for purposes of this study and comparing the two recreational economies. The statistics in the southcentral study relate to sport fishing, while the statistics in the Nushagak study relate mostly to sportfishing, but the numbers are obscured by unknown portions of other recreationists in the guide and air taxi industries. Finally, statistics are not life; they only simplify it. The economic estimates of the sport fisheries on the west side of the Susitna seem questionable because of possible problems with a small sample size for those fisheries in the southcentral study. Nevertheless, these studies were the only available economic data on wilderness dependent and access-service dependent recreational industries.

## C. DISCUSSIONS AND CONCLUSIONS

### 1. Economics

(a) CONCLUSION -- Direct consumer spending in the guide, lodge, and air taxi industries for wilderness based recreation in the Nushagak compares favorably with direct consumer spending in all industries for access-service dependent recreation on the Kenai River and Russian River.

DISCUSSION -- The Nushagak study estimated the client population of the lodge, air taxi and guide industries. At the 90% confidence level, the Nushagak study estimated the client population at between 9,896 and 18,192 clients. (BBCRSA 1986, p. 55).

The Nushagak study projected the total income for the guide, lodge, and air taxi industries on the Nushagak. This appears to be a projection of gross income rather than net profit and therefore probably represents direct client spending for services within those industries. The gross income of the industries was \$25 million (BBCRSA 1986, p. 57).

The Southcentral study uses different terms, but it estimated the number of angler trips. A trip can contain more than one person (Mills ADF&G, pers. comm., 1988). The southcentral study estimated the number of angler trips to the Kenai-Russian rivers at 333,000 in 1986 (ADF&G 1987, 3-3). Therefore, there were at least 333,000 angler visits to those rivers in 1986. Angler expenditures on the Kenai and Russian River sport fisheries was estimated at \$43 million dollars. ADF&G, 1987, p. 4-2.

There is an important difference between how the two studies examined expenditures. The Nushagak study appears to look just at client expenditures (\$25 million) for guide, lodge, and air taxi services, since it appears to look only at gross income in those industries. The Southcentral study looks at angler expenditures (\$43 million) in terms of "sport fishing related spending per trip" (ADF&G 1987, p. 8-44). It includes items not included in the Nushagak figures, such as expenditures in department/variety stores, sporting goods stores, travel businesses (e.g., commercial airlines, travel agents, car rental), trailer parks and campgrounds, hotels/motels, grocery stores, restaurants, gas, and "other types of business". The Nushagak figures do not include these types of related expenditures. Nevertheless, the figures are comparable.

What is most interesting is the efficiency with which the wilderness dependent recreation industry on the Nushagak generates commerce. The approximately 14,000 Nushagak visitors

spent \$25 million on guide, lodge, and air taxi services, while a minimum of 333,000 sportfishing trips to the Kenai and Russian Rivers resulted in direct spending of \$43 million in a broader range of services analyzed.

Since the State is concerned about commerce, this observation about the commercial horsepower of the wilderness based recreation industry is one worth making. To carry this commercial and automotive metaphor a bit further, the Kenai/Russian River fisheries are analogous to an old Detroit gas guzzler and the Nushagak is a peppy little Japanese car that runs at a much higher r.p.m. You have to pour a lot more anglers into the Kenai/Russian River fisheries to get the same commerce than you do with the Nushagak. The Nushagak appears to be twenty times more efficient than the Kenai/Russian River fisheries in producing comparable spending.

(b) CONCLUSION -- The number of jobs generated in the wilderness dependent recreation industries in the Nushagak compares favorably to the number of jobs generated from all Kenai Peninsula sportfishing.

DISCUSSION -- The Nushagak study gives figures on the "maximum number of employees per month" for the guide, lodge and air taxi industries (BBCRSA 1986, p. 57). The figures are shown in the table below.

Table 1

Maximum Number of Employees Per Month  
by Category (Nushagak Study)

	Air Taxis	Guides	Lodges
Guides	7	35	111
Pilots	82	2	45
Cooks	0	17	67
Maintenance	29	12	4
Management/Marketing	34	4	4
SUBTOTALS	160	70	231

TOTAL: 461 jobs, full & part time

Thus, it appears that the approximate 10,000 to 18,000 wilderness based recreation visitors to the Nushagak in 1985 generated 461 full and part-time jobs in the lodge, guide and air taxi industries using the Nushagak.

The southcentral study estimates the number of angler trips to the Kenai Peninsula as 647,000 in 1986 (ADF&G 1987, p. 3-3). The study also calculated full and part-time employment on the

Kenai Peninsula that results from angler spending associated with sport fishing in Southcentral. ADF&G, 1987, p. 4-10. Obviously, these jobs are created almost totally by the trips to the Peninsula to fish and are not created by trips away from the Peninsula to fish elsewhere in Southcentral. Table 2 reflects employment in Peninsula industries analogous to the air taxi, lodge and guide industries on the Nushagak.

Table 2

Number of Full and Part-time Jobs on Kenai Peninsula  
Directly Resulting from Sport Fishing

Passenger Transport	43
Hotel/Lodging Places	156
Eating/Drinking Establishments	117
Guide Services	<u>331</u>
TOTAL	647

Thus, it appears that the 647,000 angler trips to the Peninsula generated 647 jobs there, while the 14,000 visitors to the Nushagak generated 461 jobs there. One way of comparing these two economies is that it takes 31.5 clients in the wilderness dependent industries using the Nushagak to generate a job in the guide, lodge, air taxi industries, and it takes 1000 angler trips to the crowded Kenai Peninsula fisheries to generate 1 job in analogous industries there.

That manner of comparison at first seemed incredible. However, the comparison is quite logical if one thinks about how these numbers relate to economics of scale. Admittedly, these numbers compare slightly different terms (angler trips and recreational visitors), so the comparison is not precise. The point of the comparison is to draw out the next conclusion, which is about economics of scale.

(c) CONCLUSION -- The efficiency of the wilderness dependent recreation industries on the Nushagak in producing jobs and commerce results from them being on the "flip side" of the "economics of scale".

DISCUSSION -- A positive statement of the flip side of the economics of scale is that the wilderness dependent recreation industries are incredibly efficient in producing commerce and jobs because they are so inefficient in the services they provide. That is to say, they are labor intensive and costly.

Labor intensive and costly industries are assets in a depressed economy if one need not be concerned about competition.

The concept of economics of scale is only meaningful if a

consumer is concerned about price of a product or a producer of a product is concerned about competition. When those concerns occur, then economics of scale is a virtue.

However, economics of scale is not a concern when a producer has a near monopoly on a product. As will be discussed below, Alaska has nearly an international monopoly on certain forms of marketable wilderness recreation involving portions of the sport fishing recreation industry.

Furthermore, current state economic concerns are currently focused on stimulating jobs and commerce.

Finally, in the wilderness dependent recreation industry, economics of scale is probably more of a threat than a virtue. As will be discussed below, it appears that in the wilderness dependent recreation industry, there is an economic and social carrying capacity in any given area of marketable wilderness, and that when that carrying capacity is surpassed through over growth of the wilderness dependent recreation industry and overcrowding of a marketable wilderness area, competition and economics of scale erode price structure and total commerce actually declines.

It should be clear from conclusions (a) and (b) that a well managed wilderness dependent recreation industry creates more jobs and more commerce on a per consumer basis than any other sector of the recreation and tourist industry.

To see the rationality of this deduction one need only, first, observe the difference between a Cessna 206 on floats and a tour bus on wheels, and second, speculate on the implications of purchasing those two pieces of equipment.

The Cessna carries a pilot, a guide, and three guest anglers. A small fishing lodge probably requires about 45 additional, week-long guests annually (3 per week in a 15 week season) to require purchase of another Cessna 206 on floats. That will require hiring an additional pilot and an additional guide.

In contrast, a tour company probably requires at least several hundred additional annual clients to necessitate the purchase of another tour bus and the hiring of an additional driver.

(d) CONCLUSION -- Wilderness is highly marketable, and within the wilderness dependent sport fishing industries, wilderness is in fact, second only to fish, the most marketed commodity.

DISCUSSION -- In Frank Amato's Alaska Angling Guide, 33

advertisers are Alaska sport fishing businesses operating in the bush. Table 3 shows the words they use in their advertisements to describe, and promote on the basis of, the character of their locale and business.

Table 3

Promotional Description of Business Setting

	No. of services mentioning	total No. of mentions
"wilderness"	21	32
"remote"	7	8
"wild", "wild Alaska", or "wilds of Alaska"	4	4
"solitude"	2	2
"scenery" or "scenic"	2	2
"completely unspoiled"	1	1
"unspoiled"	1	1
"awesome beauty"	1	1
"bush"	1	1
"accessible only by sea and air"	1	1
"Alaska's outback"	1	1
"beautiful region"	1	1
"beautiful setting"	1	1
"beautiful river/lake system"	1	1
"expansive beauty"	1	1
No mention of setting	3	n/a

Clearly, wilderness sells to the clientele of these industries.

Roughly the same observation can be made in the Fly Shop catalogue; nine of the 12 Alaska services in that catalogue promote on the basis of their locales. The most common terms are "wilderness", "remote", and "scenic". The terms are frequently used repetatively or in conjunction with synonomous phrases such as "bush", "isolated", "inaccessible" or "most secluded".

The two publications market to non-residents. The conclusion that wilderness (whatever it implies to the consumer) is highly marketable is compatible with what the two economic studies indicate about crowding and non-residents.

The Nushagak study asked industry respondents to describe changes in the areas used for recreation since 1981. The data of those responses is reproduced in Table 4.

Table 4

Changes in Areas Used for Recreation Since 1981  
(% of Sample in Nushagak Study)

	Air Taxis	Guides	Lodges
Decline in Quality From Crowding	41	55	80
Decline in Abundance of Fish	23	5	36
Decline in Abundance of Wildlife	14	10	16

Decline in quality due to crowding is clearly the most dominant response in these sectors of the wilderness dependent recreation industry on the Nushagak.

It is noteworthy at this point that the Nushagak study indicates that the recreational visitors to the Nushagak are 69% non-residents (meaning from outside of Alaska). The study gives point estimates of the number of visitors utilizing the guide, lodge and air taxi industries (BBCRSA 1986, p. 42). And, the study presents data on the resident/non-resident mix among the clients of these industries (BBCRSA 1986, pp. 62-63). Based on these data, the following table can be constructed.

Table 5

Resident/Non-resident Clients  
(Nushagak) (1985 data)

	Point Est. # Clients	Non- resident	Resident
Lodge Industry	6466	85%	15%
Guide Industry	1650	80%	20%
Air Taxi Industry	5926	47%	53%
TOTAL	14,042	69%	31%

The reason that the predominance of non-residents is noteworthy is that the southcentral study focused on how non-residents determine where to fish. That study indicates that with respect to non-residents, concern over crowding was second only to target species as the most important factor in non-resident determinations of where to fish. The least important

factors in non-resident determinations of where to fish were: availability of a package tour, type of lodging and restaurant facilities, availability of guide services, and availability of campground or cabin facilities (AD&G 1986, p. 3-15). That is not to say that non-residents don't like services. They just don't care about them nearly as much as they care about target species and crowding.

Since wilderness is highly marketed, to whom is it being marketed? Clearly, the industry is marketing it to non-residents who are concerned about crowding as a consideration in what constitutes a "wilderness experience".

(e) CONCLUSION -- Conservation designations are good business and are highly marketable, so long as those designations are consistent in name with what recreation consumers seek to purchase.

DISCUSSION -- Of the 61 advertisements for sport fishing businesses operating in Alaska and advertising in either of the two catalogues, 45 are for operators who provide angling services in the field. Of those, 23 are for operators using conservation areas. There are 14 advertisements for operators who operate in national parks, national wildlife refuges, federally designated wilderness areas or the State's trophy trout area, and 9 advertisements are for operators who operate in the Wood-Tikchik State Park or the Kenai River Special Management Area State Park.

Of the 14 advertisements for businesses operating in national parks, national wildlife refuges, national wilderness areas or the State trophy trout area, 10 market on the fact of the conservation designation.

In Amato's Angling Guide, two-thirds (6 of 9) of the services that operate in such areas promote on the basis of the conservation designation. Alaska Rivers Safaris advertises Togiak National Wildlife Refuge and designated wilderness. Andy's Alaskan Fishing Safaris advertises Togiak National Wildlife Refuge. Silver Salmon Creek Lodge advertises Lake Clark National Park. Whaler's Cove Lodge in Angoon advertises Admiralty Island Wilderness. Gone Fishing, Inc. advertises designated wilderness and the Togiak National Wildlife Refuge. Igiugig Lodge advertises the State's designated trophy trout area, Katmai National Park and Lake Clark National Park and Preserve.

In the Fly Shop catalogue, five of the twelve Alaska services operate in such areas. Four of the five use that fact promotionally and a sixth advertises as being in the "shadow of ... Denali National Park". Rainbow River Lodge and No See-Um Lodge are both in the designated Trophy Trout Area; both use that

in promotion. Alaska River Safaris and Andy Jensen's River Camp are both in the Togiak National Wildlife Refuge; both use that in promotion. Wilderness Place Lodge advertises proximity to Denali National Park. Only Karluk Lodge does not mention being in the Kodiak National Wildlife Refuge.

However, just the reverse is true for the Wood-Tikchik State Park and the Kenai River Special Management Area state park. Among the 9 advertisements (all in Amato's catalogue), 7 are for businesses that operate in the Kenai River Special Management Area State Park and 2 are for Lodges that operate in Wood-Tikchik State Park. Of those 9, not one markets on the basis of the designation. Wood-Tikchik State Park is a superb wilderness fishery for trout and salmon. The park hosts some of the most successful lodges in the state. The Kenai River is a superb fishery, though it is not a wilderness fishery.

It is important to identify what problems may exist in marketing state parks. It is not that state designations are not marketable, for the state's designated trophy trout area is marketed. And, it is probably not that state parks can't be better named in order to be more useful promotionally. It could be that in the non-resident consumer's mind, the words "state park" connote what state parks are in the lower-48 states -- i.e., small, crowded, covered with picnic tables, and surrounded by land that would not be called "wilderness". Therefore, the problem is one of image and name for the Division of Tourism, the Division of Parks, and the Legislature to overcome.

This observation has an implication for the proposed recreational rivers in H.B. 93. "Recreational river" may be used by the recreation industry to improve marketing, but one can speculate that the Legislature might want to choose a name that comes closer to what the non-resident consumers seek to purchase. Names of conservation designations are obviously commercially important in that a good name is good business. The matter of naming the proposed recreation rivers is discussed further under the conclusions about the Susitna drainage.

It is concluded that legislative designations for conservation are good business and create jobs and commerce that would otherwise be less in number and amount, so long as the designation and management are consistent with what consumers seek. If the designation connotes the experience the consumer seeks, then the industry markets on the basis of the designation.

(f) CONCLUSION -- The wilderness dependent recreation industry in a given area of highly marketable wilderness can be characterized as having an economic and social carrying capacity. Increased use appears to increase total commerce only to a certain point, and after that point is reached, further

competition within the industry and further crowding erode the price structure and result in depressing the total commerce.

DISCUSSION -- Overcompetition and overcrowding appear to be economically disastrous to the wilderness dependent recreation industry. Although neither of the economic studies focused directly on the relationship of crowding and competition to commerce in the wilderness based recreation industry, there is strong evidence in the two studies to infer that areas of marketable wilderness have economic carrying capacities. The studies yield the following four items of compelling evidence.

First, as discussed earlier, the southcentral economic study indicates that for non-residents the two most important factors in deciding where to fish are, first, the species they seek, and second, concern about crowding. In the Nushagak study, "decline in quality from crowding" was the most often cited change in the areas utilized by the air taxis, guides and lodges that were the subject of that study. There is clearly a relationship, in the minds of both industry respondents and non-resident anglers, between crowding, quality and where the non-resident decides to spend his or her dollars.

Second, this analysis will discuss in greater detail later a comparison of prices for comparable services located in southwest Alaska and further out west Susitna drainages. For now, suffice it to say that the market in southwest will bear a price of \$3000 per week at a lodge for a trout and salmon package. A comparable package at west Susitna lodges on Lake Creek or Talachalitna River, where there is relatively more crowding and competition, runs \$1500 to \$2000 per week. Between the two areas, there are different costs within the services (fly-out fishing is more common among southwest lodges), but crowding and competition may also contribute to lower prices on the west side. Thus, price comparisons appear consistent with what non-residents say about how they determine where to fish.

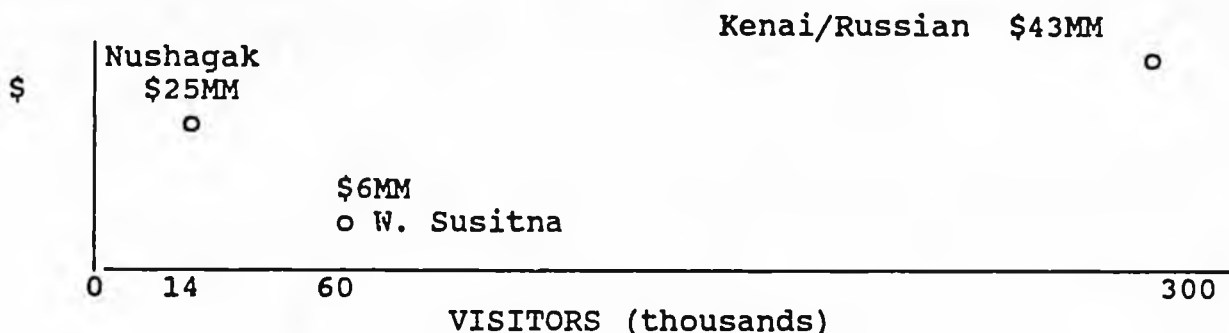
Third, a comparison of the non-resident spending on the Nushagak with non-resident spending on west Susitna streams supports the inference that there is an economic carrying capacity in wilderness recreation areas.

On the Nushagak, on a pro-rata basis, the 9686 non-resident visitors (based on a point estimate total of 14,042 visitors) spent \$17.25 million. In reality they spent much more, because Table 5 shows that they disproportionately purchase expensive lodge and guide services, as opposed to less expensive air taxi services. On the Nushagak, the average price per visitor is \$1785.

On the west Susitna streams, the southcentral study reported only on the king and silver salmon fisheries. With respect to

those fisheries, the study estimated 8529 non-resident angler trips (out of 68,293 total resident and non-resident angler trips) resulted in about \$3 million of direct spending (out of a total \$6 million) on recreational services there (ADF&G, 1987, p. 3-3, p. 4-2). Based on these estimates, for non-residents the average cost per trip was \$58.

Fourth, following graph compares spending and number of visitors for three fisheries. The Nushagak is predominantly a non-resident, wilderness dependent industry. The Kenai/Russian rivers are predominantly resident and access-service dependent. The west Susitna, as will be shown later, is a mix of access-service dependent fisheries on the lower reaches of some streams and wilderness dependent on the upper portions of some streams where the lodge industry is highly competitive.



The only line that can connect these points is one that implies a carrying capacity for wilderness dependent industry. When it becomes overly competitive it becomes less productive of commerce. The line is left undrawn because it would obscure several problems with the data that make the graph less than fully accurate. First, the Nushagak recreation visitors are not all anglers but are predominantly so. Second, as will be seen below, the west Susitna fisheries are only partly comparable to Nushagak fisheries in terms of how they market and the species they market. Nevertheless, this graphic portrayal of three fisheries implies an economic and social carrying capacity tied to competition and crowding.

The difference in non-resident spending between the Nushagak and the west side of the Susitna deserves more analysis than these studies will support. However, the difference clearly exists, and erosion in price structure may contribute to it. It appears that the commercial horsepower of the west Susitna streams is depressed by factors the State would be wise to bring under control.

There are probably many variables that affect recreational spending in these two areas and that obscure the relationship of crowding, competition and spending. Those variables include the

fact that the west Susitna streams have both an access-service dependent fishery in some areas and a wilderness dependent fishery in other areas, less fly-out fishing on west Susitna streams, decreased wilderness, and a predominance of salmon fisheries as opposed to trout with salmon and other stocks. This study however seeks to point out that crowding and overcompetition appear to be among the variables and deserve further study as the State seeks solutions to its depressed economy.

Although the inference of the negative relationship of total spending to crowding and competition is based on indirect evidence, the inference is consistent with a common sense observation that when the fishing hole gets too crowded, the higher dollar wilderness consumer is probably the first to move.

Finally, political leaders and agency officials might want to note that this inference of an economic carrying capacity serves many interests. The notion of an economic carrying capacity serves state economic interests because state agencies can identify carrying capacities to understand what levels of competition and public use maximize commerce and jobs. That is not to suggest that state policy should be governed solely by maximizing commerce, since on the Nushagak that would mean doing away with the less expensive air taxi industry and handing all flying of recreationists over to the more expensive lodge and guide industries. Clearly, there needs to be a mix of different recreational services, catering to different markets for wilderness dependent industries. The mix just needs to be managed to sustain a healthy level of commerce and employment.

The concept of an economic carrying capacity serves industry interests because it protects existing wilderness dependent recreational businesses from overcompetition. The notion of a carrying capacity serves employment interests, because it protects wages against overcompetition and supports the ability to hire high quality staff which is very important in the more lucrative portions of the lodge industry.

The notion of a carrying capacity clearly serves conservation interests, because it protects the character of marketable wilderness.

The notion of a carrying capacity protects Native interests, because it protects rural Alaskans from overcompetition for resources and space. Adoption of such a notion could help to assure rural Natives that the recreation industry will not endlessly keep introducing more and more non-Natives into areas valued by Natives.

(g) CONCLUSION -- The State might benefit economically if public officials had a better understanding of non-resident and resident interests and participation in the wilderness dependent and access-service dependent sectors of the recreation industry. Such an understanding is necessary if Alaska is going to deal with its national and international competition for exotic recreation, regardless of whether the recreation is access-service dependent or wilderness dependent.

DISCUSSION -- In considering what the State can do to promote jobs and commerce in the recreation industry, it is very important to bear in mind that resident versus non-resident participation is a fundamental difference between the consumers of the access-service dependent fisheries, such as many of those in southcentral Alaska, and the wilderness dependent fisheries on places like the Nushagak.

In the Nushagak system, approximately 9,686 of the 14,042 visitors in 1985, or 69%, were non-residents. In southcentral Alaska sportfisheries, the reverse is true. Less than 15% of the sportfishing trips were by non-residents. Of 1,089,000 sportfishing trips, approximately 161,000 were by non-residents. This relationship holds true on the west Susitna drainages where non-resident fishermen took approximately 12.5% of the trips, and on the Kenai Peninsula where non-resident fishermen took approximately 18.7% of the fishing trips (ADF&G 1987, p. 3-3).

The predominance of non-residents in the wilderness dependent recreation industry has important economic implications for a state concerned about commerce and jobs.

If the State seeks to expand the recreation industry, there may be merit to focusing more on the non-resident wilderness consumer who purchases services in industries that are so efficient in producing jobs and commerce. Unfortunately, the Division of Tourism seems to focus most on the non-resident consumer who purchases services in access-service dependent industries, such as the cruise ship industry and the package tour industry, which may be inefficient in producing jobs for Alaskans and are probably disproportionately run by outside firms.

For example, compare the following two hypothetical tourists. One is an angler booking into an expensive southwest Alaska lodge and the other is a purchaser of a cruise ship ticket.

The economic consequences of the non-resident angler are likely to be:

(1) the angler may spend a thousand dollars on an airline ticket to get here, and the money goes to a non-Alaskan airline

to support non-Alaskan employment,

(2) the angler may spend several hundred dollars on an Alaskan owned airline that takes the angler to the bush,

(3) the angler may spend \$3000 at a lodge that is most likely to be Alaskan owned and that is labor intensive and therefore efficient at producing jobs, and

(4) the angler is likely to purchase several hundred dollars worth of lodging, retail sales and travel in and about Anchorage.

Contrast the foregoing with a hypothetical client in the cruise ship industry.

(1) several thousand dollars to purchase a cruise ship ticket for which the price goes to an out-of-state firm,

(2) probably several nights of lodging worth a few hundred dollars which go to Alaska firms,

(3) retail purchasing and group travel in Alaska, costing perhaps in excess of several hundreds of dollars.

There are two distinctions between these hypothetical examples. The angler appears to leave more money in the state than does the cruise ship client. And, the angler spends within an industry that is labor intensive, operates on the "flip side" of the economics of scale and is therefore efficient in producing the next incremental job. The cruise ship client spends only in industries that operate on the economics of scale.

The foregoing comparison does not necessarily mean that the consumers of wilderness recreation spend more or generate more jobs than access-service dependent consumers. There are probably many more non-resident "clients" than "anglers". This matter should be examined further.

(h) CONCLUSION -- There is little the State can do to expand the portion of the recreation industry that is overwhelmingly dependent on residents. For the most part, all the State can do is shift the locale of resident activities through increased access.

DISCUSSION -- Outside of oil matters and national defense defense expenditures in Alaska, the state may have limited options that result in increasing the number of Alaska residents and thereby increasing the recreational commerce in which they engage. Since Alaskans are burning fuel and rubber getting out of here, the portion of the recreation industry that depends on

their expenditures is not a good candidate for state efforts.

However, the State can promote out-of-state visitors, who incidentally don't require schools, jobs, roads and other services.

Since the number of residents is limited and declining, state efforts to increase access to desirable recreation areas are likely to result only in shifting the location of where the resident recreation dollar is spent and where the job is generated.

Therefore, statements by the Division of Forestry that the originally proposed Susitna timber sale would increase recreational spending are misguided. The exact opposite is probably true since the cost of recreation on the west side of the Susitna would decrease. So would the value of the private aircraft industry. Furthermore, there is no evidence that such access would increase non-resident use of the area. Fewer non-residents use the cheaper west Susitna fisheries than use the expensive Nushagak fisheries. Except for the rather unique Kenai River fishery, non-residents seem to prefer expensive fishing vacations over cheaper ones.

(i) CONCLUSION -- With the exception of stimulating commerce related to the oil industry, the most efficient state action to stimulate jobs and commerce on a long term basis may be to undertake a sophisticated program to protect, regulate and promote wilderness dependent recreation industries.

DISCUSSION -- All of the above conclusions and discussions lead to this conclusion. This study makes a number of recommendations as to what that program might be.

(j) CONCLUSION -- Within the current market for wilderness based recreation, the most lucrative combination of commodities is probably the combination of world class rainbow trout, in conjunction with salmon and resident fish stocks, in a wilderness setting that carries an administrative or legislative designation that is marketable to the consumer.

DISCUSSION -- World class rainbow trout is the most important species to the non-resident angler, as indicated by the price structure within the industry, the marketing practices of the industry, and the economic data. The Fly Shop catalogue contains prices for all advertisers. Amato's contains almost no price information and therefore could not be used to analyze price structure. Both catalogues yield data of species depicted in the artwork (mostly photographs) in the advertisements.

With respect to price structure, of the 27 world wide services marketed in the Fly Shop Catalogue, the highest prices (about \$3000 per week) are commanded by wilderness lodges offering world class trout fishing in Alaska and Patagonia (Chile).

Furthermore, the Fly Shop catalogue shows that in Alaska, rainbow trout offered in conjunction with salmon and resident fish species command 50% higher prices and therefore commerce, than just salmon alone.

In southwest Alaska, the price for a week of world class rainbow trout fishing, mixed with salmon, char and grayling, is about \$3000 per week. Dave Egdorf's Western Alaska Sport Fishing sells trout camp at \$2900/wk. Rainbow River Lodge markets rainbows at \$2995/wk. and emphasizes the Iliamna Trophy Trout area designated by the Board of Fisheries. No See-Um Lodge is \$3195/wk. and emphasizes the Iliamna Trophy Trout designation. Alaska River Safaris, near Goodnews, sells "superb rainbow trout" and equally emphasizes salmon at \$2850/wk and \$2350/wk.

Contrast these prices with prices in the same locale (Southwest) and even in the same business facilities, when only salmon is offered. Dave Egdorf's Western Alaska Sport Fishing sells salmon camp for \$1900/wk. Dave Coray's "Shelter Creek" near Iliamna Volcano sells silver salmon for \$995 for 4 days. Karluk Lodge on Kodiak Island sells king salmon at \$1595/wk., red and pink salmon at \$795/wk., and silver salmon at \$1750/wk. Karluk's highest price is \$300 per day of fishing for steelhead, which are ocean run rainbow trout. Andy Jensen's River Camp, near Togiak, sells salmon for \$1850/wk.

Obviously, the market will bear a 50% higher price tag for experiences that include world class rainbow trout fishing than for salmon fishing in the same locale and even in the same camp. That differential is a differential of commercial power in the two resources in southwest Alaska.

With respect to marketing practices, in Amatos' Alaska Angling Guide, Rainbow trout is the species most marketed by the sport fishing industry in the advertising artwork. Table 6 summarizes the data.

Table 6

Species Depicted in Amato Advertising

Rainbow Trout	17
King Salmon	13
Silver Salmon	1

Similarly, for the clientele to which the Fly Shop markets, rainbow trout is the species most marketed in lodge industry photographs. Eleven of those 12 Alaska services in the Fly Shop catalogue promote by photograph, and a total of 13 photos are used. Table 7 summarizes the data.

Table 7

Species Depicted in Fly Shop Advertising

Rainbow Trout	7
Silver Salmon	3
King Salmon	1*
Grayling	1
Pool of Salmon	1

\* King salmon photo used in conjunction with silver salmon photo, therefore the numbers do not add to 12.

The foregoing comparison of prices and the photographic analysis is consistent with the Nushagak study, which found fishing for rainbow trout is the most popular activity, slightly ahead of king and silver salmon, in that system (BBCRSA, 1986, p. 18). This species preference for rainbows is characteristic of most of the clientele in the Bristol Bay drainage.

The importance of rainbow trout does not mean that kings and silvers are not important elements in marketing or in the economics of the sport fishing industry. It simply indicates there is an economic relationship between species, price structure, and marketing practices.

An implication of that relationship is that conservation of world class rainbow trout stocks is wise economic policy. During the past four years, pressure from the sport fishing community and the sport fishing industry has moved the Alaska Department of Fish and Game and the Board of Fisheries toward improving the management of Alaska's world class rainbow trout stocks.

The lodge industry is very supportive of conservative management of trout. Esthetics aside, rainbows are slow growing, reproductive at a late age in southwest Alaska, and financially important. Maintaining world class trout is necessary to the economic future of the lodge industry. Of the 25 lodges responding in the Nushagak study, 24 reported they do not allow clients to kill rainbow trout, and 16 reported they do not allow clients to kill grayling or char (BBCRSA 1986, p. 31).

The guide industry is supportive of strict management of rainbow trout, but the industry is not as strongly conservationist on this measure as the lodge industry. Of the 22 guides responding in the Nushagak study, 13 reported they do not allow clients to kill rainbow trout. Id. Although both industries are clearly supportive of very careful management of world class rainbow trout, the lodge industry is more so probably because it involves investment in facilities that depends on continued world class trout.

The situation with respect to species appears somewhat reversed for southcentral Alaska businesses. As a consequence the State's ability under present circumstances to market southcentral recreation to non-residents appears to be deleteriously diminished. With the exception of some wilderness Susitna drainage fisheries, southcentral businesses have to focus on salmon more than the combination of trout, salmon and wilderness. They have to do so even though salmon are a less lucrative species to market to non-residents as indicated by the previous price structure analysis. And, they have to do so in the context of the comparatively depressed overall recreational commerce generated from non-residents on the west side of the Susitna. And, they have to do so in an arena fraught with competition and crowding. And, they have to compete for non-residents who are demonstrably concerned about crowding.

Therefore, firms dependent on southcentral fisheries market to non-resident anglers proportionately focused more on salmon than on trout, salmon and wilderness. Table 8 presents the data derived from analysis of the photographic artwork and the verbal descriptions of locale of operation with respect to advertisers that operate in southcentral Alaska.

Table 8 makes clear that in southcentral, there are two sport fishing industries. One is access-service dependent. It markets salmon. The Kenai River advertisements in Table 8 are representative of this industry. The other is a wilderness based industry, and the commodity it markets is the combination of trout, salmon, and wilderness. This industry is more analogous to the industry on the Nushagak in terms of product, marketing practices, and probably clientele and efficiency with which it produces jobs and commerce.

Table 8

Species Depicted and Locale Descriptions in Southcentral  
and Kenai River Sport Fishing Advertisements  
in Amato, Fly Shop and Access-Service Dependent  
and Wilderness Dependent Fisheries

	Amato	Fly Shop	Kenai (Access service depend)	Talachalitna R. Lake Cr. & others (wilderness based)
-----				
Sample Size	12	2	7	8
-----				
King Salmon	10	0	5	2
Rainbow Trout	5	2	2	4
Silver Salmon	2	0	2	0
-----				
"wilderness"	n/a*	n/a*	0	4
"remote"	n/a*	n/a*	0	3
"scenic"	n/a*	n/a*	1	2
"bush"	n/a*	n/a*	0	1
"unspoiled"	n/a*	n/a*	0	1
"virtually untouched"	n/a*	n/a*	0	1
"wilds"	n/a*	n/a*	1	1
"beautiful setting"	n/a*	n/a*	-	1

\* n/a because in analyzing verbal descriptions of locale, it makes sense only to separate access-service dependent fisheries from wilderness dependent fisheries; combining them only produces meaningless data.

This table clearly indicates that when a fishery in southcentral Alaska becomes access-service dependent and is much less efficient in producing commerce and jobs, the market to which the sport fishing industry must appeal changes from a market for trout, salmon and wilderness to a market just for salmon.

Furthermore, the table indicates that when an area of marketable wilderness turns access-service dependent, the ability to market wilderness and locale disappears, along with the efficiently produced commerce and jobs that go with the wilderness dependent recreation industry.

The eight businesses in the southcentral wilderness dependent sample are Talaview Lodge (Talachalitna River), Wilderness Place Lodge (Lake Creek), Lake Creek Lodge, Tolsina Lake Resort, Beluga River Camp, Kalgin Island Lodge, Angler's Alaska Adventures (selling custom "bush" fishing expedition but

based in Anchorage), Ultimate Rivers (offerring "wilderness" fishing experiences and based in Healy). Talaview and Wilderness Place Lodge advertise in Fly Shop; the rest advertise in Amato.

The seven businesses in the access-service dependent sample on the Kenai River are Kenai River Sport Fishing Camp, Wes' Alaskan Fishing Adventures, David and Valerie Booth, King Louie's Salmon Charters, Great Alaska Fish Camp, R. W.'s Guide Service, and Tim Hiner.

The different character of southcentral marketing and commerce probably is due to several factors, including:

- (a) diminished world class trout fisheries where they were historically present in southcentral,
- (b) the predominance of resident interest in salmon over trout, and
- (c) probably different degrees of concern about crowding among salmon fishing clientele in southcentral fisheries as opposed to trout clientele in southwest fisheries.

One implication of this list and the evidence about carrying capacity and depressed commerce on the west Susitna drainages is that a wise economic policy would be to seek measures that enhance the marketability of wilderness dependent fisheries in the Susitna drainage.

It is important to note the "wilderness" is not mentioned in the above list. "Wilderness", whatever it means in the marketplace, is clearly relevant economically to the industry. It is not mentioned in the list because the concept of "wilderness" is an intangible entity. The concept probably exists first and foremost in the eyes of the beholder. What it may mean for Alaskan law is a problem for the Legislature, not this study. However, one should not infer that wilderness in the Susitna drainage should not be addressed. Business does, and therefor, public policy should.

(k) CONCLUSION -- The marketing practices of the lodge industry are consistent with conservative management of resident fish stocks, particularly rainbow trout. The economic importance of rainbow trout indicates that very conservative management of rainbow trout is good business and sound economic policy.

DISCUSSION -- A competent guide or angler can distinguish a photograph of a live released fish from a dead fish. A competent guide or angler will simply "know" a picture of a released fish because she or he has taken a thousand pictures likes those in

the advertising artwork. Released fish are horizontal. Dead ones are verticle. Released fish have the tail held firmly to control the animal for its safety, and the abdomen is supported with the person's fingers away from the gills. Dead fish, even when held horizontally, are not held like that. Released fish have flapping pectral (front) fins. Dead fish have pectral fins pasted to the body with mucus. Released fish have bright, colorful eyeballs going every which way. Dead fish have dull, flat eyes flush with the body and "looking" straight out. Finally, anglers holding released fish are usually in the water, alone in the picture, holding the fish close to the water with rod still in hand, or nearby, and the hook is frequently still in the mouth (that's so the angler can still get the picture if the fish flops free and starts swimming away). In dead fish pictures, the angler is generally the exact opposite of what he or she is in released fish pictures. Thus, in photographs, dead fish don't have to wear plaid to be "dead", released fish don't have to be swimming to be "released".

Table 9 summarizes the advertising photos in Amato.

Table 9

Released vs. Dead Fish by Species (Amato)

	Released	Dead
Rainbow Trout	11	2
King Salmon	2	11
Silver Salmon	2	8

The photographic advertising data from the Fly Shop catalogue is:

Table 10

Released vs. Dead Fish by Species (Fly Shop)

	Released	Dead
Rainbow Trout	7	0
King Salmon	N/A	N/A
Silver Salmon	3	0
Grayling	1	0

What is important in all of this is that in the non-resident market, released rainbows sell, but dead ones don't. Thus, a sound economic argument can be made for conservative management of trout stocks.

## 2. Conclusions About the Susitna Drainage

The west Susitna fisheries confront the State with especially complex problems because they support both high volume, low budget, access-service dependent fisheries and more expensive wilderness fisheries. Fundamentally, that is one reason why the recreational rivers bill, H.B. 93, has been controversial even among recreationists. Few of them dispute the value of these rivers and the need to manage them wisely. They just can't agree on the bill. Throw in the so-called resource development advocates, the environmentalists, the Borough, the Susitna timber issue, and the conflicting beliefs of legislators and agency officials, and it should be no wonder that the Legislature has had a difficult time resolving the issue.

Some suggestions will be made in this section of the analysis.

(1) CONCLUSION -- Fishing lodges on the west side of the Susitna are presently unable to command the price of comparable services in southwest Alaska.

DISCUSSION -- Two of the 12 Alaska services in the Fly Shop catalogue are on the west Susitna drainages. This is a small sample, but the prices are apparently representative of the lodge industry on the west Susitna streams. (Robert Farmer, pers. comm., 1988).

Talaview Lodge on the Talachalitna River markets salmon and trout at \$940 for 4 days, and Wilderness Place Lodge on Lake Creek markets salmon and trout for \$1595/wk. A question to ask is why this lower economic return from the resource occurs on west Susitna streams, even in the wilderness dependent sector marketing trout, plus salmon, plus wilderness.

Lake Creek still offers excellent rainbows, and the Talachalitna is pretty good. The difference in price structure is probably at least partly the result of increased crowding and competition with the industry. Both systems are readily accessible by air and boat from Anchorage. Lake Creek has more than 20 lodges and guide services operating on it, and the Talachalitna has 7 or 8. Crowding from resident anglers and competitor's clientele, whether resident or non-resident, may contribute to the substantially lower prices than occur in southwest Alaska.

The indications of depressed price structure are consistent with what the southcentral study found with respect to crowding and non-resident determinations of where to fish -- i.e., that second only to species preference and availability of species

sought, crowding is the most significant factor in where non-residents decide to fish.

The two west side packages in the Fly Shop Catalogue also include airfare from Anchorage, whereas the southwest packages generally do not, thereby increasing the strength of the inference that the relative price structure on the west side is not as secure as that in southwest and in comparative terms appears to have caved in on itself. What we have in the wilderness dependent industry on Lake Creek and the Talachalitna may be examples of a surpassed carrying capacity.

This does not mean that the state should go about eliminating lodges, outfitters, air taxi operators, guides, or recreational anglers whether resident or non-resident. It does mean, however, that the State should be very cautious about further competition, over harvest of large rainbow trout, land disposal, timber harvest and road access to these areas. A wise economic policy would enhance the marketability of the area rather than deplete the marketability of the area.

(m) CONCLUSION -- The wilderness based recreation on the west side of the Susitna appears to have surpassed its carrying capacity. It is operating at about one-sixth to one-fourth the commercial horsepower of the Nushagak recreation, despite the fact that the west Susitna drainages receive five times as many total visitors, an approximately equal number of non-resident visitors, and still in some areas seek to market trout, salmon and wilderness.

DISCUSSION -- Based on the southcentral study, direct expenditure by non-residents on 8529 angler trips to west Susitna streams amounted to \$3 million. Based on the Nushagak study, 9,686 non-resident recreational visitors to the Nushagak spent at a pro-rata minimum, about \$17.25 million in just the guide, lodge and air-taxi industries. Furthermore, expenditures on 68,000 total (resident and non-resident) trips to the west Susitna streams amounted to \$6 million, compared to 14,000 total (resident and non-resident) visitors to the Nushagak who spent \$25 million.

Based on the price structure, it appears that lodge prices for comparable fisheries on the wilderness streams on the west side of the Susitna (eg. Talachalitna and Lake Creek) are depressed from 30% to 50% below economic carrying capacity when compared to southwest Alaska. Thus, it appears that the wilderness based recreation industry on the west Susitna drainage may have passed its economic carrying capacity and tipped over. The State should look into the wisdom of protecting existing industry and price structure by limiting new guide and lodge operations in places where there is evidence of overcompetition.

For purposes of recreational commerce, these fisheries are functioning far below potential. The problems appear to be crowding, overcompetition within the lodge and guide industry, the absence of marketable state conservation designations, decline of trout stocks, a history of land disposal.

(n) CONCLUSION -- On the west Susitna fisheries, the State would do well to recognize that there are two different industries operating in different areas of these rivers and that the difference gives rise to implications for economic policy, resource management and legislation.

DISCUSSION -- Sport fisheries on the lower reaches of the Deshka (the 25 miles of water downstream from Neil Lake) and Alexander Creek (downstream from Sucker Creek which is a mid point of Alexander) appear to be too crowded to market to many high paying non-resident wilderness consumers. They will clearly buy into such areas, for there is some lodge industry activity on the lower portions of these rivers. However, for the most part these fisheries are resident based. They appear most marketable to residents, who comprise 85% of the visitors.

Furthermore, the upper river wilderness based fisheries may be too crowded with competing services to maintain a price structure comparable to similar fisheries in southwest Alaska.

The most sensible economic policy may be a combination of marketable conservation designations and management that distinguishes between accessible, high volume, low budget fisheries on the lower reaches of several rivers and higher priced, wilderness dependent fisheries on streams such as the Talachalitna River and Lake Creek. Such distinctions would promote the ability of the recreation industry to market accordingly.

Based on the evidence that appropriately named conservation designations are highly marketable, the Legislature, as it considers the recreational rivers bill, would be wise to think before naming the baby. A thoughtful argument can be made that the Legislature should be bearing twins. One might be named "Susitna Wilderness Trout and Salmon Reserve" and be for the rivers or portions of rivers that remain wilderness in character, less crowded, more expensive, efficient or capable of being efficient in producing jobs and commerce, conducive to multi-day trips, and supportive of a wilderness dependent industry that markets trout, salmon, and wilderness. The other might be named "Alaska Salmon Sport Fishery" and be for the rivers or portions of rivers that are access-service dependent, more crowded, less expensive and are marketable to anglers mostly seeking salmon.

If the Legislature did that, then the industries, particularly the wilderness based industry that focuses proportionately more on non-residents, would be likely to start cutting new advertisements immediately.

(o) CONCLUSION -- The Legislature and several state agencies should examine the wisdom of amending the boundaries of the proposed recreational rivers, since it may be that, regardless of the name, a boundary on some of the rivers should be redesigned to accommodate the different industries that occur. It may be that it should be broader in areas where the wilderness dependent industries are marketable, or potentially marketable, than in areas of access-service dependent industry.

DISCUSSION -- The last industries Alaska needs to dispose of are those that efficiently produce commerce and jobs. This conclusion simply follows from much of what has been discussed above about marketing, jobs and commerce, resident versus non-resident behavior, the wilderness dependent industry compared to the access-service dependent industry, price structure, and carrying capacities. This conclusion is simply a deduction from many of the foregoing conclusions and discussions.

(p) CONCLUSION -- State decisions, such as massive timber harvests, that severely impact the character of marketable wilderness may lead to net long term losses of existing and potential commerce.

DISCUSSION -- On December 29, 1987 the Division of Forestry revised upwards its previous estimates of the economic value of the proposed Susitna timber sale. (Memorandum, DNR, Forestry, to Office of Policy Development, 12/29/87.) The revised figures on annual product value is \$4.4 million to \$14.7 million.

The highest of these figures is lower than the minimum estimate -- \$17.25 million -- of the direct non-resident spending on the Nushagak on just the guide, lodge, and air taxi services. That spending disregards other spending by those non-residents in Alaska, and that estimate disregards the fact that non-residents disproportionately purchase the more expensive lodge and guide services, as opposed to air taxi services, on the Nushagak.

During the Susitna timber advisory committee meetings, estimates for rotation (return of forest to harvestable condition) ranged from 30 to 100 years. Taking these admittedly unsubstantiated figures at face value, it is possible to reach a range for the annualized product value across the rotation period. A worst case scenario might be 100-year rotation at \$4.4 million of yearly product, and a best case would be a 30-year rotation at \$14.7 million of yearly product.

These worst and best cases put the annualized product value between \$0.88 million and \$9.7 million, assuming that the timber would be harvested across 20 years as originally planned.

Since the evidence also appears to be that the wilderness based recreation industry on the west Susitna drainages is depressed below its economic carrying capacity, the wisest economic policy seems to be one that pushes the wilderness dependent recreation industries on the west side back toward its economic carrying capacity, rather than undermining it further through timber harvest.

It has already been shown that the wilderness based industry on the west side markets like the Nushagak and has the combination of quality trout, salmon and wilderness. Policies that might push the industry back toward its carrying capacity might be --

(1) enactment of a recreational rivers bill that protects the access-service dependent industry attractive to residents, expands the commercial value of the wilderness based industry that is more attractive to non-residents, names the conservation designation in an appropriate manner, and manages the resources upon which the respective industries depend in a manner supportive of those industries,

(2) a moratorium on new recreation businesses in order to protect present businesses against overcompetition and erosion of price structure,

(3) a long term program to gradually and fairly redistribute competition among what appears to be an overgrown wilderness based industry that has passed its economic carrying capacity. Such a program might involve amortizing operators who have little or no on-the-ground investment, such as non-Alaskan tent-camp permittees.

### 3. The Nature of the Market and National and International Competition

(g) CONCLUSION -- In the national and international markets for high paying anglers, Alaska appears to be the most popular destination for North American anglers seeking exotic destinations involving marketable wilderness, but Alaska faces difficult competition to match in the world of salt water angling.

DISCUSSION -- Alaska appears to have a near monopoly on

marketable wilderness fisheries for trout, plus salmon and other resident fish. In the market for high paying anglers, this combination appears to be still the most popular and commands the greatest prices.

The destinations the Fly Shop markets include Alaska, Patagonia, Bhutan, the South Pacific, the Bahamas, and other exotic locations. Twelve of the 27 services are Alaska services. Ten of the 27 are for saltwater destinations with which Alaska competes but can't match. These destinations include places such as Belize, Christmas Island, the Yucatan in Mexico, Costa Rica, and the Bahamas.

In the Fly Shop catalogue, Alaska businesses far out number those of other countries or lower-48 locales. The catalogue offers one Montana package for cutthroat trout fishing by horseback in the Bob Marshall Wilderness Area and one Oregon package for rainbow trout and steelhead trout (an ocean run rainbow trout) on the Deschutes River. There are three Canadian packages -- a trout package on the Bow River near Calgary and two steelhead trout packages in British Columbia.

There is a Patagonia package for trout at prices comparable to southwest Alaska. There is a Bhutan package for trout in the Himalayas at prices somewhat lower than southwest Alaska.

Although there is no New Zealand package (winter is approaching there), New Zealand is assumed to be a competitor with Alaska for the national and international, high paying angler.

(r) CONCLUSION -- Non-resident fly fishermen pursuing world class rainbow trout in conjunction with salmon and other resident fish appear to be the portion of the non-resident market that is most productive of jobs and commerce in the wilderness recreation industry. The next most productive consumer is probably the non-resident hunter.

DISCUSSION -- Since the Fly Shop catalogue is a prejudiced sample for purposes of this conclusion, it is excluded.

However, Amato's Alaska Angling Guide is sold on news stands throughout the country and markets to a wider audience for both the wilderness based recreational fishing industry and access-service dependent recreational fishing industry.

Table 10 summarizes the type of tackle shown, if any, in the advertising artwork of all businesses advertising in Amato, and of the businesses advertising field services by locale in southwest (SW) and southcentral and the Kenai River (SC & Kenai).

Table 11

Tackle Depicted in Advertising Artwork (Amato),

	Fly tackle	Spin tackle	Tackle not shown
All Businesses & Areas	38	9	22
SW Services only	13	2	8
All SC & Kenai R. Serv.	5	6	5
SC/Wilderness Dependent	4	2	2
Kenai R./Acc.-serv. Dep.	0	2	5

Table 10 indicates, as did Table 9, that there are two sport fishing industries operating in southcentral -- one access service dependent and one wilderness dependent. Once again, the southcentral wilderness dependent industry is behaving similarly to the one on the Nushagak.

This data adds to much of what has been said previously about the wilderness dependent industry compared to the access-service dependent industry. Fly tackle correlates with the wilderness based industry, efficient production of commerce and jobs, price structure related to rainbow trout, the market for uncrowded fisheries, released fish, and sound economic and resource policy related to the wilderness based industry.

Spin fishing has opposite correlations but not negative implications. The data should not be interpreted as saying that spin fishing is economically unproductive. One need only look at the Kenai to know that it is very productive from the perspective of economics of scale. Spin fishers outnumber fly fishers by many times. Therein lies their productivity.

However, the correlations do indicate that sound economic policy means that the Board of Fisheries, state resource agencies, and the Legislature should be sensitive to fly fishing issues, regardless of whether those issues arise from the public or the industry, and regardless of whether they involve fish, competition within the industry, resource management, or crowding.

(s) CONCLUSION -- Where wilderness, remoteness and solitude can not be used to promote high quality sport fisheries involving trout, the market requires a price reduction in the nature of one-third to two-thirds for otherwise comparable recreation and services.

DISCUSSION -- Just as world class rainbow trout appear to add 50% to the price the market will bear over salmon alone, it

appears that wilderness adds substantially to what the market will bear.

It is useful here to compare the prices of high quality trout fisheries in western state and Canadian trout fisheries that cannot promote on the basis of wilderness. They compete with the Alaskan wilderness recreation industry by offering comparable fisheries in a nonwilderness setting at a greatly reduced price.

The Bow River flows through Calgary, Alberta. Calgary has secondary sewerage treatment which leaves organic nutrients in the water. The result is that downstream from Calgary, a city of about 800,000, an economically useful, non-wilderness trout population has developed in the cattle country south of town. The trout harvest is carefully regulated, and the fishery is among the best in North America. It is non-wilderness and the price structure, at \$510 for 3 days, reflects that.

The Deschutes is in Oregon and is a significant fishery in the lower-48. For the most part it is road accessible. The price structure of the industry is the same as on the Bow -- \$535 for 3 days. Like on the Bow, trout harvest is conservatively managed at two fish per day, only one over 20 inches. Outdoor Life, February 1988, p. 119.

It should be obvious that in the marketplace, lower price does not necessarily mean stronger competition or a more marketable experience. Few lower priced competitors exist in the market for high dollar anglers. Lower price usually means one of three things: (1) lower demand among top dollar tourists as shown in the discussions of salmon camp and trout camp prices, (2) a non-wilderness experience (Bow and Deschutes Rivers), or (3) overcompetition within a region for the same resource and experience (crowding concerns of non-residents and lower price structure of the west Susitna wilderness based industry).

Lower priced competitors can't beat most of Alaska for wilderness and salmon. What is happening, however, is that other governments are challenging Alaska's dominance in the market for high paying Anglers. According to Craig Medred of the Anchorage Daily News, the government of Chili actively promotes and allegedly writes articles for the industry in Patagonia that directly competes with Alaska (Medred, pers. comm., 1988). Alaska also is facing creative competition from lower priced areas that improve the quality of the fishing, if not the esthetic experience, through more conservative management of fisheries. Thus, areas like southern Alberta (eg. Bow River) and many western streams are increasingly going to be low cost competitors and alternatives in the market, even though they lack our salmon and, in varying degrees, our wilderness.

What is happening in some non-wilderness trout fisheries is that areas that cannot compete with Alaska in wilderness, compete with us through lower prices and conservatiely managed fisheries. In short, government acts to compete with Alaska.

Thus, the competition should be viewed in two ways. The competition should be viewed as being between Alaskan and non-Alaskan businesses operating at different price levels and selling different combinations of goods. And, more importantly, the competition should also be viewed as being between comparable governmental agencies in different governments. The nature of that competition is a struggle to see which governments can best manage its resources, its recreational consumers, and its recreational industry.

(t) CONCLUSION -- There are indications that the wilderness dependent sport fishing industry is seeking to market a Native cultural experience in conjunction with a fishing experience, and that such attempts at marketing may provide opportunities for Native employment in the bush and for maintaining traditional and contemporary Native culture as a viable entity.

DISCUSSION -- Two of the most interesting advertisements appear in the Fly Shop catalogue. One is for Bhutan and the other is for White Mountain Lodge near Nome.

The Bhutan advertisement sells "a fine fishing trip" in conjunction with a "fascinating cultural odyssey" in the course of "an intimate ... angling journey through a friendly, mountainous, midieval Shangri-La."

The White Mountain advertisement promotes the lodge as Native owned, with "professional Eskimo guides, staff, and management." The ad offers "a cultural and angling delight", and "evenings highlighted by Native guests."

These two ads are competing for the same clients. Opinions on the wisdom of such marketing practices may vary, but the most important opinions are probably those of the Bhutanese and the people of White Mountain.

In Amato's guide, Mary Bauer, an outdoor writer, has written an article called "A Woman's Experience Fishing in Alaska", which discusses her impressions at what is obviously White Mountain Lodge. The following paragraphs are from her article.

"The lodge was built and is run by Eskimos. The fishing guides are all local men who have fished there all of their lives and know the rivers intimately. Because the Eskimos still live basically on dried fish and seal oil, a chef was brought in from Colorado to

teach them the gourmet cooking that their guests would far more appreciate. However, they were more than willing to let us taste the local delicacies.

"One of my favorite things about the lodge was the cheerful and helpful Eskimo women who worked there. Enid and Chunky served breakfast and dinner, and also taught us Eskimo words and told us of their lives. Each day some of the local people were invited for dinner so we could get to know them and become even more familiar with their customs. These people in turn invited us to visit their summer camps along the river where they netted and dried fish for the winter."

The content of these paragraphs is obviously cross-cultural. They speak of work, food, language, custom, and cross-cultural visits. Although the lodge business is clearly an Anglo activity, these paragraphs are about both Anglo activities and activities that in more famous words could be called "customary and traditional."

The lodge has received a number of excellent reviews in the angling press.

How the wilderness recreation industry and the State will respond to Native concerns is a question for the future. However, it is clear that market forces have led the industry toward --

- (a) economic sensitivity to the effects of crowding on the industry,
- (b) the importance of wilderness as a marketable commodity,
- (c) the need for legislation to protect, regulate and promote the guide and lodge industries,
- (d) the marketing value of legislative and administrative designations, and
- (e) the importance of conservation practices related to rainbow trout.

These advertisements may be an indication that market forces may also be leading the industry toward resolving its conflicts with rural people. If that is the case, then the State might want to assist that process.

### III. RECOMMENDATIONS FOR STATE POLICY

The State can do many things to support the wilderness based recreation industry, the access-service dependent industry, and address rural concerns. What follows are some specific thoughts that appear to have merit based on the foregoing conclusions and analysis. Since this study has originated from a few individuals in the private sector, rather than in government, some of the following suggestions may be of things already being done or of things that have been tried and failed. Nevertheless, public policy benefits from public discourse, and that is what this study and these recommendations are.

A. In a more organized manner than seems to be currently done, the state could more fully identify --

- (1) marketable wilderness resources by locale,
- (2) the degree and manner in which they are marketed and used,
- (3) the businesses are marketing the resources,
- (4) the competition in the national and international marketplace,
- (5) the marketing practices of the competition are,
- (6) the status of agency management of the resources upon which our national and international competitors rely,
- (7) the areas where there are likely to be conflicts between recreationists and rural people or between different elements of the recreational industry, or between different types of recreational consumers.

This suggestion started out with the phrase "more organized manner". An excellent example of the "more organized manner" that may be needed can be found in ADF&G's habitat guide. A similar effort would be useful with respect to the recreation industry.

The reason this suggestion started with the phrase "more organized manner" is that conflicts between the Department of Natural Resources and the Department of Fish and Game frequently seem to involve situations in which the Department of Natural Resources behaves as if Fish and Game is fighting the Department of Natural Resources. That may or may not be the case. But the appearance of that, when viewed from DNR's shoes, seems to provoke a defensive response.

Once that is provoked, smooth government becomes difficult. To see this one need only look the discord that has occurred between the two agencies over the Susitna timber sale. It cannot be characterized as trust and information seeking. The Division of Forestry appears to have gotten defensive, personal and disputatious. (Memorandum, DNR, Forestry to ADF&G, Habitat, 1988.) That should never be the case. Agencies have neutral responsibilities to the public, not obligations to industry. Anchorage Daily News, March 25, 1985.

A problem seems to be that knowledge about the recreational industry exists informally within ADF&G. Another agency may need that information and not even know it. This was clearly the case in the timber sale. DNR simply blundered into a mess that anyone with the slightest knowledge or access to knowledge of the recreation industry could have warned DNR about.

However, ADF&G's present responsibility is to manage wildlife, not businesses dependent on wildlife. This leaves no one looking after the industry as a whole. An agency that knows something about wildlife, recreation and business is needed to mind the store.

To do what is recommended here would require inventory and planning processes, work with local residents, work with existing industry, and work with public interest groups. This would cost money, which is in short supply. So, the State may need to look at special taxes, which will be addressed shortly.

B. The State should establish social, economic, and resource carrying capacities for wilderness areas that are readily marketable so as to protect the industry from going past its peak.

C. In order to fund these inventory, planning, regulatory, and promotional efforts by the State, the State could establish, increase or re-establish port-of-call taxes, commercial aircraft landing fees, king salmon and trout stamps, and taxes on clients of the lodge, guide, outfitter, air-taxi, and motel industry, taxes on the package tour industry, and the restaurant industry.

If these taxes were properly designed, implemented, and spent, the State could focus them on non-residents and probably beat an equal protection challenge under State and Federal law and could beat an "ear marked funds" challenge under the State Constitution. The state has not handled well previous special fish stamps such as many states use for king salmon, steelhead and trout. Such stamps were unpopular several years ago in Alaska because some areas of Alaska paid the tax but received no

benefit. Such problems would have to be avoided.

D. The State should designate marketable conservation areas where such designations will aid promotion of wilderness dependent, non-resident recreation or will aid access-service dependent, non-resident recreation. Recreational rivers legislation is a case in point, and the deficiencies in the present bill, with respect to name, boundaries, and marketability have been discussed elsewhere in this study.

E. The Legislature should enact legislation to protect, regulate, and support the guide, lodge, air taxi and outfitter industries. Several pieces of such legislation are or have been before the Legislature recently. This study has made not attempt to review the legislation. However, legislation could --

- (1) establish enforceable legal standards on the Department of Natural Resources to prevent the Department from disposals of natural resources where, in the absence of good economic evidence supporting the disposal, it can be shown that such disposals are substantially likely to impair the economic vitality of the recreation industry in the area,

- (2) establish standards for the fishing guide, lodge, and outfitter industries, so as to assure competence, truthful advertising, and conformance with public land and resource laws,

- (3) allow utilization of permit authorities to be considered in at least some sectors of the industry and some locales in order to protect existing investment against overcompetition, protect rural interests against overcompetition, and protect social, economic and resource carrying capacities, and

- (4) establish durations of permits sufficient enough to allow the recreational industry to borrow capital and invest with security.

F. The State should address a number of Native concerns about the recreational industry, including concerns about trespass and competition with rural needs and values. Some simple things might be to --

- (1) instruct DNR to post maps and instructional information at bush airports to show private land and urge respect for it,

(2) instruct ADF&G to similarly post explanations to visitors of the subsistence law and urge respect for Native needs and use in the area,

(3) instruct ADF&G to print on the sport fishing regulation booklets a similar explanation of subsistence, instructions to look for the trespass materials a bush airports, statements of the State's new, conservative rainbow trout policy, and advice on litter, and

(4) instruct ADF&G to print in the subsistence regulation books, or similarly post, explanations of public rights in navigable waters and on public lands.

The persistent failure of the State to undertake such simple efforts must appear to be a double standard when for good reason we ask Natives to abide by our rules on our lands (e.g. spring waterfowl harvests), but we fail to ask as much of ourselves when we are near their lands.

G. If rural people wish, the State could undertake efforts to encourage Native employment, investment, management and other participation in the recreation industry.

Non-Natives should probably have great reservations about pushing Anglo-american ideas on Native people.

It may be that the same ingredients in the wilderness dependent recreational industry that cause conflict with rural Alaskans can be rearranged to produce positive outcomes that would protect the traditional and modern vitality of Native culture as well as provide economic, social and political benefits.

## Outline and Rationale for Interim Legislation for Recreational Rivers

If the Legislature is unable to draft this session a recreational rivers bill that satisfies the diverse interests tied to the lands surrounding the rivers in H.B. 93, then the legislature should consider brief interim legislation before adjournment of this legislature to protect the status quo within the river drainages, not just the designated corridors. Such interim legislation should set aside the river drainages for two years, prohibit commercial timber sales within those drainages for two years, continue the current administrative closure to new mining claims within the corridors, require that any road development take into account the interim status of the drainages, and direct the Department of Natural Resources, the Division of Parks, the Division of Land and Water, the Division of Forestry, the Department of Fish and Game, the Sportfish Division, the Commercial Fisheries Division, the Habitat Division, and the Subsistence Division to appoint representatives to work with interest groups, the Borough, and the Susitna timber planning process to submit model recreational river legislation and brief tentative management plans by January, 1989 for the six rivers in H.B. 93.

Such an approach would have advantages. First, it should not affect potential timber harvest, because no plant will be built within two two years. Second, it should satisfy Borough and recreational interests that have sought management plans before designation of the rivers. Third, it would allow agencies, the timber planning process, the public, and the Legislature to consider many of the issues raised in the accompanying study.

April 20, 1988

Members of the Alaska Senate  
Juneau, Alaska 99811

Members of the Alaska House of Representatives  
Juneau, Alaska 99811

Subject: Tourism, Economics, and Natural Resource Management

Dear Senators and Representatives:

We, the undersigned, are sending you the enclosed draft study because we believe it will be useful in addressing numerous issues confronting you now and in the future. The issues upon which this study bears include commerce, jobs, state economic policy, natural resource management, Native concerns, conservation and state agency management. The current legislation upon which this study bears includes H.B. 93, the controversial recreational rivers bill, and S.B. 112, allowing timber management agreements. Because those two bills are now before you, we have decided to send you this document, as a preliminary report.

The study is on the economics and marketing practices of wilderness dependent recreational industries. We believe that for certain areas of Alaska, this study stakes out the high economic ground of resource development for wilderness dependent recreation industry. We hope that you will review the study and accept the following suggestions.

(1) If it appears the Legislature will be unable to draft this session a recreational rivers bill that satisfies the diverse interests tied to those lands, then we urge you to enact brief interim legislation, before adjournment of this legislature, to protect the status quo within the drainages, not just the designated corridors. An outline of interim legislation is attached, along with our rationale for this interim approach. This study indirectly supports such an approach as the best interim economic and political policy.

(2) Based on the study we urge you to reject S.B. 112 as counter productive of jobs and commerce.

(3) This study outlines for the Legislature and several state agencies a more sophisticated approach to the recreation industry. Furthermore, this study indicates that if such an approach is taken, then there

will be benefits for jobs, commerce, resource development, conservation, Native concerns, recreational interests, and the recreational industry. We urge you to adopt in the next Legislature the course of action suggested in the study.

For purposes of the study, the term "wilderness" means only the character of the land, rather than a legal designation. However, the study clearly has implications for resource management and legislative action.

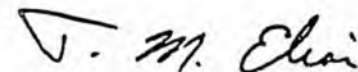
If the conclusions of this study are correct, then it is a direct challenge to many so-called resource development advocates. This study appears to put them on the wrong side of jobs, commerce, economic development, and sensible state policy. It challenges the Legislature, state agencies and so-called resource development advocates to respond with better analysis.

This study acknowledges that better analysis is needed. We hope that our final product will be better than the draft. We hope you will help make it so, by commenting on the draft. But, fundamentally, analysis of this sort is the responsibility of government, not of publicly interested volunteers. We hope that in your roles as Alaska's legislators, you will meet the challenges presented by this study and respond with energy, drive, creativity, intellect and an appreciation for Alaska.

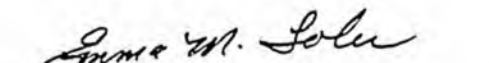
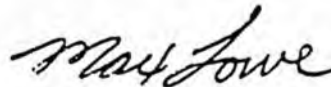
Sincerely,



Jeff Parker  
Author of Study



Tom Elias, President  
Alaska Sportfishing Assoc.

  
FOC Chris Goll, President  
Alaska Professional  
Sportfishing Assoc.

Max Lowe  
Secretary-Treasurer  
Alaska Hotel & Motel Assoc.

DRAFT

THE ECONOMICS AND MARKETING PRACTICES OF  
WILDERNESS DEPENDENT RECREATION INDUSTRIES IN ALASKA,  
WITH IMPLICATIONS FOR PUBLIC POLICY

A PRELIMINARY REPORT TO THE ALASKA LEGISLATURE

By Jeff Parker

With Support of the Following:  
Max Lowe, Sec.-Treas., Alaska Hotel and Motel Association  
Alaska Professional Sportfishing Association  
Alaska Sportfishing Association

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HB

93

(FILE 2)

STATE OF ALASKA  
THE LEGISLATURE

POUCH Y STATE CAPITOL  
JUNEAU, ALASKA 99811  
907 465 3800

LEGISLATIVE AFFAIRS AGENCY

MEMORANDUM

March 3, 1987

SUBJECT: Recreation rivers  
[CSHB 93 (Resources)]

TO: Representative Sam Gotten

FROM: Richard A. Bradley  
Legislative Counsel

Ned Farquhar has requested a new draft. Some observations on the enclosed draft are in order.

(1) I note that while the title of the bill "establishes" the recreation rivers, Ned's latest draft request "designates" the rivers. While the language is not dissimilar, if arguments that something less than establishment occurred are to be avoided, I believe that the rivers should be "established" in the substantive language of the bill as well as in the title.

(2) I have deleted the word "hardrock" in Sec. 41.23.250(b). I believe that the section referenced applies only to hardrock mining but the term is not used in the statutes in any technical sense. In that same section, I have changed the last phrase. The law that authorizes "coal leasing" is AS 38.05.150. If the reference sought is AS 38.05.150 - 38.05.175, then I suggest "mineral leasing" as more accurate than "coal leasing".

(3) In my view, the phrase "With legislative approval and funding," at the beginning of Sec. 41.23.250(e) raises constitutional problems. The "legislative approval" aspect sounds like a legislative veto. [While I have not deleted it, I strongly advise that it be deleted.]

If I may be of further assistance, please advise.

RAB:mkr  
m9/077

Enclosure

STATE OF ALASKA  
THE LEGISLATURE

POUCH Y STATE CAPITOL  
JUNEAU, ALASKA 99811  
907 465 3800


LEGISLATIVE AFFAIRS AGENCY

MEMORANDUM

March 4, 1987

SUBJECT: Land management within a recreation river  
corridor [CSHB 93(Resources)-- 3/3/87 draft]

TO: Representative Sam Cotten

FROM: Richard A. Bradley   
Legislative Counsel

Ned Farquhar has asked that I explore the question of the authority of the commissioner of natural resources to dispose of surface interests within a recreation river.

It seems that the section that presents the primary problem in this regard is Sec. 41.23.250(a); it provides that "Except to the extent that a provision is inconsistent with a provision of AS 41.23.200 - 41.23.280, the provisions of AS 38.04, AS 38.05, AS 39.35, and AS 38.95 apply to land described in AS 41.23.280(b)."

AS 38.05 is the Alaska Land Act and contains the law of the state on the disposal of land to private uses.

I believe that the ambiguity may be affirmatively addressed by the addition of the second sentence in Sec. 41.23.250(b). See the enclosed draft.

And while the 3/3/87 draft used the "established" that I suggested in Sec. 41.23.200(a), the draft continued the use of "designated" in other portions of the bill; this draft resolves that inconsistency. See Sec. 41.23.210(a), (f), Sec. 41.23.230, Sec. 41.23.270, and Sec. 41.23.280(a) and (b).

Note that Sec. 41.23.210(f) is also reworked.

If I may be of further assistance, please advise.

RAB:mkr  
m9/091

5-0230B ✓  
Bradley  
3/4/87

Original sponsors: Cotten, Pourchot,  
Rieger, et al.

1 IN THE HOUSE

BY THE RESOURCES COMMITTEE

2 CS FOR HOUSE BILL NO. 93 (Resources)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FIFTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act establishing six recreation rivers; and pro-  
7 viding for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 \* Section 1. AS 41.23 is amended by adding new sections to read:

10 ARTICLE 3. RECREATION RIVERS.

11 Sec. 41.23.200. PURPOSES. (a) The purpose of AS 41.23.200 -  
12 41.23.280 is to establish recreation rivers on state-owned land and  
13 water and establish guidelines for the management of the recreation  
14 river corridors.

15 (b) The goals and objectives by which a recreation river corri-  
16 dor shall be managed include

17 (1) the protection and maintenance of the fish and wildlife  
18 populations and habitat on a sustained-yield basis;

19 (2) conservation of the scenic and natural integrity of the  
20 recreation river corridor and continued recreational and economic uses  
21 by the public including hunting, fishing, trapping, boating, hiking,  
22 snowmachining, skiing, dog mushing, and wildlife viewing;

23 (3) management of upland activities within the recreation  
24 river corridor for the protection and maintenance of water quality and  
25 stream flow; and

26 (4) accommodation of access, tourism, and economic uses of  
27 the river corridor.

28 (c) The commissioner shall allow an activity when compatible  
29 with (b) of this section including, but not limited to

- 1 (1) use of aircraft, powerboats, snowmachines, all-terrain
- 2 vehicles, and other motorized transportation;
- 3 (2) harvest of wood products;
- 4 (3) mineral and oil and gas leasing;
- 5 (4) sand and gravel extraction for public use; and
- 6 (5) public use facilities.

7 Sec. 41.23.210. GENERAL MANAGEMENT OF RECREATION RIVER CORRI-  
8 DORS. (a) The state-owned land and water within the area established  
9 as a recreation river corridor under AS 41.23.280(b) is assigned to  
10 the commissioner for management consistent with the purposes of  
11 AS 41.23.200 - 41.23.280.

12 (b) The commissioner shall reserve to the state under AS 46.15.-  
13 145 an instream flow or level for the water in the rivers described in  
14 AS 41.23.280(b) that is adequate to achieve the purposes of AS 41.23.-  
15 200 - 41.23.280.

16 (c) The provisions of AS 41.23.200 - 41.23.280 do not affect the  
17 authority of

18 (1) the Department of Fish and Game, the Board of Fisher-  
19 ies, the Board of Game, or the Guide Licensing and Control Board under  
20 AS 08.54, AS 16, or AS 41.99.010;

21 (2) the Department of Environmental Conservation under  
22 AS 46.03; or

23 (3) state agencies and municipalities under AS 44.19.145-  
24 (a)(11) and AS 46.40.100.

25 (d) The commissioner may not restrict the use of weapons, in-  
26 cluding firearms, within a recreation river corridor except in sites  
27 of high public use such as picnic areas, boat ramps, camping grounds,  
28 and parking areas when the commissioner determines that the use of  
29 weapons constitutes a threat to public safety. Except as provided in

1 this subsection, the commissioner may not restrict fishing, hunting,  
2 or trapping within a recreation river corridor

3 (e) The commissioner may lease land competitively within a  
4 recreation river corridor for the construction and operation of a  
5 public use facility.

6 (f) The commissioner may not restrict commercial or private  
7 activities on state-owned land within the boundaries of a recreation  
8 river corridor existing on the effective date of this Act unless the  
9 commissioner determines that the commercial activity is incompatible  
10 with AS 41.23.200(b).

11 Sec. 41.23.220. MANAGEMENT PLAN. (a) After consultation with  
12 local authorities and state agencies, including the commissioner of  
13 fish and game, the commissioner shall adopt and may revise a manage-  
14 ment plan for a recreation river corridor. The commissioner shall  
15 comply with the notice requirements of AS 38.05.945 and shall hold at  
16 least one public hearing in the municipalities and communities near  
17 the recreation river corridor and with the local fish and game ad-  
18 visory committee in the area in the adoption or revision of a man-  
19 agement plan. The management plan shall establish long-range guide-  
20 lines and management practices consistent with AS 41.23.200(b) to

21 (1) protect the fish and wildlife habitat and the free-  
22 flowing nature of the river;

23 (2) identify special recreational values and manage the  
24 level of intensity and types of recreational uses;

25 (3) designate compatible land uses and management guide-  
26 lines for associated development;

27 (4) manage commercial activities or development, including  
28 recreational services such as guiding;

29 (5) provide for necessary public services, such as

1 transportation and utility corridors, public safety, and law enforce-  
2 ment;

3 (6) allow reasonable and necessary access to public land  
4 and private inholdings and to land beyond the recreation river corri-  
5 dor;

6 (7) establish criteria and timelines to review future  
7 proposed uses for compatibility with AS 41.23.200(b);

8 (8) establish guidelines and setback restrictions for an  
9 activity occurring under AS 41.23.200(c) or for mineral and oil and  
10 gas leasing under AS 41.23.250(b) - (d).

11 (b) The commissioner may adopt regulations necessary to imple-  
12 ment the plan.

13 (c) A management plan adopted or revised by the commissioner  
14 under (a) of this section shall be submitted to the legislature for  
15 review within the first 10 days of the first regular session of the  
16 legislature to convene after its adoption or revision by the commis-  
17 sioner.

18 Sec. 41.23.230. MANAGEMENT OF MUNICIPAL LAND. If a municipality  
19 commits land for inclusion in a recreation river corridor established  
20 under AS 41.23.280(b), the commissioner shall obtain the concurrence  
21 of the municipality to the management plan proposed under AS 41.23.220  
22 as it applies to municipal land. The commissioner shall cooperate, at  
23 the request of a municipality, in planning for municipal land adjacent  
24 to a recreation river corridor.

25 Sec. 41.23.240. ACQUISITION OF ADDITIONAL LAND. (a) The com-  
26 missioner may acquire in the name of the state land that is adjacent  
27 to or located within the land described in AS 41.23.280(b) by pur-  
28 chase, lease, gift, or exchange.

29 (b) The commissioner may not acquire land for inclusion in a

1 recreation river corridor by eminent domain.

2 Sec. 41.23.250. APPLICATION OF PUBLIC LAND LAWS. (a) Except to  
3 the extent that a provision is inconsistent with a provision of  
4 AS 41.23.200 - 41.23.280, the provisions of AS 38.04, AS 38.05,  
5 AS 38.35, and AS 38.95 apply to land described in AS 41.23.280(b).

6 (b) Except as provided in (c) of this section, the state-owned  
7 land and water within a recreation river corridor is closed to mineral  
8 location and entry under AS 38.05.195 and to disposal of leasable  
9 minerals under AS 38.05.150 - 38.05.175. The state-owned land within  
10 a recreation river corridor is closed to surface disposal under  
11 AS 38.05, AS 38.08, and AS 38.09.

12 (c) Except on state-owned land below ordinary high-water, the  
13 commissioner may permit mineral prospecting under AS 38.05.245 and,  
14 upon a subsequent discovery, mineral leasing under AS 38.05.205 in an  
15 area within a recreation river corridor if leasing is allowed under a  
16 management plan that has been adopted by the commissioner. The com-  
17 missioner shall establish appropriate conditions in permits, operating  
18 plans, and leases to protect the environment and prevent degradation  
19 of the recreational uses of the river.

20 (d) The state-owned land and water within a recreation river  
21 corridor is available for oil and gas leasing subject to conditions in  
22 an adopted management plan.

23 (e) The commissioner of administration shall separately account  
24 for funds collected under this section and deposited in the general  
25 fund. The annual estimated balance in the account may be appropriated  
26 by the legislature to the department to carry out the purposes of this  
27 chapter.

28 Sec. 41.23.260. COOPERATIVE MANAGEMENT AGREEMENTS. (a) The  
29 commissioner may enter into a cooperative management agreement for the

1 management of land and water described in AS 41.23.280(b) or of other  
2 adjacent land and water with a federal agency, a municipality of the  
3 state, another agency of the state, or a private landowner.

4 (b) The commissioner may transfer the management of a specific  
5 site within a recreation river corridor described in AS 41.23.280(b)  
6 to a state agency to assist in the development of a facility or to  
7 carry out a program authorized by law.

8 (c) The commissioner may not manage a recreation river corridor  
9 described in AS 41.23.280(b) as a unit of the state park system. The  
10 commissioner may assign management of a recreation site such as a  
11 campground or a boat launch to the division of parks and may adopt  
12 regulations allowing the division of parks to manage recreation activ-  
13 ities in a recreation river corridor.

14 Sec. 41.23.270. ESTABLISHMENT OF RECREATION RIVER CORRIDORS.  
15 State-owned land and water may be established as a recreation river  
16 corridor only by the legislature.

17 Sec. 41.23.280. DESIGNATED RIVERS. (a) Subject to valid exist-  
18 ing rights, the state-owned land and water established as a recreation  
19 river corridor under (b) of this section constitutes a special purpose  
20 area under art. VIII, sec. 7, Constitution of the State of Alaska.

21 (b) The land and water presently owned by the state and all land  
22 and water acquired by the state in the future, including shore and  
23 submerged land, that lies within the following described parcels are  
24 established as recreation rivers:

25 (1) Talachulitna State Recreation River

26 (A) Township 16 North, Range 10 West, Seward Meridian

27 Section 6: W1/2

28 Section 7: NW1/4

29 (B) Township 16 North, Range 11 West, Seward Meridian

- 1 Section 1: E1/2, SW1/4  
2 Section 2: S1/2, NW1/4  
3 Section 3  
4 Section 11: N1/2  
5 Section 12: N1/2  
6 (C) Township 17 North, Range 10 West, Seward Meridian  
7 Section 6: W1/2, W1/2SE1/4  
8 Section 7  
9 Sections 18 - 19  
10 Sections 30 - 31  
11 (D) Township 17 North, Range 11 West, Seward Meridian  
12 Section 1: E1/2E1/2  
13 Section 3: W1/2  
14 Sections 4 - 5  
15 Section 6: S1/2  
16 Sections 7 - 8  
17 Section 9: N1/2, SE1/4  
18 Section 10  
19 Section 14: W1/2  
20 Section 15  
21 Section 17: NW1/4  
22 Section 18: N1/2, SW1/4  
23 Section 19: NW1/4NW1/4  
24 Section 22  
25 Section 23: W1/2  
26 Section 25: E1/2E1/2  
27 Section 26: W1/2  
28 Section 27  
29 Section 34

1 Section 35: W1/2

2 (E) Township 17 North, Range 12 West, Seward Meridian

3 Section 7: S1/2

4 Section 12: S1/2

5 Section 13

6 Section 14: S1/2

7 Section 15: S1/2

8 Section 16: S1/2

9 Sections 17 - 18

10 Section 20: E1/2

11 Sections 21 - 23

12 Section 24: N1/2, N1/2S1/2

13 (F) Township 17 North, Range 13 West, Seward Meridian

14 Section 9: S1/2

15 Section 10: S1/2

16 Section 11: S1/2

17 Section 12: S1/2

18 Sections 13 - 16

19 Section 24: N1/2

20 (G) Township 18 North, Range 10 West, Seward Meridian

21 Section 18: SW1/4SW1/4

22 Section 19: NW1/4, S1/2NE1/4, E1/2SW1/4, SE1/4

23 Section 20: S1/2, NE1/4

24 Section 21

25 Section 22: W1/2W1/2

26 Section 26: W1/2SW1/4, SW1/4NW1/4

27 Section 27: S1/2, S1/2N1/2

28 Sections 28 - 29

29 Section 30: E1/2, E1/2W1/2

1 Section 31: NE1/4, S1/2NW1/4, NE1/4NW1/4,  
2 SW1/4, W1/2SE1/4

3 Section 33: NE1/4NE1/4

4 Section 34: N1/2NW1/4

5 (H) Township 18 North, Range 11 West, Seward Meridian

6 Section 6: W1/2, W1/2E1/2, E1/2SE1/4

7 Section 7

8 Section 11: E1/2SE1/4

9 Section 12: SW1/4SW1/4

10 Section 13: NW1/4, E1/2SW1/4, SE1/4

11 Section 16: SW1/4

12 Sections 17 - 18

13 Section 19: NE1/4

14 Section 20: N1/2, SE1/4

15 Section 21: W1/2

16 Section 24: E1/2NE1/4

17 Section 28

18 Section 29: E1/2

19 Section 32: E1/2

20 Section 33

21 (I) Township 18 North, Range 12 West, Seward Meridian

22 Sections 1 - 2

23 Section 12: N1/2, SE1/4

24 (J) Township 19 North, Range 12 West, Seward Meridian

25 Section 3: N1/2, SW1/4

26 Section 4: E1/2E1/2, W1/2SE1/4, SE1/4SW1/4

27 Section 9: E1/2, SW1/4, E1/2NW1/4, SW1/4NW1/4

28 Section 10: NW1/4

29 Section 15: W1/2SW1/4, SW1/4NW1/4

1 Section 16

2 Section 21

3 Section 22: W1/2W1/2, E1/2SW1/4, SW1/4SE1/4

4 Sections 27 - 28

5 Section 34

6 Section 35: S1/2, NW1/4

7 (K) Township 20 North, Range 11 West, Seward Meridian

8 Section 18: W1/2

9 Section 19: W1/2

10 (L) Township 20 North, Range 12 West, Seward Meridian

11 Section 1

12 Section 2: N1/2

13 Section 11: E1/2

14 Sections 12 - 13

15 Section 14: E1/2

16 Sections 23 - 24

17 Section 25: N1/2

18 Section 26

19 Section 27: E1/2

20 Section 34: S1/2, NE1/4, SE1/4NW1/4

21 Section 35: NW1/4

22 (M) Township 21 North, Range 11 West, Seward Meridian

23 Section 31: SW1/4

24 (N) Township 21 North, Range 12 West, Seward Meridian

25 Section 25: that portion south of the Skwentna  
26 River

27 Section 26: that portion south of the Skwentna  
28 River

29 Section 35: that portion south of the Skwentna

1 River

2 Section 36: that portion south of the Skwentna  
3 River

4 (2) Alexander Creek State Recreation River

5 (A) Township 16 North, Range 7 West, Seward Meridian  
6 Sections 6 - 7

7 Sections 18 - 19

8 (B) Township 17 North, Range 7 West, Seward Meridian

9 Section 18: S1/2, W1/2NW1/4

10 Section 19

11 Sections 30 - 31

12 Section 32: W1/2

13 (C) Township 17 North, Range 8 West, Seward Meridian

14 Section 1

15 Section 2: E1/2, N1/2NW1/4

16 Section 3: N1/2N1/2

17 Section 4: N1/2, N1/2SE1/4

18 Section 11: NE1/4

19 Section 12

20 Section 13: E1/2, E1/2NW1/4

21 Section 24: NE1/4, E1/2SE1/4

22 (D) Township 18 North, Range 8 West, Seward Meridian

23 Section 4: W1/2

24 Section 5

25 Section 6: NE1/4

26 Section 8: N1/2, SE1/4

27 Section 9

28 Section 10: SW1/4

29 Section 14: W1/2SW1/4, SE1/4SW1/4

Section 15: W1/2, SE1/4, S1/2NE1/4

Section 16: N1/2, SE1/4

Section 22: N1/2, N1/2S1/2, S1/2SE1/4

Section 23: W1/2, W1/2SE1/4

Section 26: W1/2, W1/2E1/2, E1/2SE1/4

Section 27: E1/2NE1/4

Section 33: SW1/4, S1/2SE1/4

Section 34: S1/2S1/2

Section 35

Section 36: W1/2

(E) Township 19 North, Range 8 West, Seward Meridian

Section 19: W1/2, W1/2E1/2

Section 29: W1/2W1/2

Section 30

Section 31: E1/2, E1/2W1/2

Section 32

(F) Township 19 North, Range 9 West, Seward Meridian

Sections 3 - 4

Sections 9 - 10

Section 13: S1/2

Section 14: S1/2

Sections 15 - 16

Section 22: N1/2

Section 23: N1/2

Section 24

(3) Lake Creek State Recreation River

(A) Township 21 North, Range 9 West, Seward Meridian

Section 3

Section 4: Excluding Tracts A, B, C and D

1 Section 9: N1/2 Excluding Tracts A and B

2 Section 10

3 Section 15

4 (B) Township 22 North, Range 9 West, Seward Meridian

5 Section 4: NW1/4, S1/2

6 Section 5: N1/2, E1/2SE1/4

7 Section 9: N1/2, SE1/4, E1/2SW1/4

8 Section 10: W1/2SW1/4, SW1/4NW1/4

9 Section 15: W1/2

10 Section 16: E1/2, E1/2W1/2

11 Section 21: E1/2

12 Section 22: W1/2

13 Section 27: W1/2

14 Section 28: E1/2

15 Section 34

16 (C) Township 23 North, Range 9 West, Seward Meridian

17 Section 3: W1/2W1/2

18 Section 4

19 Section 5: E1/2, E1/2SW1/4

20 Section 7: SE1/4, SE1/4NE1/4, E1/2SW1/4

21 Section 8: S1/2, NE1/4, S1/2NW1/4, NE1/4NW1/4

22 Section 9: N1/2NW1/4, SW1/4NW1/4, NW1/4SW1/4

23 Section 17: W1/2, W1/2E1/2

24 Section 18: E1/2

25 Section 19: N1/2, SE1/4, E1/2SW1/4

26 Section 20: W1/2, SE1/4, S1/2NE1/4, NW1/4NE1/4

27 Section 29

28 Section 30: NE1/4, E1/2NW1/4, NE1/4SW1/4, SE1/4

29 Section 32

1 Section 33: S1/2SW1/4, NW1/4SW1/4

2 (D) Township 24 North, Range 9 West, Seward Meridian

3 Section 28: S1/2SW1/4, SW1/4SE1/4

4 Section 29: NW1/4, S1/2

5 Section 30

6 Section 31: N1/2

7 Section 32: NW1/4, E1/2

8 Section 33

9 Section 34: SW1/4SW1/4

10 (E) Township 24 North, Range 10 West, Seward Meridian

11 Section 3

12 Section 4: E1/2

13 Section 10

14 Section 11: W1/2, W1/2SE1/4, SW1/4NE1/4

15 Section 13: W1/2W1/2

16 Section 14

17 Section 15: NE1/4

18 Section 23: N1/2, SE1/4

19 Section 24: W1/2, S1/2SE1/4, NW1/4SE1/4

20 Section 25

21 Section 36: NE1/4, E1/2NW1/4

22 (F) Township 25 North, Range 10 West, Seward Meridian

23 Sections 6 - 7

24 Section 8: S1/2, NW1/4

25 Section 16: W1/2

26 Section 17

27 Section 18: E1/2

28 Section 20: SE1/4, N1/2

29 Section 21

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Section 22: W1/2

Section 25: SW1/4

Section 26: S1/2

Section 27

Section 28: E1/2, NW1/4

Sections 34 - 35

Section 36: W1/2

(G) Township 25 North, Range 11 West, Seward Meridian  
Section 1: E1/2

(H) Township 26 North, Range 10 West, Seward Meridian  
Section 31

(I) Township 26 North, Range 11 West, Seward Meridian  
Sections 3 - 4

Section 9: E1/2

Section 10

Section 14: W1/2

Section 15

Section 22: E1/2, E1/2NW1/4

Section 23

Section 25: S1/2, NW1/4

Section 26

Section 27: NE1/4

Section 35: NE1/4

Section 36

(J) Township 27 North, Range 11 West, Seward Meridian  
Section 6: SW1/4

Section 7

Section 8: SW1/4

Sections 17 - 18

- 1 Section 19: N1/2, SE1/4  
2 Section 20  
3 Section 21: SW1/4  
4 Sections 28 - 29  
5 Section 30: NE1/4  
6 Section 32: E1/2  
7 Section 33  
8 Section 34: W1/2  
9 (K) Township 27 North, Range 12 West, Seward Meridian  
10 Sections 1 - 3  
11 Section 10: N1/2, SE1/4  
12 Sections 11 - 14  
13 Section 15: NE1/4  
14 Section 23: NE1/4  
15 Section 24: N1/2  
16 (L) Township 28 North, Range 12 West, Seward Meridian  
17 Sections 1 - 5  
18 Sections 8 - 12  
19 Sections 13 - 17  
20 Sections 21 - 24  
21 Sections 25 - 28  
22 Sections 33 - 36  
23 (4) Kroto Creek and Moose Creek State Recreation River  
24 (A) Township 19 North, Range 6 West, Seward Meridian  
25 Section 2: SW1/4  
26 Section 3  
27 Section 10: E1/2  
28 Section 11  
29 Section 14

1 Section 15: E1/2E1/2

2 Section 22: E1/2E1/2

3 Section 23

4 Section 25: that portion west of the eastern-  
5 most bank of the Susitna River

6 Section 26

7 Section 27: E1/2E1/2

8 Section 34: NE1/4NE1/4

9 Section 35

10 Section 36: that portion west of the eastern-  
11 most bank of the Susitna River

12 (B) Township 20 North, Range 6 West, Seward Meridian

13 Section 4

14 Section 5: E1/2

15 Section 8: NE1/4, E1/2SE1/4

16 Section 9

17 Section 15: W1/2

18 Section 16

19 Section 21: E1/2, N1/2NW1/4, SE1/4NW1/4

20 Section 22: NW1/4, S1/2

21 Section 27

22 Section 34

23 (C) Township 21 North, Range 6 West, Seward Meridian

24 Section 3

25 Section 9: E1/2SE1/4, SE1/4NE1/4

26 Section 10

27 Section 15: W1/2, W1/2NE1/4

28 Section 16

29 Section 20: E1/2

1 Section 21

2 Section 28

3 Section 29: E1/2

4 Section 32: E1/2E1/2, NW1/4NE1/4

5 Section 33

6 Section 34: SW1/4

7 (D) Township 22 North, Range 6 West, Seward Meridian

8 Sections 4 - 5

9 Section 6: E1/2, E1/2W1/2

10 Sections 7 - 9

11 Sections 16 - 18

12 Sections 20 - 21

13 Section 27

14 Section 28: N1/2, SE1/4, E1/2SW1/4

15 Section 29: E1/2NE1/4

16 Section 33: N1/2NE1/4, SE1/4NE1/4

17 Section 34

18 (E) Township 23 North, Range 6 West, Seward Meridian

19 Section 4

20 Section 7: W1/2

21 Section 9

22 Section 16

23 Section 17: SW1/4SW1/4

24 Sections 18 - 19

25 Section 20: W1/2NW1/4

26 Section 21

27 Section 28

28 Sections 30 - 31

29 Section 32: S1/2

## 1 Section 33

2 (F) Township 23 North, Range 7 West, Seward Meridian

3 Section 1

4 Section 2: E1/2

5 Sections 12 - 13

6 Section 24

7 Section 25: N1/2, SE1/4

8 Section 36: N1/2NE1/4

9 (G) Township 24 North, Range 6 West, Seward Meridian

10 Section 4: W1/2

11 Section 5

12 Section 6: NE1/4, E1/2SE1/4

13 Section 8: N1/2, SE1/4, E1/2SW1/4

14 Section 9

15 Section 15: SW1/4, SW1/4NW1/4

16 Section 16

17 Section 17: NE1/4, N1/2SE1/4

18 Section 21: E1/2, SE1/4SW1/4

19 Section 22: NW1/4, N1/2SW1/4, SW1/4SW1/4

20 Section 28: E1/2W1/2, E1/2

21 Section 33

22 (H) Township 24 North, Range 7 West, Seward Meridian

23 Section 6: S1/2, NW1/4

24 Section 7

25 Section 8: S1/2SW1/4

26 Section 16: W1/2, W1/2E1/2

27 Section 17

28 Section 18: N1/2N1/2, SE1/4NW1/4, S1/2NE1/4,  
29 N1/2SE1/4, SE1/4SE1/4

1 Section 19: NE1/4NE1/4

2 Section 20: N1/2

3 Section 21: W1/2, SE1/4, W1/2NE1/4

4 Section 27

5 Section 28: E1/2

6 Section 33: NE1/4NE1/4

7 Section 34: E1/2, E1/2W1/2, NW1/4NW1/4

8 Section 35: W1/2, SE1/4, S1/2NE1/4

9 Section 36: SW1/4

10 (I) Township 24 North, Range 8 West, Seward Meridian

11 Section 1: E1/2

12 Section 12: NE1/4, E1/2SE1/4

13 Section 13: NE1/4NE1/4

14 (J) Township 25 North, Range 6 West, Seward Meridian

15 Section 5

16 Section 8

17 Section 17

18 Section 18: SE1/4

19 Section 19: E1/2, E1/2W1/2

20 Section 20: W1/2W1/2

21 Section 29: W1/2W1/2

22 Section 30: E1/2, E1/2W1/2

23 Section 31: E1/2

24 Section 32: W1/2W1/2, SE1/4SW1/4

25 (K) Township 25 North, Range 7 West, Seward Meridian

26 Section 5

27 Section 6: SE1/4, S1/2NE1/4

28 Section 7: E1/2, SW1/4, E1/2NW1/4

29 Section 8: NW1/4, W1/2SW1/4

1 Sections 18 - 19

2 Sections 30 - 31

3 (L) Township 25 North, Range 8 West, Seward Meridian

4 Section 13: E1/2 SE1/4

5 Section 24: E1/2NE1/4

6 (M) Township 26 North, Range 6 West, Seward Meridian

7 Section 5

8 Section 8

9 Section 17: N1/2, SE1/4, N1/2SW1/4, SE1/4SW1/4

10 Section 19: SE1/4

11 Section 20: E1/2, SW1/4, S1/2NW1/4, NE1/4NW1/4

12 Section 29: E1/2, NW1/4

13 Section 30: S1/2, NE1/4, SE1/4NW1/4

14 Section 31: E1/2NE1/4, that portion of NW1/4-  
15 NE1/4 within retained easement (50' each side  
16 of MHWM)

17 Section 32: lands within 150' of MHWM

18 (N) Township 26 North, Range 7 West, Seward Meridian

19 Section 4: W1/2

20 Section 5: E1/2, S1/2SW1/4

21 Section 7: SE1/4

22 Section 8

23 Section 9: NW1/4, N1/2SW1/4

24 Section 17

25 Section 18: E1/2

26 Section 19

27 Section 20: W1/2

28 Section 29: S1/2, NW1/4

29 Section 30

1 Section 31: NE1/4

2 Section 32

3 (O) Township 27 North, Range 6 West, Seward Meridian

4 Section 4

5 Section 5: E1/2

6 Section 8: E1/2

7 Section 9

8 Section 16

9 Section 17: E1/2

10 Section 20: E1/2

11 Section 21

12 Section 28: W1/2

13 Section 29: E1/2

14 Section 32: E1/2

15 Section 33: W1/2

16 (P) Township 27 North, Range 7 West, Seward Meridian

17 Section 7

18 Section 8: S1/2, NW1/4

19 Section 9: W1/2

20 Section 16

21 Section 17: N1/2, SE1/4

22 Section 20: E1/2

23 Section 21

24 Section 28: N1/2, SW1/4

25 Section 29: E1/2

26 Section 32: E1/2

27 Section 33: W1/2

28 (Q) Township 27 North, Range 8 West, Seward Meridian

29 Section 12: NE1/4

1 (R) Township 28 North, Range 6 West, Seward Meridian

2 Section 32: S1/2SE1/4

3 Section 33: S1/2S1/2

4 (5) Talkeetna State Recreation River

5 (A) Township 26 North, Range 3 West, Seward Meridian

6 Section 1

7 Section 2

8 Sections 3 - 6: excluding ASLS 81-196, ASLS  
9 80-94, ASLS 80-84

10 (B) Township 27 North, Range 2 West, Seward Meridian

11 Section 2: SW1/4

12 Section 3: S1/2

13 Section 4: S1/2

14 Section 5: SE1/4, E1/2SW1/4

15 Section 7: SE1/4

16 Sections 8 - 12

17 Section 13: N1/2

18 Section 14: N1/2NE1/4

19 Section 17

20 Section 18: E1/2, SW1/4

21 Section 19

22 Section 20: N1/2, SW1/4

23 Section 30: W1/2

24 (C) Township 27 North, Range 3 West, Seward Meridian

25 Section 24: E1/2

26 Section 25

27 Section 26: SE1/4

28 Section 31: S1/2

29 Section 32: S1/2 exclusive of ASLS 79-149

1 Section 33: S1/2S1/2 exclusive of ASLS 79-149

2 Section 34: S1/2S1/2 exclusive of ASLS 79-149

3 and ASLS 76-138

4 Sections 35 - 36

5 (D) Township 27 North, Range 4 West, Seward Meridian

6 Section 36: S1/2SE1/4 exclusive of ASLS 74-78

7 and ASLS 74-77

8 (6) Little Susitna State Recreation River: the water column  
9 of the main stream of the Little Susitna River from mean high water  
10 mark to mean high water mark, from the point at which the river cross-  
11 es the section line dividing Sections 23 and 26 in Township 19 North,  
12 Range 1 East, Seward Meridian downstream to the point at which the  
13 river crosses the section line between Sections 15 and 22 in Township  
14 16 North, Range 5 West, Seward Meridian; the water column of Lake  
15 Creek from mean high water mark to mean high water mark, from the  
16 point at which the creek crosses the section line dividing Sections 10  
17 and 11, Township 18 North, Range 4 West, Seward Meridian downstream to  
18 the confluence with the Little Susitna River; and

19 (A) Township 16 North, Range 5 West, Seward Meridian

20 Section 3

21 Section 4: NE1/4NE1/4

22 Section 10: E1/2, E1/2W1/2

23 Section 15: E1/2, E1/2W1/2

24 (B) Township 17 North, Range 5 West, Seward Meridian

25 Section 12

26 Section 13

27 Section 14

28 Section 15

29 Section 21: NW1/4NE1/4, N1/2NW1/4

1 Section 22

2 Section 23: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4

3 Section 26: W1/2W1/2

4 Section 27

5 Section 34

6 (C) Township 18 North, Range 1 East, Seward Meridian

7 Section 8: NW1/4, SW1/4NE1/4, S1/2NW1/4NE1/4

8 (D) Township 18 North, Range 1 West, Seward Meridian

9 Section 15: N1/2NW1/4

10 Section 16: NW1/4, N1/2NE1/4, SE1/4NE1/4

11 (E) Township 18 North, Range 2 West, Seward Meridian

12 Section 15: NW1/4, N1/2NE1/4, NW1/4SW1/4

13 Section 16: S1/2

14 Section 17: S1/2

15 Section 19: NW1/4, W1/2NE1/4, E1/2SW1/4.

16 (F) Township 18 North, Range 3 West, Seward Meridian

17 Section 19

18 Section 20: SW1/4, W1/2SE1/4, SE1/4NW1/4,

19 W1/2NW1/4

20 Section 30: NE1/4, SW1/4NW1/4, NW1/4SW1/4

21 (G) Township 18 North, Range 4 West, Seward Meridian

22 Section 11: SW1/4, SW1/4SE1/4, SW1/4NW1/4

23 Section 13: S1/2, SW1/4NW1/4

24 Section 14

25 Section 24

26 Section 25: N1/2

27 Section 26

28 Section 27: S1/2

29 Section 33: S1/2, S1/2NE1/4

1 Section 34

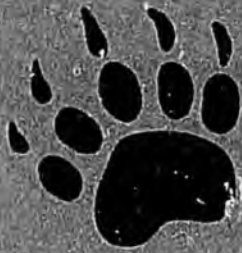
2 Section 35: NW1/4, W1/2NE1/4

3 ARTICLE 4. GENERAL PROVISIONS.

4 Sec. 41.23.900. DEFINITION. In this chapter, "commissioner"  
5 means the commissioner of natural resources.

6 \* Sec. 2. Until a management plan has been adopted for a recreation  
7 river corridor under AS 41.23.220(a) as enacted in sec. 1 of this Act,  
8 interim management shall be consistent with AS 41.23.200. The commissioner  
9 of natural resources shall adopt management plans for the three most exten-  
10 sively used rivers by July 1, 1989.

11 \* Sec. 3. This Act takes effect immediately under AS 01.10.070(c).  
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# TRACKS

Published by the Wildlife Federation of Alaska

The Alaska Affiliate of the National Wildlife Federation

Fall 1986

## WFA Questions Cowper, Sturgulewski

**O**ne thing we're all going to get for Christmas this year is a new Governor. Tremendous issues face our state, and the challenges are made even more difficult because of the revenue situation we face. The choice of governor is an important one. To help our members in this effort, the board of WFA posed several key questions concerning conservation issues and management to both candidates, Steve Cowper and Arliss Sturgulewski. Here are the questions and the responses of the candidates.

**Question:** *"During the 1986 legislative session, a bill establishing several recreational rivers on state land passed the House but failed to pass the Senate. A number of conservation and sportfishing organizations, including the Wildlife Federation of Alaska, supported this bill. The rivers named in the bill represented some of the most important recreational fishing, floating, camping and hunting opportunities in southcentral Alaska. After numerous hearings and compromises on the bill, certain groups (principally the Resource Development Council) while supporting protective classification for the rivers opposed legislative designation. WFA continues to feel strongly that legislative designation is the appropriate final step in the process of assuring that the recreational values and public use of these important rivers not be lost over time. Do you support the establishment of state recreational rivers? Would you propose recreational river legislation and work for its passage? What other thoughts, if any, do you have on this issue?"*

**Sturgulewski:** "As chairman of the Senate Resources Committee I actively supported the rec rivers bill and as governor would introduce or

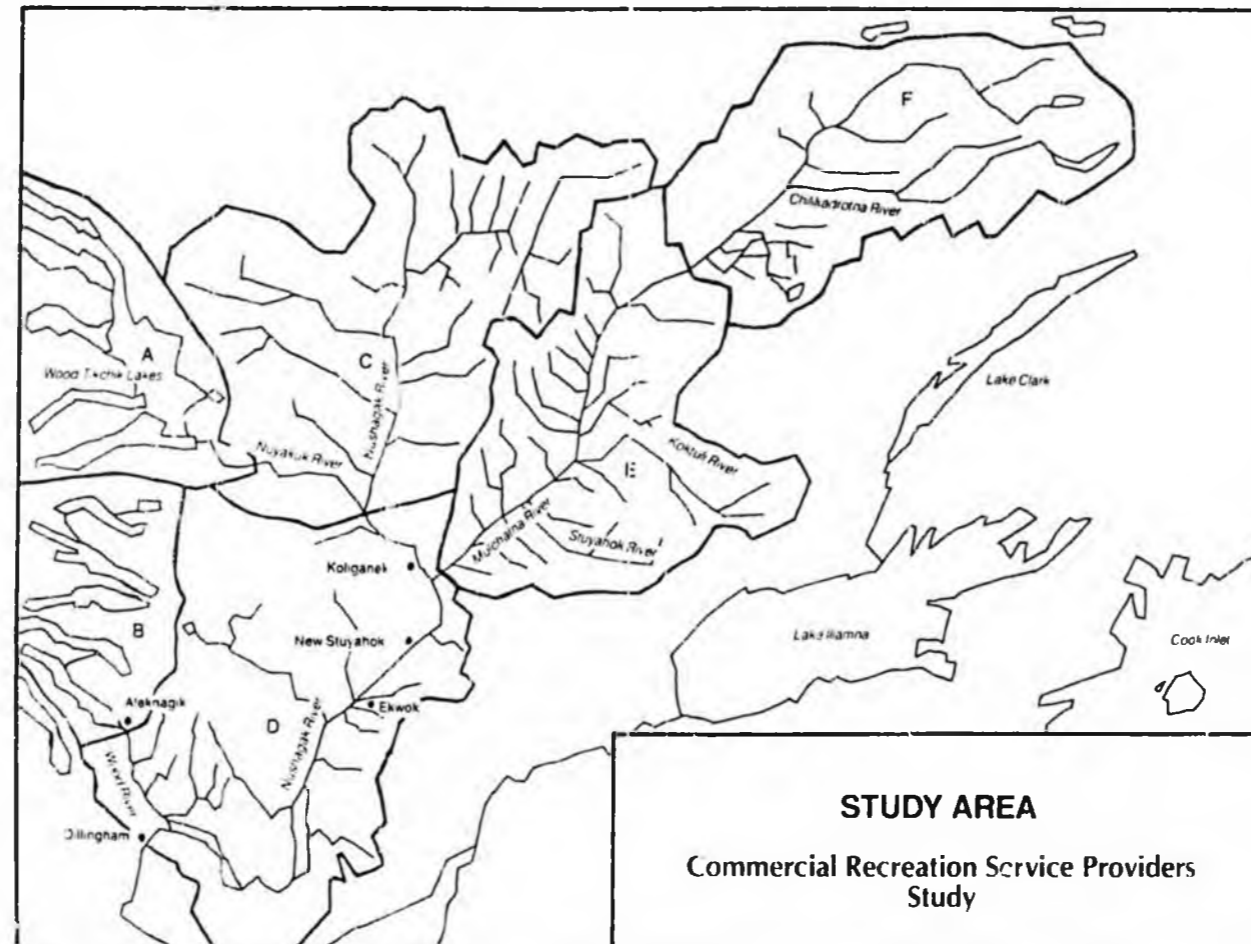
support the introduction and passage of a rec rivers bill. I have a very strong record of support for legislation of interest to the outdoor community."

**Cowper:** "I support legislative designation of state recreational rivers and would consider introducing a bill, if legislators don't do so themselves. Alaska's recreational rivers are important to residents and visitors, alike. The situation on the Kenai River should be a lesson to us about the need for sound management of recreational resources.

Northward expansion of recreational rivers will help take the pressure off the Kenai River, help guard against over-use and degradation, and provide valuable recreational resources for both residents and visitors."

# COMMERCIAL RECREATION SERVICE PROVIDERS STUDY

EXECUTIVE SUMMARY  
JUNE 1986



Bristol Bay  
Coastal Resource  
Service Area

## INTRODUCTION

The Bristol Bay region of Alaska is world renowned for its fish and wildlife resources. Two river systems within the region, the Nushagak and Mulchatna, contain all five species of Pacific Salmon and a variety of freshwater fish. Big game species include moose, caribou and brown bear.

Historically, the residents of Bristol Bay have relied heavily upon fish and wildlife resources for subsistence. Additionally, commercial salmon fishing has been the mainstay of the region's economy since the late 1800s. The harvest constitutes the world's largest sockeye salmon fishery.

The abundant fish and wildlife, combined with the region's scenic beauty, has attracted growing numbers of recreational boaters, sport fishermen and sport hunters, from all over the world in recent years. An increasing number of air taxi, guide and lodge operators provide access to the river systems for these people.

As a result, pressure on, and competition for, the fish and wildlife by commercial fishing, traditional subsistence and commercial recreation user groups is intensifying. As use increases, resource managers must be able to understand the importance of these activities and evaluate the impact of management decisions on the various fish and wildlife users, as well as on the resources themselves.

## STUDY

Prior to this study, information existed on the specific locations and intensity of recreational activities by commercial recreation service providers on state and private land within the region. As a result, the Bristol Bay Coastal Resource Service Area (CRSA) initiated this study of commercial recreation service providers to obtain information on the characteristics of their activities in the Nushagak-Mulchatna River drainages.

The Nushagak-Mulchatna Rivers drainages were selected because of both the rapid increase in recreational use over the last decade, and growing resource and land use conflicts with other user

groups. Two major products were developed as part of the commercial recreation study:

- A current directory of air taxi, guide and lodge operators providing commercial recreation services in the study area; and
- Data collected through a survey of these operators that was analyzed and discussed in the final report.

The directory was compiled to both determine the number of commercial recreation service providers operating in the study area, and facilitate future communication and coordination between the CRSA board and these businesses.

The information generated by the study increases CRSA board, and other government agency, understanding of the scope of recreational activities in the area, and related issues and needs. Increased understanding of recreational considerations aids both the planning and permit review process.

## RESULTS

The study generated useful information that was analyzed and discussed in the final report, the Bristol Bay Commercial Recreation Service Providers Study. Some of the results of the survey are highlighted below.

### Operator Characteristics

Number and Type of Commercial Recreation Service Provider

	Air Taxis	Guides	Lodges
Sample	24	22	25
Population	42	47	38

### Client Profile

Average and Total # of Clients in 1985

	Air Taxis	Guides	Lodges
SAMPLE			
Average	141	35	170
Total	2822	597	4254
POPULATION			
Projected	3300 to	926 to	5676 to
Total	8552	2378	7262
(90% Confidence Level)			

Clients are predominantly from the Lower 48, followed by Alaskan then international clients.

## Income

Average Estimated Gross Income (average of point estimate)

Air Taxi	\$194,762
Guide	\$56,447
Lodge	\$254,792

Projected Total Study Area Income of Operator Population (point estimate)

Air Taxi	\$8,810,004
Guide	\$2,653,009
Lodge	\$13,492,096
TOTAL	\$24,955,109

Maximum # of Employees/Month by Category

	Air Taxis	Guides	Lodges
Guides	7	35	111
Pilots	82	2	45
Cook's	0	7	67
Maintenance	29	12	4
Management/Marketing	34	4	4

## Activities

### Activity Preference

Among air taxi, guide and lodge operators, sport fishing is the most popular client activity. Rainbow trout and king salmon are the most sought after fish. Guided boating is second in popularity among guides and lodges, followed by hunting, where caribou, moose and bear are roughly equal preference. Hunting is the second most popular client activity for air taxis, followed by boating.

### Activity Distribution

Fishing, hunting and boating activities occur throughout the study area; however, activities are more concentrated in certain sub-areas. In general, the Mulchatna River Drainage (sub-areas E and F) receive the heaviest overall use. Salmon and rainbow trout fishing is most frequent in these regions, along with Portage Creek in sub-area D. Hunting and boating are also concentrated along the Mulchatna River, although the Wood-Tikchik Lakes (sub-area A) is also heavily used for these purposes.

## Recreation Use Perceptions

Many operators feel they have been restricted by the creation of federal reserves, and regulations

associated with hunting and fishing on those reserves. The conveyance of land to Native corporations was also frequently mentioned as restricting commercial operations.

Crowding due to an increasing number of operators is viewed as negatively affecting the quality of recreation use in the study area. However, most operators do not see a corresponding decline in the abundance of fish and wildlife.

## OBSERVATIONS

While conducting the study, several observations were made as follows:

The relative lack of communication between commercial recreation service providers and residents of the region has historically limited cooperation between the two groups. The study has increased communication between the Bristol Bay CRSA and commercial recreation service providers; continued coordination is recommended.

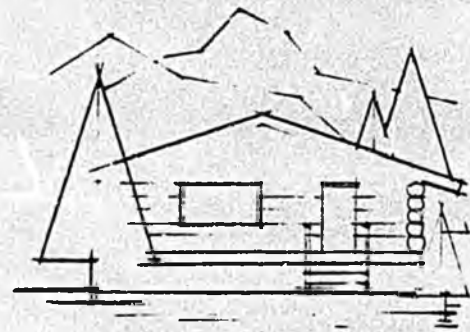
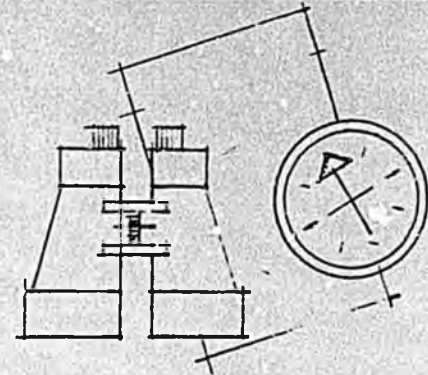
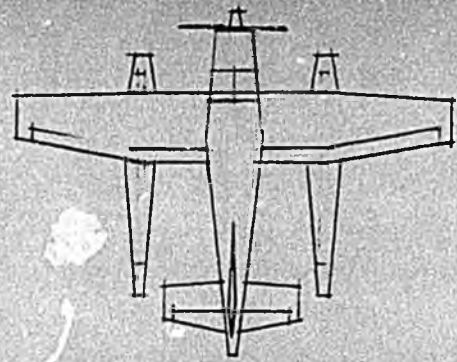
Study data will be useful in making coastal consistency recommendations on recreation activities requiring state and federal permits. Because commercial operators are resource users within the region, the Bristol Bay CRSA should consider the impact of other activities on existing recreation uses, when determining consistency of proposed activities.

It is in the best interests of both the Bristol Bay CRSA, the residents of the region and commercial recreation service providers to work together to:

- solve potential conflicts between recreation activities and other resource users; and
- Work with private, state and federal land managers to plan for future recreational use.


THE FOLLOWING PAGES WERE TREATED AS  
A UNIT IN THE ORIGINAL FILE.

# COMMERCIAL RECREATION SERVICE PROVIDERS STUDY



## Bristol Bay Coastal Resource Service Area

JUNE 1986

 jon isaacs and associates

## ACKNOWLEDGEMENTS

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