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SENATE COMMITTEE REPORT

JK

DATE: 4/15/92

FURTHER: Finance

DATE TURNED INTO OFFICE: May 6, 1992

Resources Committee considered CS FOR HOUSE BILL NO. 446 (RESOURCES)

"An Act relating to the wildlife conservation tag and to entry onto state game and wildlife sanctuaries, state game refuges, state range areas, and fish and game critical habitat areas; and providing for an effective date."

repts it has floor

and recommends:

- replace with _____ CS _____
- or adopt previous _____ CS _____
- attaches amendment(s)

- same title
- new title
- technical title change (HB only)

adopts _____ Letter of Intent

further referral to the _____

- do pass
- do not pass
- no recommendation
- individual recommendations

P H R

NEW FISCAL NOTES: Dept/Date

zero fiscal notes _____

fiscal notes _____

appropriation--no fiscal note

PREVIOUS FISCAL NOTES: Dept/Date

zero fiscal notes _____

fiscal notes ADF+6 2/25/92

DO PASS:

OTHER RECOMMENDATIONS:

(3) Grant - Memorial
(3) Jan 21

(3) Do Not Pass

(1) [Signature]
Chair: Signature and Recommendation



ALASKA OUTDOOR COUNCIL, INC.

P O Box 34097
Juneau, AK 99803
463-3830

March 13, 1992

The Honorable Fran Ulmer
Alaska State Legislature
State Capitol
Juneau, AK 99811

Dear Representative Ulmer:

I am pleased to inform you that the Alaska Outdoor Council voted to support HB446, the wildlife conservation tag bill which you introduced.

Members recommended amendments that would enable a different fee structure for resident, non-resident, and commercial users, consistent with the concept of different fees charged for other uses of wildlife and fish. They also noted that commercial users such as writers and photographers use viewing areas principally for profit, as well as for their personal enjoyment.

Members also recommended requiring guides for non-residents using areas to ensure compliance with regulations, and where necessary, to ensure the well-being of visitors.

We have not prepared specific amendments following these recommendations. I would be pleased to work with your staff on such amendments.

We appreciate your interest and efforts on this bill. If passed it will be a significant contribution to the State's conservation efforts.

Sincerely,

Richard H. Bishop
Legislative Affairs

Alaska State Legislature

HOUSE OF REPRESENTATIVES



REPRESENTATIVE FRAN ULMER

MEMORANDUM

April 21, 1992

TO: Senator Lloyd Jones, Chair
Senate Resources Committee

FROM: Rep. Fran Ulmer

RE: CSHB 446 (Resources) - "wildlife conservation tags"

I am requesting a hearing on HB 446 at your earliest convenience. HB 446 is designed to provide an alternate source of funds for the wildlife conservation efforts in the state. The bill, which passed the House by unanimous vote, will allow the sale of wildlife conservation tags to visitors to the state's game refuges, sanctuaries and other areas.

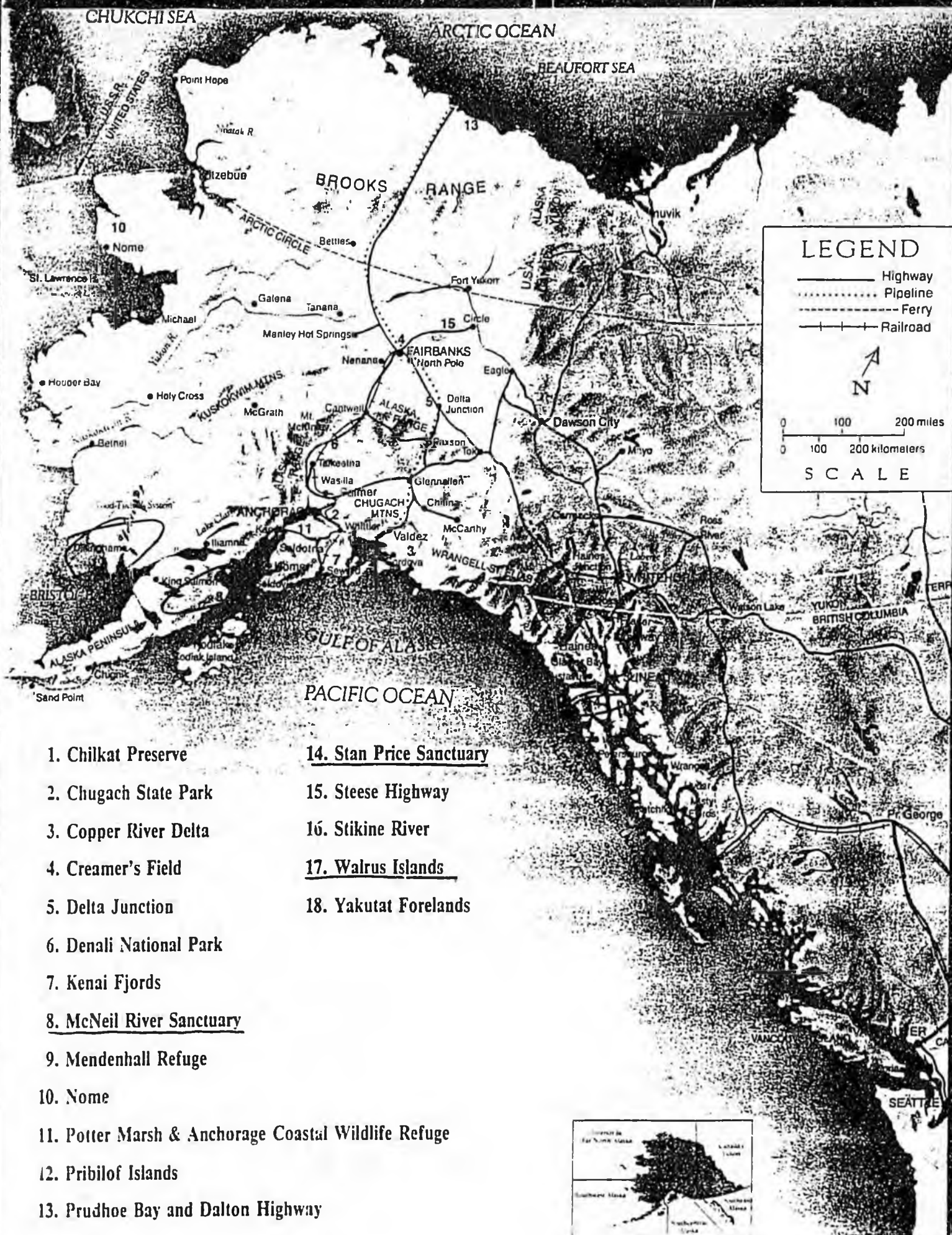
In addition, HB 446 would:

- * allow the production of a patch, decal or other emblem to be sold with each tag, so visitors can show they're supporting wildlife conservation in Alaska.
- * require that the money from the sale of the conservation tags be earmarked for wildlife conservation purposes.
- * require the tags for entry to the Stan Price Sanctuary, the MacNeil River Sanctuary, and the Walrus Island Sanctuary.
- * allow the Commissioner of Fish and Game to add other areas to the tag program, including state refuges, ranges and critical habitat areas.

Currently, over 80% of ADF&G's wildlife conservation budget comes from hunters in the form of licenses and excise taxes on firearms and ammunition. An alternative source of funds will help answer a growing concern that not enough is being done to preserve wildlife and give non-consumptive users an increased responsibility in providing for the future management of our wildlife.

Groups and individuals representing a wide spectrum of environmental, conservation and hunting interests have expressed support for the concept of fees for non-consumptive uses.

Thank you for your prompt attention to this matter



LEGEND

- Highway
- Pipeline
- - - - - Ferry
- + + + + + Railroad

N

0 100 200 miles
0 100 200 kilometers

SCALE

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Chilkat Preserve 2. Chugach State Park 3. Copper River Delta 4. Creamer's Field 5. Delta Junction 6. Denali National Park 7. Kenai Fjords 8. <u>McNeil River Sanctuary</u> 9. Mendenhall Refuge 10. Nome 11. Potter Marsh & Anchorage Coastal Wildlife Refuge 12. Pribilof Islands 13. Prudhoe Bay and Dalton Highway | <ul style="list-style-type: none"> 14. <u>Stan Price Sanctuary</u> 15. Steese Highway 16. Stikine River 17. <u>Walrus Islands</u> 18. Yakutat Forelands |
|--|--|





Nancy Tankersley

Walrus Islands State Game Sanctuary (Round Island) ★

Location and Access

These islands are approximately 70 miles southwest of Dillingham in southwestern Alaska and have virtually no amenities. An access permit is required to visit Round Island, and the numbers of campers and day visitors are limited. Most visitors arrive by charter boat from Togiak when conditions permit. Seasonal sanctuary staff ferry visitors from the boat or plane to the rocky shore via a small inflatable raft.

Viewing Opportunities and Seasons

Round Island, one of the islands in this remote state sanctuary, is home to a unique concentration of male walrus each summer. As many as 14,000 male walrus rest here between periodic feeding forays for clams and other shellfish. Up to 1,000 Steller sea lions haul out here, and hundreds of thousands of seabirds (mostly murre, kittiwake, cormorant, auklet, puffin, and gull) nest here. A small resident population of "tolerant" red foxes often allows good photographic opportunities as well. From late May through August is the best time to visit.

Habitat

The island habitats include marine waters, rocky shorelines, and moist alpine tundra.

Advice and Cautions

Travel to Round Island is expensive and can be dangerous. Visitors should be in very good physical condition and have appropriate clothing and gear for wet and extremely windy weather.

Above, top: Watching walrus, Round Island.

Above: Red foxes are commonly seen on Round Island.

Pribilof Islands, Alaska Maritime National Wildlife Refuge

Location and Access

These are remote oceanic islands off southwest Alaska, accessible by commercial air service from Anchorage during the summer. Portions of the islands are included in the 3.5 million acre Alaska Maritime National Wildlife Refuge, and other portions are occupied by year-round residents. Guided land tours and hotels are available.

Viewing Opportunities and Seasons

The Pribilof Islands have some of the largest seabird colonies in the northern hemisphere. Common nesting seabirds include fulmars, cormorants, murre, kittiwake, auklet, and puffin, which are best seen from late May to early August. Sightings of rarer Asiatic birds mostly occur during migration in spring (mid-May to early June) and fall (early August to mid-September). The world's largest rookery for northern fur seals is on St. Paul Island, and harbor seals and Steller sea lions are also commonly seen during the summer.



John Hyde

Habitat

These islands have extensive rocky cliffs where the seabirds nest, and also have areas of coastal wetlands and tundra. Tundra wildflowers can be spectacular from mid-June through July.

Advice and Cautions

Bring appropriate clothes and equipment for foggy, windy, and rainy weather. Fog frequently closes the airport, so leave some flexibility in your travel schedule. A bird checklist is available.

Southcentral/Southeast

★ McNeil River State Game Sanctuary

Location and Access

This remote sanctuary is located approximately 100 miles southwest of Homer. Most visitors arrive by float-plane from Homer, with arrivals and departures coinciding with high tides. A permit is required to visit the falls during June, July, and August; the deadline for applications to enter the permit lottery is April 1. All visitors are accompanied to the falls by sanctuary staff.

Viewing Opportunities and Seasons

McNeil River State Game Sanctuary has Alaska's largest concentration of brown bears, gathering during the summer to feed on spawning chum salmon at the McNeil River falls. July is the peak month when up to 65 bears have been seen at one time. Red foxes, bald eagles, gulls, murrelets, and cormorants are commonly seen during the summer as well.

Habitat

This area is mostly open country, featuring creeks and rivers, shrub thickets, coastal wetlands, rocky shorelines and cliffs, and marine waters.

Advice and Cautions

Sanctuary staff are committed to providing a safe environment for bears and people and sanctuary regulations are strictly enforced. Weapons are allowed but not necessary. No bears or people have been injured since the permit system was initiated in 1973. All visitors must be self-sufficient as facilities are limited to a primitive campground with a cook cabin and an outhouse. Visits to the falls require a three mile hike, round trip. High quality warm clothing, rain-gear, and hip waders are essential, as the weather is frequently cool, wet, or windy. A good camera with a telephoto lens and lots of film are strongly recommended.

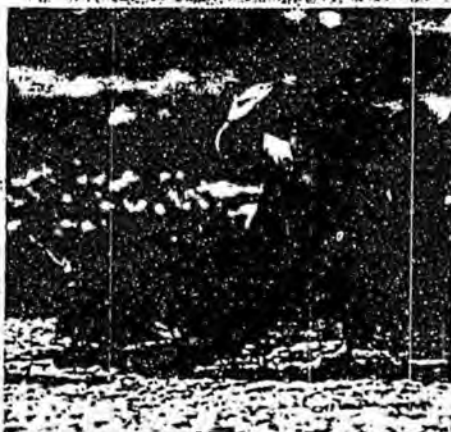


John Hyde

Chilkat Bald Eagle Preserve /Haines Highway

Location and Access

The preserve, a unit of the state park system, is accessible from Mileposts 19-26, north of Haines. The only facilities available within the preserve are portable toilets, garbage containers, and highway turnouts. Visitors stay in nearby Haines, which is accessible by ferry from the south, by regularly-scheduled air taxi flights from Juneau, or by highway from the north. During fall and winter, commercial tours provide transportation and guides for view-



John Hyde

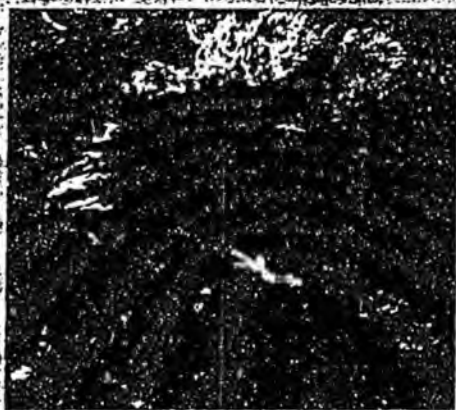
ing and photography expeditions to view the eagle concentrations, while "do-it-yourselfers" who arrive without a vehicle can combine a hotel/motel stay with car rental. During summer, natural history-oriented tours of the Chilkat Valley are provided by commercial tour operators based in Haines.

Viewing Opportunities and Season

The winter gathering of bald eagles on their "council grounds" to feed on salmon in the Chilkat River is the largest gathering of eagles in the world. Numbers of eagles begin building up in late September and peak as high as 3,500 in November. High numbers usually remain into January, unless cold weather freezes over the open channels sooner.

Habitat

A 48,000-acre preserve surrounds the unique stretch of the Chilkat River where upwellings of warm water below

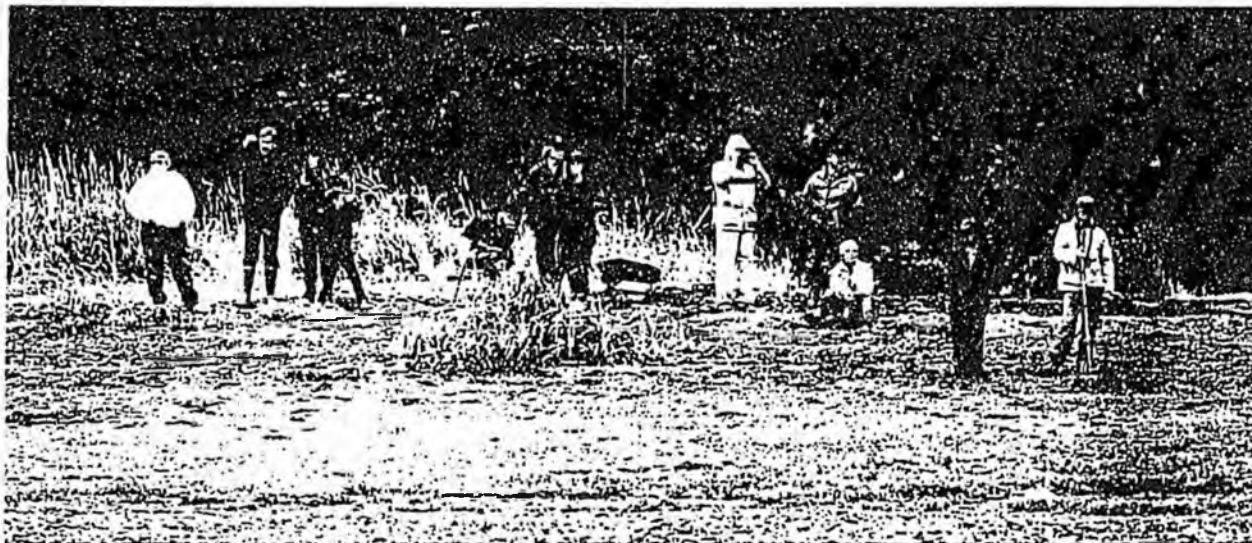


John Hyde

the massive Tsirku River alluvial fan persist late into winter. The late fall run of chum salmon attracts the large numbers of eagles because it is their sole abundant food source during late fall and early winter.

Advice and Cautions

Park only at turnouts along the Haines Highway. To reduce disturbance to the eagles, view and photograph them from a distance, using binoculars and telephoto lenses. Remember that the birds cannot afford unnecessary expenditures of energy during this stressful period.



John Hyde

Stan Price State Wildlife Sanctuary/Pack Creek

Location and Access

The refuge is located 28 miles south of Juneau on Admiralty Island. Access is by charter boat or air taxi from Juneau. Guided tours are available from commercial tour operators. Some visitors arrive by kayak, available for rental in Juneau, but the required open water crossing between Juneau and Admiralty Island can be difficult in bad weather. Primitive camping is allowed in designated areas.

Viewing Opportunities and Seasons

Located on Pack Creek, the Stan Price State Wildlife Sanctuary is becoming increasingly popular for its opportunities to view and photograph brown bears in July and August. A small portion of the famed Admiralty Island "Fortress of the Bears," the Pack Creek area has been closed to bear hunting for many years and is jointly managed by the U.S. Forest Service and the Alaska Department of Fish and Game. The bears tolerate a certain amount of human presence and visitors can view and photograph bears fishing for salmon and interacting. Sows and sow-cub groups are the primary users. The salmon runs attract bald eagles and gulls as well.

Habitat

Pack Creek is typical of many streams on the large islands of the Alexander Archipelago. It passes through the coastal spruce-hemlock forest and supports runs of pink and chum salmon which attract bears and other predators. A broad estuary and tidal flat at the stream's mouth is used frequently as a travel route and resting area by bears.

Advice and Cautions

Brown bears can be extremely dangerous and unpredictable. Visitors must obtain a permit from the U.S. Forest Service in Juneau or the Regional Division of Wildlife Conservation office in Douglas. Permits are free and currently not limited to a specific number each day. An orientation to the area and rules to increase (but not guarantee) your safety in the area are provided upon arrival.



John Hyde

Top: Viewers look for brown bears at Stan Price State Wildlife Sanctuary. Left: In her younger days, this female was a nuisance to Pack Creek visitors. With better management systems now in place, she has gotten over her bad habit of looking to people for food.

Alaska's wildlands provide a rich variety of recreational and educational experiences found nowhere else in the world. This issue of *Alaska's Wildlife* focuses on wildlife watching opportunities in Alaska and their relationship to economics and conservation.

According to the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, more than 167 million Americans (about 75 percent) participated in hunting, fishing or wildlife watching during 1985. The survey also identified wildlife watching (including viewing, photography, and feeding) as the fastest growing segment of wildlife recreation, with 135 million participants age 16 years old or older accounting for \$14 billion in annual expenditures. The same survey estimated that 288,000 Alaskans participated in wildlife watching in 1985. Clearly, wildlife watching has become a significant and growing recreational pursuit in Alaska and across the nation.

Wildlife managers throughout the United States are being challenged by diverse and increasing demands for wildlife recreation while, concurrently, wildlife habitat is shrinking and becoming fragmented. Revenues to support management and conservation programs are also declining. In recognition of this dilemma and the burgeoning public interest in wildlife, state and federal wildlife agencies are embracing the national "Watchable Wildlife" initiative. The central focus of this initiative, which is endorsed by national conservation groups (including Defenders of Wildlife, Earth Walton League, National Audubon Society, and National Wildlife Federation), federal land management agencies, and the International Association of Fish and Wildlife Agencies, is to promote and expand wildlife recreation and education. This, in turn, is expected to broaden public support and funding for the conservation of all wildlife species and their habitats.

Like our counterparts in Colorado, Montana, Oregon, and Wyoming, the Division of Wildlife Conservation recognizes the opportunity the "Watchable

Wildlife" initiative represents for enhancing wildlife recreation and conservation in Alaska. This should not be interpreted as abandoning our traditional hunting constituency, nor decreasing our efforts to provide for sustained yield of game resources. Rather, we are acknowledging an expanding public interest in wildlife conservation and management and we will begin broadening our programs to reflect that change. All wildlife users (including hunters, wildlife watchers, and tour operators) must recognize that the conservation of wildlife habitat is the common ground they share in their pursuit of wildlife opportunities throughout this remarkable state.

We have the opportunity in Alaska for developing a wildlife recreation and conservation program that could stand as a model for the world. There are few areas on earth that capture people's enthusiasm for experiencing wildlife and wildlands more than Alaska. Tourism has become a billion dollar industry in Alaska and our spectacular wildlife resources are one of the state's primary attractions. A brief glance at Alaska travel brochures lends credence to this point. Where else can you walk on an ocean beach and watch mountain goats, brown bears, bald eagles, and humpback whales; or hike a tundra ridge and observe caribou, Dall sheep, snowy owls, muskoxen, wolves, and hundreds of thousands of migratory birds? In east Africa where wildlife viewing and photography have become a major industry, they say, "If wildlife pays, wildlife stays."

This issue of *Alaska's Wildlife* highlights some of the world's premiere viewing areas, explains how and when to find several of the most sought-after species, and how we manage for wildlife viewing. You will also learn more about the importance of wildlife to the tourism industry and its potential economic significance to the state.

Although Alaska has outstanding potential for wildlife watching, we are at an early stage in our development of these new programs. One of our new projects, in cooperation with other resource agen-



John V. Schoen

cies, will be a revision of the department's *Guide to Wildlife Viewing in Alaska* as part of a new national series. A key to successfully broadening the division's wildlife program will be finding new alternative funding sources. Currently, over 80 percent of our division budget comes from hunters through the sale of hunting licenses and excise taxes on firearms and ammunition.

Successful conservation of Alaska's unique wildlife heritage will require broad-based public support and interagency cooperation. We believe that expanding wildlife recreational and educational opportunities in Alaska will increase the public's enjoyment of their wildlife resources, promote long-term conservation, and benefit the Alaskan economy. We welcome your ideas and comments as we begin our new and exciting journey toward expanding wildlife management on the last frontier.

John Schoen in the senior staff biologist for Conservation and Education, Division of Wildlife Conservation, ADF&G, Fairbanks.

W I L D L I F E W A

A Growing Nation

Americans' love affair with the great outdoors traditionally has been expressed through sport fish and game activities. But more recently, the relationship has been marked by a growing national interest in wildlife viewing and appreciation. Wildlife viewers are becoming increasingly vocal on the need for more attention to all wildlife, including the 90 percent of all species that are neither hunted nor fished.

The 1980 U.S. Fish and Wildlife Service Survey of Fishing, Hunting, and Wildlife Associated Recreation showed that some 93 million Americans, age 16 years and older, participated in some form of wildlife viewing, feeding, or photography as a primary or secondary recreational activity. By 1985, the number had increased to nearly 135 million—a 43 percent increase. The 1986 report by the President's Commission on Americans Outdoors identified wildlife-associated recreation as one of the nation's most popular outdoor activities.

Effects on Federal Agencies

Several federal agencies have responded to this trend by integrating wildlife viewing into all resource planning efforts and developing new recreation and conservation programs. The U.S. Forest Service's (USFS) "Eyes on Wildlife" program has resulted in enhancements like viewing platforms and blinds and interpretative information for viewers. The Forest Service has also entered into an agreement with Defenders of Wildlife to coordinate the publication of a state-by-state series of wildlife viewing guide books.

The U.S. Fish and Wildlife Service (USFWS) has joined the charge by playing a prominent role in seeking funding for the federal Fish and Wildlife Conservation Act (1980). The Act (also known as the Nongame Act) was intended to provide funding

to state fish and wildlife agencies to develop and implement comprehensive wildlife conservation plans to benefit species overlooked by traditional game management programs.

The Bureau of Land Management (BLM) has also embraced this trend with enthusiasm, developing a strategic plan to implement more recreation and conservation programs to benefit viewers. BLM also deserves much of the credit for coordinating a partnership of 14 national agencies and conservation groups in a Memorandum of Understanding (MOU) to support wildlife viewing nationwide. Implementation of this national MOU offers exciting opportunities for cooperation among a variety of groups, including the military, federal natural resource agencies, the International Association of Fish and Wildlife Agencies, Defenders of Wildlife, Izaak Walton League, and other conservation groups to develop recreation, education, and conservation programs to benefit viewers.

One product of this partnership has resulted in the Federal Highway Administration adopting a binocular symbol as the official roadside logo for wildlife viewing areas. This logo will aid travelers in finding designated viewing sites along the nation's highways and roads.

Effects on State Agencies

In response to public concern, many state wildlife agencies began expanded efforts towards nongame species in the late 1970s and early 1980s. Funding for many of these programs was based on or enhanced by voluntary income tax donations. Although \$11-15 million has been generated by 34 states annually, most nongame programs have been underfunded and understaffed, constituting less than 3 percent of statewide wildlife management budgets. The voluntary nature of the



John Hyde

Recreation

by Sara Vickerman and Wendy Hudson

donations and growing competition from other income tax check-offs have rendered them an unreliable source of revenue. In any case, estimates are that at least 30 times the annual amount is needed nationally to conduct viable nongame and watchable wildlife programs.

At the same time, hunting has shown a steady decline nationally. In California, for example, the Department of Fish and Game posted a budget deficit of nearly \$10 million in 1990 and anticipates a deficit of \$12.6 million in 1991. "With their budgets still tied to license sales," writes Tom Arrandale in *High Country News*, "most state agencies lack the funds they need to protect nongame species and counter habitat destruction." In the face of declining hunting-related and nongame checkoff revenues, state wildlife managers are beginning to court additional political and financial support from wildlife viewers, most of whom do not fish nor hunt.

Wyoming was one of the first states to recognize that visitors were spending phenomenal sums annually to visit the state to enjoy its wildlife. The Wyoming Game and Fish Department, in coordination with their state tourism agency, developed a trademarked name, "Wyoming's Wildlife - Worth the Watching," and a professional public relations campaign to increase wildlife viewing tourism. Oregon, Montana, Utah, and Idaho also are developing viewing programs, and have published statewide viewing guide books as part of the national series with Defenders of Wildlife. Along with the guide books, these states have formally designated viewing sites, installed signs with the binocular logo, and developed interpretive materials for viewers.

In many of these states, it is hoped that by obtaining the political and financial support of hunters and wildlife viewers, and by enlisting the aid of the tourism industry, state conservation efforts can be expanded.

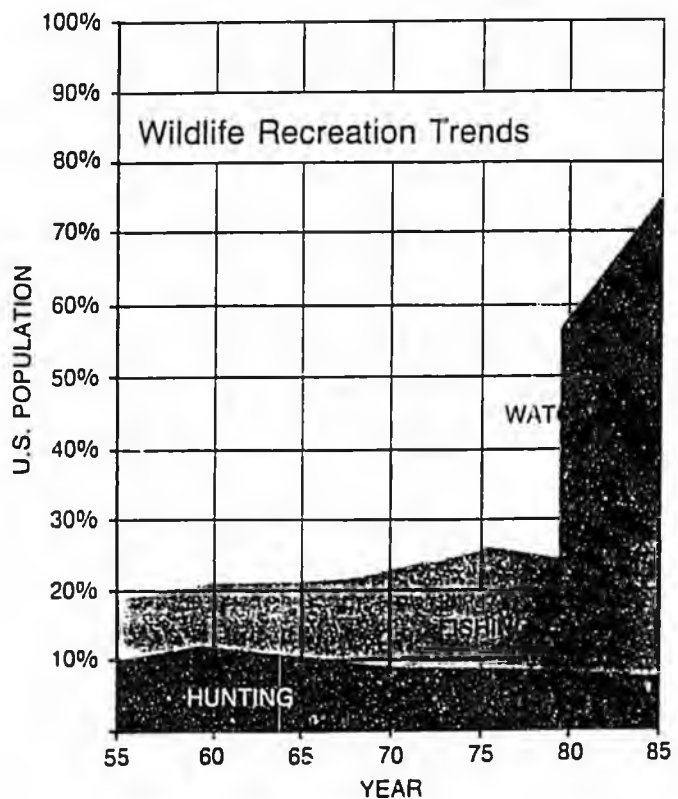
The Winning Formula

The ultimate success of these efforts, however, depends on our collective ability to maintain, and in some cases restore, habitat to support a natural diversity of wildlife. Recently, the U.S. Fish and Wildlife Service released its Strategic Planning Document that has as its centerpiece the conservation of biological diversity. The President's Commission on Americans Outdoors recommended the protection and enhancement of recreation opportunities on federal lands and waters, including long-term emphasis on conservation of natural resources. The commission also encouraged educators to integrate environmental issues into basic education, and urged federal resource agencies to help children experience the nation's diverse ecosystems.

For natural resource agencies, achieving broad conservation goals means making fundamental changes in policies, structure, funding, and constituencies. It means breaking out of the mold, taking risks, communicating with unfamiliar people, and accommodating the ecological requirements of some little known and unappreciated creatures and the vegetation upon which they depend.

Alaska has a tremendous opportunity--perhaps the last in North America--to design and implement a world-class wildlife recreation and conservation program, and to prevent the endangered species crises we have seen with alarming frequency in many other states. Defenders of Wildlife applauds the Alaska Department of Fish and Game for its interest in and dedication to the conservation of wildlife diversity, and for sharing its magnificent lands and inhabitants with those of us who are lucky enough to visit once or twice in a lifetime.

Sara Vickerman is Regional Program Director and Wendy Hudson is Communications Coordinator for the Defenders of Wildlife in Portland, Oregon.



How Much Is Wildlife Watching Worth?

by Daniel W. McCollum

Wildlife is a valuable resource. Most Alaskans already know that, but do they know just how valuable it is? According to a U.S. Fish and Wildlife Service survey, almost \$56 billion were spent on wildlife-associated recreation in the U.S. in 1985. Over \$14 billion of that was spent by wildlife watchers. Similar data show that \$44 million of economic activity in Montana was generated by wildlife watching trips. In an example I will come back to later, the State of Wyoming recognized that wildlife-related recreational activities in their state had an annual combined net economic value of \$102.3 million to residents and nonresident visitors, and that nonresident wildlife users accounted for a \$230.6 million annual impact on the Wyoming economy. That same kind of economic information can contribute to wildlife management and economic development in Alaska.

The concept of economic value is one we deal with every day. We go into the grocery store and compare prices. Is the national brand of peanut butter really worth 60 cents more than the store brand? Do we like walnuts in our chocolate chip cookies enough to pay \$4.00 for a pound of walnuts? Some of us do and some of us don't. The thought process that we go through in making those and other decisions, however, is exactly what economists try to capture when they attempt to measure economic value.

We are most familiar with placing values on goods and services that are sold in markets—peanut butter, walnuts, hockey tickets. But, are goods and services that are not sold in markets really any different? Don't we know our preferences for hunting and fishing, or wildlife watching, or wilderness camping as well as we know our preferences for walnuts or peanut butter? Most people do, but they are not used to thinking about market goods and nonmarket goods in the same terms.

Policy makers and resource managers are faced with a similar problem. Suppose a forest can be managed for timber or wildlife habitat, but not both. It is easy for a manager to determine the value of the land for timber production. Timber and other mineral resources are traded in organized markets. The benefits

of managing the forest for wildlife habitat are not so clear or so easily determined. They would include, but not be limited to, those gained by people hunting and watching the wildlife. That difficulty in obtaining information may result in alternative land uses (like wildlife habitat) being slighted when it comes to allocating resources. When that happens, managers are not making fully informed decisions and society's resources are not being allocated efficiently.

Economic value is distinct from economic impact. Economic impact measures market transactions related to a particular resource or activity and tracks those expenditures as they move through the economy. Economic value provides information on how much value individuals or groups place on certain resources or services. Gross economic value includes the market transactions tracked by an economic impact analysis. Net economic value (above and beyond all costs or market transactions) is what is typically used in policy analyses.

Over the last forty years economists have developed methods by which net values for nonmarket goods and services can be estimated. One approach, of which the 'travel cost' method is the most common example, is to use related goods and services, which do move through markets, to infer information about the demand for and value of nonmarket goods. "Travel cost" (essentially the cost of travelling to and from a recreation site) is used as a proxy for the price of a good called "recreational visits." Numbers of visits serve as proxies for quantity demanded or consumed. To illustrate, suppose the site considered is Denali National Park. It might cost \$50 for a trip to Denali if you live in Anchorage. It might cost \$150 if you live in Juneau. It might cost \$1500 for that trip if you live in Wichita, Kansas. One can observe how many trips are made to Denali from each of those places. Putting those pieces of information together allows estimation of a demand curve that can be used to estimate how much value visitors receive from a trip to Denali.

(Continued on page 40.)

How Much is it Worth?

(Continued from page 4.)

The second approach, "contingent valuation," uses interviews and surveys to elicit information on how much benefit or value people receive from nonmarket goods or services directly. During the interview the subject is given a detailed description of the nonmarket good. He or she is then asked: "What is the most you would be willing to pay to acquire that good?" For example, a trip to Denali National Park might be described to a group of people. They would then be asked what they would be willing to pay for that trip. Their responses would be taken as direct revelations of how much they value a trip to Denali. While these descriptions of both methods are highly simplified, they should give a basic feel for how the methods work.

There have been many valuation studies done involving wildlife-related recreation. Almost all of them, however, have focused on consumptive uses of wildlife—primarily hunting and fishing. Very little work has been done on nonconsumptive uses of wildlife, like wildlife watching. Traditionally, wildlife management agencies have been funded largely from sources related to hunting and fishing—license fees, etc.; and those users have been active in their interaction with the agencies. Consequently, the values and preferences of consumptive users have been of interest to agencies and policy analysts. Along with that, consumptive users are a relatively easy population to identify and their high level of devotion to their sport typically makes them a cooperative group to study.

That pattern has been changing. The numbers of consumptive users appear to be decreasing over time, implying a shrinking of the funding base for wildlife management agencies. At the same time, wildlife watching was one of the fastest growing outdoor recreation activities of the 1980s, and that trend is expected to continue.

Nonconsumptive users of wildlife present some analytical complications, however. They are less readily identifiable and, therefore, more difficult to sample. Practically no valuation studies have been done on nonconsumptive wildlife use in Alaska (and only a few on hunting and fishing). If we move down to the lower 48 states, we can say a little more about the value of nonconsumptive wildlife activities, though still not much. A few scattered studies have been done on the economic value of wildlife watching: two on general wildlife watching (one in western national forests and one in Arizona), and one each on deer watching in California, bighorn sheep watching in Arizona, and whooping crane watching in Texas. The work being initiated by the Alaska Department of Fish and Game will be a major contribution to the state of the art in nonconsumptive wildlife valuation.

Economic information is beginning to be used by several states to develop and manage wildlife resources. One such state is Wyoming. Data from the 1985 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (NSFHWAR)

show that, in 1985, Wyoming had 2,094,000 activity days of hunting and 3,946,000 activity days of nonconsumptive wildlife recreation, mainly watching or photographing wildlife, of which 510,000 and 2,029,000 respectively were by nonresidents of the state. Combining those data with estimates of net economic value for hunting (about \$30 per activity day) and wildlife watching (about \$10 per activity day) from studies specifically in the Rocky Mountain region shows that the well-being of residents and nonresidents were enhanced by \$66.7 million and \$35.6 million, respectively, by participating in wildlife-related activities. To add some perspective to those numbers, the value of the timber harvest in Wyoming in 1986 was around \$2.3 million.

Trip-related expenditures (excluding equipment purchases) actually made in Wyoming in 1985 averaged \$60.11 per day by nonresident hunters and \$41.72 per day by nonresident wildlife watchers and photographers. That implies a direct economic impact of \$115.3 million—wildlife-related activities brought \$115.3 million into the Wyoming economy in 1985. Multipliers for recreational activities in the contiguous U.S. typically average around 2—every recreation dollar that comes into the state generates a second dollar of economic activity within the state. That implies the total nonresident economic impact of wildlife-related activities in Wyoming was around \$230.6 million in 1985. Such impacts, fueled by nonresident expenditures, are a source of economic growth. The NSFHWAR data are only on "primary purpose" trips, i.e., they do not include people for whom wildlife was a secondary activity on their trip, so the economic impact is a conservative estimate.

Of that \$230.6 million of total nonresident economic impact, \$169.3 million (73 percent) was generated by wildlife watching. That kind of information, combined with the net economic value estimates for both residents and nonresidents, led Wyoming state officials to recognize nonconsumptive wildlife use as "one of the more feasible areas to target for expansion of Wyoming's recreation-tourism industry," according to a Wyoming Game and Fish Department report. One result was "Wyoming's Wildlife—Worth the Watching," a program to develop easily accessible opportunities for wildlife watching that will induce people driving through Wyoming to stop, view the wildlife, and spend more time (and money) in Wyoming.

All indications are that the wildlife resource in Alaska is a valuable one. Numbers can be put on that value to confirm what Alaskans already know, and to point out areas and ways that wildlife resources might be enhanced and developed to increase the well-being of Alaskans and promote economic growth.

Dr. Daniel W. McCollum is an economist with the U.S. Forest Service at the Rocky Mountain Forest and Range Experiment Station in Fort Collins, Colorado.

WILDLIFE WATCHING IN ALASKA—WHAT'S IT WORTH?

by SuzAnne Miller

The image of Alaska as a wildlife haven has significant economic value which will only grow as wildlife continues to decline elsewhere. It is in Alaska's best interest to maintain and cultivate the resources upon which that image is based.

ADF&G's Division of Wildlife Conservation has initiated a research program to determine the economic value of Alaska's wildlife resources. It will allow the state to focus on wildlife as an economic resource which can be evaluated like other resources.

Research in the economic program is focusing on two areas: impact and value. A project has been started to estimate the impacts (the amount of money actually spent) of wildlife-dependent business activities on both the state and regional economies. This involves developing computer models which follow the flow of money generated by such businesses. This study will provide information on how much money comes in, where it comes from, who receives it, how much of it flows back out of the economies, and what jobs are created. This information will allow the state to examine the economic effects of different resource management decisions, to identify new business opportunities and to limit the flow of money outside the state. Alaska residents, nonresident visitors to Alaska, and Alaskan businesses will be surveyed to gather data on their respective expenditures.

Economic value data (how much a person values an experience, not how much they actually spend for it) will be collected through a series of site specific projects. For example, the Division of Wildlife Conservation cooperated with Yale University on an economic survey of wildlife watchers visiting the McNeil River State Game Sanctuary last summer. Results will be available later this year. Similarly, the division is cooperating with the University of Alaska Fairbanks to study the economic value of the Delta bison herd. Questions regarding economic value will be included on the surveys conducted for the impact study.

The difference between what a person actually spends for an experience (economic impact) and how much they would be willing to spend (economic value) is called consumer

surplus. Knowing the consumer surplus for specific wildlife dependent activities (watching, hunting, etc.) will enable the state to consider ways of capturing some of that surplus in the form of state revenues.

The trick is to devise methods of payment (hunting licenses, for example) and appropriate amounts which will not turn users away, but will bring their actual expenditures closer to their total values. The only way to achieve this is through knowledge of both their expenditures and their values.

With the help of the U.S. Fish and Wildlife Service's Federal Aid Program and with the U.S. Forest Service's Rocky Mountain Forest and Range Experiment Station, the Division gathered some of the nation's leading economists to develop a technically sound study plan. The results will be presented in a book entitled *Valuing Wildlife Resources in Alaska* to be published by Westview Press later this year. The book will establish the foundation for the division to proceed in applying economic principles to wildlife management issues.

Since wildlife and wilderness recreational opportunities are rural, they can be used to promote economic development and stability in remote areas where unemployment is high. Many wildlife-related business opportunities do not require large capital outlays, allowing entry by small operators.

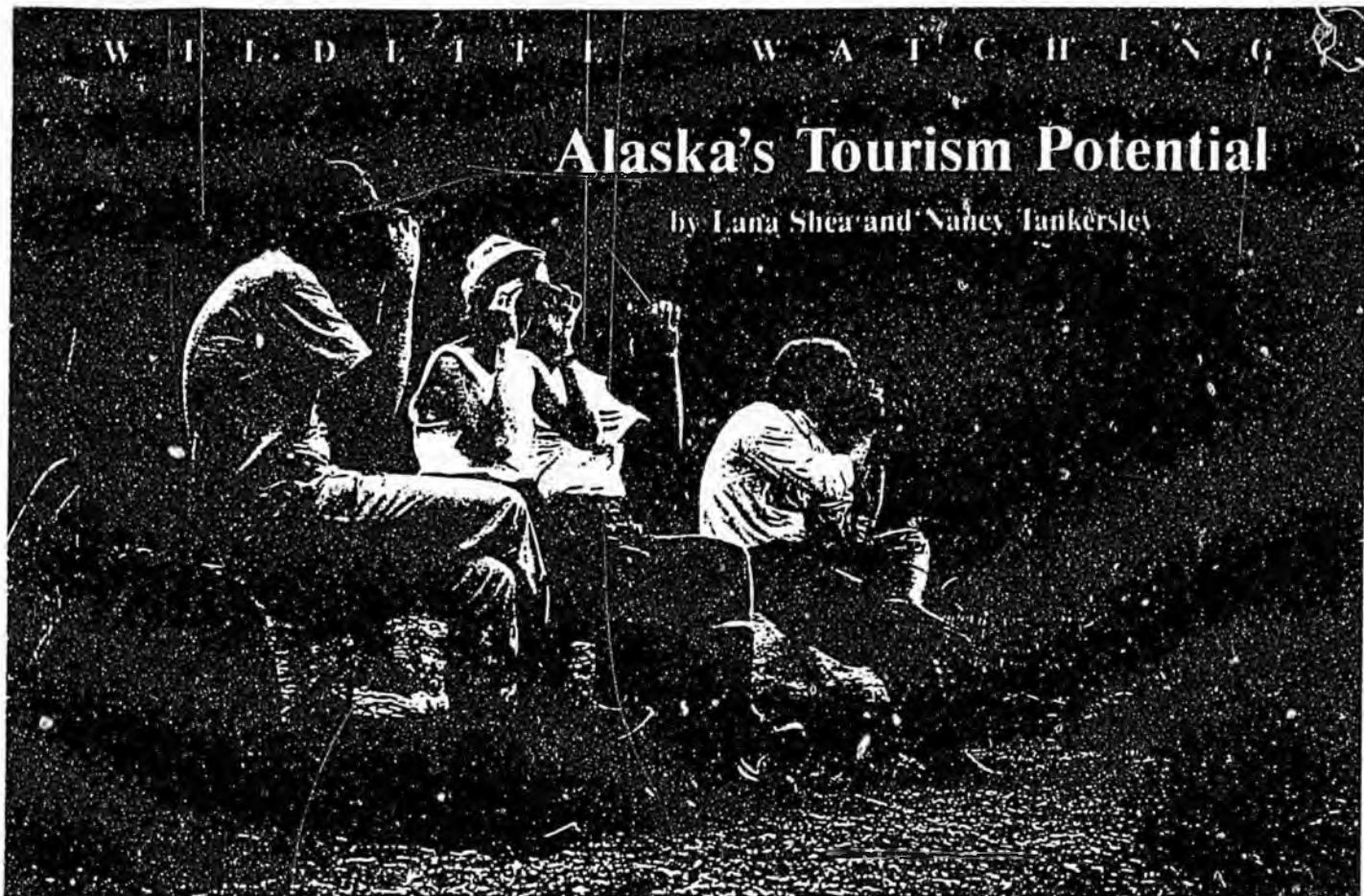
By studying potential visitor's preferences, the state can stimulate appropriate tourism to capture more money from visitors. Thus the state can identify new revenue sources from visitors without burdening Alaska residents.

Too often wildlife has been seen as an obstacle to economic development, rather than as an opportunity. Knowledge of the value of Alaska's wildlife will enable decision-makers to better select among resource management and development alternatives.

SuzAnne Miller is a biometrician with the Division of Wildlife Conservation, ADF&G, Anchorage.

Alaska's Tourism Potential

by Lana Shea and Nancy Tankersley



John Hyde

Alaska has an abundance of wildlife that visitors hope to see including species that are uncommon or endangered elsewhere, such as the brown bear, wolf, caribou, moose, bald eagle, trumpeter swan, peregrine falcon, and common loon. Large concentrations of seabirds, waterfowl, shorebirds, whales, and sea lions provide unparalleled viewing spectacles. Western Alaska hosts many Asiatic birds that are found nowhere else in North America.

These wildlife resources are big visitor attractions. Images of wildlife and wildlife recreation have been used successfully by state tourism agencies to lure visitors to Alaska. Passengers in cruise ships along the Inside Passage have indicated that wilderness and wildlife were their principal interests. Bird watchers from around the world flock to western and southwestern Alaska to view Asiatic and Alaska birds. Opportunities for wildlife viewing are even being used to lure convention business.

In Alaska, visitor surveys in 1985 and 1989 showed that interest in wildlife viewing was growing. Wildlife viewing was the activity with the highest level of participation in every region (from 27 percent to 67 percent of visitors in 1989), with bird-watching second. In fact, more visitors participated in wildlife and bird watching than in sport fishing, hunting, hiking, flightseeing or city tours.

The number of visitors to Alaska in the summer of 1990 was approximately 585,000, with summer tourism growing at an

average of about 4 percent per year. U.S. Fish and Wildlife Service surveys indicate that wildlife viewing tourism more than doubled from 1980 to 1985. All indications are that participation is growing in North America, as well as overseas. This indicates that the potential markets for wildlife viewing tourism in Alaska are large.

Other states and Canadian provinces have recognized the value of wildlife-related tourism and are taking steps to capture more of this growing market. Alaska was identified as a prime competitor of British Columbia (B.C.) in capturing this market because of the similarity of wildlands, wildlife, and viewing opportunities. Although B.C. is more accessible to many U.S. states, Alaska was acknowledged as a more obvious destination. The B.C. report states, "If any region of North America captures imaginations, Alaska is it."

Although Alaska tourism is currently a billion dollar industry, relatively little attention has been paid to the potential worth of wildlife resources to Alaska's economy.

Limited information from southeast Alaska indicates that in 1989 there were more than 180,000 visitors who participated in wildlife viewing, and businesses that marketed wildlife viewing as an important component of their services had 146,000 clients. These clients spent \$43 million on charter boat, kayak, canoe, raft, hiking, and flightseeing trips and remote lodges. Another indication of the importance of wildlife viewing to

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Alaska's Tourism Potential

(Continued from page 6.)

the southeast tourism industry is that almost half of the non-retail businesses actively market wildlife viewing, while a quarter of them believe they are dependent on wildlife viewers.

Other states and Canada already have decided to invest in promoting wildlife watching as a way to diversify their economies with a renewable resource. Wyoming's Department of Game and Fish has teamed up with the state Travel Commission to promote wildlife viewing, designate viewing sites, and develop interpretative displays. Wyoming expects to increase the economic value of wildlife viewing from \$680 million in 1986 to \$1 billion in 1991, with an investment of \$3.5 million.

British Columbia initiated a 5-year program to increase regional economic growth by dispersing visitors into the remote areas of the province and expanding the operating seasons of hotels, restaurants, and guide/outfitters. Through the development of 51 viewing sites and more aggressive marketing, B.C. expects to increase the outdoor adventure tourism sector by \$200 million over the next five years.

Alaska has a good start in providing outstanding wildlife viewing opportunities for residents and visitors. Highlights include Denali National Park, Glacier Bay National Park, McNeil River State Game Sanctuary, and Chilkat River Bald Eagle Preserve. State game refuges near Juneau, Fairbanks, and Anchorage are popular sites as well.

In a 1979 study, cruiseship passengers in southeast were disappointed in the wildlife viewing opportunities. However, expanded backcountry travel services in the 1980s greatly improved visitor satisfaction on cruises and elsewhere. In 1989, visitors to Alaska rated their satisfaction with wildlife and bird watching as good or very good.

More of these types of areas and related services and products must be developed and promoted if Alaska is to capture its share of the growing wildlife viewing market. Demand exceeds supply in many of the existing viewing areas. Less than 10 percent of applicants for McNeil River obtain a permit to visit. Denali National Park has closed most of its road system to private vehicles to reduce crowding, and the campgrounds usually are filled to capacity throughout the summer. Even in remote settings, crowding has been documented as a problem for tour operators.

Tourism opportunities can be promoted in undeveloped areas as well as designated sites. Examples of wildlife viewing services, products and facilities that would benefit state, regional and local economies are:

1. More guided wildlife viewing trips out of towns served by state ferries, cruise ships, regular air carriers, roads, or the railroad. Local economies could be boosted by direct income to tour operators, as well as additional lodging, meals and related services. Trips should be offered in a variety of lengths and styles to accommodate various visitor preferences.

2. More wildlife viewing services in remote areas. This is an opportunity for some hunting guides and outfitters during their off-season. A tourism marketing study in Alberta in 1990 noted that the markets for wildlife viewing and hunting overlap considerably, since 90 percent of hunters are also viewers and many have families that are interested in viewing as well. The study said that guides and outfitters have good potential for providing more viewing opportunities, but may need some assistance with upgrading and marketing these services. This may be pertinent to Alaska as well.

3. Development and distribution of wildlife viewing guidebooks for local areas which may encourage visitors to spend more time (or a night) in the town. These guides could encourage an independent traveler to go on a self-guided tour along the road or trail systems or from a rented kayak, raft, canoe, sailboat or motorboat.

4. Marketing wildlife viewing opportunities in the spring, fall and winter to promote off-season travel. For example, use winter wildlife viewing opportunities in ski promotions.

5. Increased information about wildlife viewing opportunities with displays and brochures on the state ferries, railroad, airports, and other public buildings.

6. Construction of highway pullouts, trails, boardwalks and other facilities with interpretative information and good vantage points for wildlife viewing.

If Alaska is interested in sustaining growth of wildlife viewing tourism, cooperation among landowners, managers, and the private sector is critical. Protection and management of wildlife and the environment are the cornerstones of sustainability. Conflicting land uses also must be considered when developing viewing sites. Management of people is also important, such as adherence of tour operators and viewers to ethical and safe viewing practices.

In order to develop more sustainable and high quality wildlife viewing opportunities, and to increase visitor satisfaction, some recommendations from Canadian studies are pertinent, including increased research, marketing, and development of new services and facilities.

The growth of wildlife viewing tourism has exciting implications for Alaska. Wildlife is a resource that Alaskans can promote and develop into educational and unforgettable experiences for the growing legions of wildlife viewers. We look forward to partnerships between the public and private sectors to promote growth of Alaska's economy and wildlife conservation.

Lana Shea is a biologist with ADF&G's Division of Habitat in Juneau.

Nancy Tankersley is a biologist with ADF&G's Division of Wildlife Conservation in Anchorage.

FISCAL NOTE

No. 1
 Bill Version: CSHB 446 (RES)
 (H) Publish Date: 2-28-92

STATE OF ALASKA
 1992 LEGISLATIVE SESSION

Revision Date: 2/25/92
 Title: An Act relating to the wildlife conservation tag and sanctuary entry
 Sponsor: Representative Ulmer
 Requestor: House Resources

Department Affected: Fish and Game
 BRU: Wildlife Conservation
 Component: Wildlife Conservation
 COMPONENT SERIAL NO.

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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES	4.5	3.5	3.5	3.5	3.5	3.5
TRAVEL						
CONTRACTUAL	5.9	5.9	5.6	5.9	6.2	6.4
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	10.4	9.4	8.1	9.4	9.7	9.9

CAPITAL						
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REVENUE FUND SOURCE: 1004	37.0	45.0	50.0	55.0	60.0	65.0
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FUNDING: (Thousands of Dollars)

GENERAL FUND	10.4	9.4	8.1	9.4	9.7	9.9
FEDERAL FUNDS						
OTHER FUND SOURCE:						
TOTAL	10.4	9.4	8.1	9.4	9.7	9.9

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year impact: No FY92 impact.

ANALYSIS: (Attach a separate page if necessary.)

See attached page.

Prepared By: Diana Ground Phone: 465-4190
 Division: Division of Wildlife Conservation Date: 2/25/92
 Approved by Commissioner: [Signature]
 Agency: Department of Fish and Game Date: 2/25/92

Distribution (by preparer): Leg. Fin., Legislative Sponsor, Requestor, OMB/DBR, Gov. Legis. OSC., & Impacted Agency(ies)

FISCAL ANALYSIS of CSHB 446(res)

The bill analysis is based on the following assumptions:

1. the fee for the wildlife conservation tag is \$10.00.
2. voluntary sales will start at 500/annum; double in the second year; and increase by 20 percent annually through FY98.
3. sales of tags to visitors at Round Island (Walrus Islands State Game Sanctuary) will remain constant at 200/annum; at Pack Creek at 1000/annum; and applicants for McNeil Sanctuary viewing permits will increase from 2000 to 3500/annum through FY98.
4. half of all tags sold will be by license vendors with the other half sold by state agency offices.

No new positions will be required for this program. In the first year (FY93) approximately 2 man-months of an existing Wildlife Biologist position will be needed to establish the program; thereafter 1.5 man-months will be needed to continue the program. In addition, .5 man-months of a Data Processing Clerk I position will be necessary to handle application requests, fill orders from vendors, etc. Other operating costs will be for printing of the tags, distribution to vendors, promotional materials.

Revenue to fund this program would consist of program receipts.