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# **Subsistence-Recreational Conflicts Along the Togiak, Kanektok, and Goodnews Rivers: A Summary**

by

**Robert J. Wolfe**

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1989

Alaska Department of Fish and Game

Division of Subsistence



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<b>Weights and measures (metric)</b>		<b>General</b>		<b>Mathematics, statistics</b>	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly-accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	$H_A$
gram	g			base of natural logarithm	e
hectare	ha			catch per unit effort	CPUE
kilogram	kg	all commonly-accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	coefficient of variation	CV
kilometer	km			confidence interval	CI
liter	L	at	@	correlation coefficient (multiple)	R
meter	m	compass directions:		correlation coefficient (simple)	r
milliliter	mL	east	E	covariance	cov
millimeter	mm	north	N	degree (angular)	$^\circ$
		south	S	degrees of freedom	df
<b>Weights and measures (English)</b>		west	W	expected value	E
cubic feet per second	ft <sup>3</sup> /s	copyright	©	greater than	>
foot	ft	corporate suffixes:		greater than or equal to	≥
gallon	gal	Company	Co.	harvest per unit effort	HPUE
inch	in	Corporation	Corp.	less than	<
mile	mi	Incorporated	Inc.	less than or equal to	≤
nautical mile	nmi	Limited	Ltd.	logarithm (natural)	ln
ounce	oz	District of Columbia	D.C.	logarithm (base 10)	log
pound	lb	et alii (and others)	et al.	logarithm (specify base)	log <sub>2</sub> , etc.
quart	qt	et cetera (and so forth)	etc.	minute (angular)	'
yard	yd	exempli gratia (for example)	e.g.	not significant	NS
		Federal Information Code	FIC	null hypothesis	$H_0$
<b>Time and temperature</b>		id est (that is)	i.e.	percent	%
day	d	latitude or longitude	lat. or long.	probability	P
degrees Celsius	°C	monetary symbols (U.S.)	\$, ¢	probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
degrees Fahrenheit	°F	months (tables and figures)	first three letters (Jan.,...,Dec)	probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
degrees kelvin	K	registered trademark	®	second (angular)	"
hour	h	trademark	™	standard deviation	SD
minute	min	United States (adjective)	U.S.	standard error	SE
second	s	United States of America (noun)	USA	variance	
		U.S.C.	United States Code	population	Var
<b>Physics and chemistry</b>		U.S. state	two-letter abbreviations (e.g., AK, WA)	sample	var
<i>all atomic symbols</i>					
alternating current	AC	<b>Measures (fisheries)</b>			
ampere	A	fork length	FL		
calorie	cal	mid-eye-to-fork	MEF		
direct current	DC	mid-eye-to-tail-fork	METF		
hertz	Hz	standard length	SL		
horsepower	hp	total length	TL		
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

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1989

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**Subsistence-Recreational Conflicts  
Along the Togiak, Kanektok, and Goodnews Rivers:  
A Summary**

A report to the Alaska Board of Fisheries, February 1990.

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## The Area

The Togiak, Kanektok, and Goodnews rivers are three major salmon and char streams flowing into the Bering Sea in western Alaska (Fig. 1). These rivers are traditional subsistence fishing areas for five villages: Togiak and Twin Hills use the Togiak River; Goodnews Bay and Platinum use the Goodnews River, and Quinhagak uses the Kanektok River (Wolfe et al. 1984). The villages are predominantly Central Yup'ik Eskimo (Burch 1984), and had a combined population of 1,359 people in 1985 (Alaska Department of Labor 1987). The villages also participate in small-scale commercial salmon fisheries near the mouths of each river which provide income into this relatively cash-poor area (Wolfe et al. 1984).

Most of the area is part of the Togiak National Wildlife Refuge and Wilderness established by ANILCA in 1980, and administered by the U.S. Fish and Wildlife Service (USFWS) (Fig. 2). In recent years, the USFWS has issued permits to commercial operators in portions of the refuge. Management of fish and game along the rivers has been under state jurisdiction.

In the last decade, the rivers have been discovered by the Alaska sport guiding industry, which consists of guides and lodges offering recreational outings for sport fishing. By 1987, the recreation industry had grown so that about a dozen sport businesses operated along the rivers. In a typical operation, sport fishers were flown by float plane to temporary tent camps to fish with rod and reel from boats, gravel bars, or the banks. Most guides and lodges follow catch-and-release policies, where most fish are returned to the water after being caught. Most business owners were from outside the region, and 80 percent of the clientele were from outside the state. In 1986 there were twice as many recreational visitors

to the Togiak, Kanektok, and Goodnews rivers as Yup'ik residents (2,544 recreational visitors and 11,439 recreational use days, based on lodge reports to Togiak National Wildlife Refuge). Reported conflicts between subsistence and sport fishers have increased with the developing sport industry along the rivers.

### The Studies

The increase in reported problems between sport and subsistence fishing along these rivers stimulated two studies by the Division of Subsistence. Basic research in Quinhagak, Togiak, and Goodnews Bay was conducted in 1984 to describe the area (Wolfe et al. 1984). A study along the Togiak River in the summer of 1987 was conducted to identify the nature and extent of emerging problems between fishery groups. The study plans were developed in consultation with the city councils and traditional councils in Quinhagak and Goodnews Bay, with the fish and game advisory committee in Togiak, and with the Togiak National Wildlife Service in Dillingham, which reviewed the research design and contributed to costs of personnel and travel associated with fieldwork.

In the Togiak study, two researchers with local bilingual assistants made participant observations on the Togiak River during the 1987 fishing season (July-September), making 27 trips over a six week period. Observations were made of 135 boats from Togiak with 404 persons, 55 boats which were engaged in fishing. Sport guides along the river were interviewed, and 504 sport fishermen were observed. Sport guides submitted estimates of catch and cliental numbers to the federal refuge and the state ADFG after the season. In addition to observations along the river, interviews using a bilingual translator were conducted with 53 people in 48 households in Togiak, including 21 village elders, representing 35

percent of the households and 42 percent of the people. Topics ranged widely, covering river use, timing, locations, activities, interactions between fishing groups, and changes over time in river use.

#### Findings: The Conflicts

The conflicts discovered along the Togiak River are presented here to illustrate the kinds of problems which are developing between sport fishing and subsistence fishing groups. The problems along the Goodnews River and Kanektok River in general are similar to those along the Togiak. However, there are some local differences to the issues particular to each of the rivers. While this case will describe the fishery conflicts using materials pertaining to the Togiak fishery, the fisheries and reported conflicts along the Kanektok, Goodnews, and Togiak rivers differ in certain details (Fall 1987; Wolfe et al. 1984, Wolfe 1987).

According to state fisheries managers, there appeared to be no immediate biological problems with most fish stocks along the river. Low numbers of returning salmon had required some restrictions of the commercial fishery at the river mouths from time to time. But escapement levels were believed to be adequate. Some local Yup'ik fishermen disagreed with this, reporting certain signs of depletion and damage to stocks, such as lower returns and malnourished fish (particularly char). They were concerned about the adequacy of ADFG stock monitoring systems to detect the negative changes they were observing.

In 1987, subsistence fishing for salmon and char primarily took place in the Togiak River, with some fishing also occurring in the marine waters of Togiak Bay (Fig. 3). From June through early August, subsistence chinook, sockeye, and chum salmon were harvested with set nets placed in the lower portion of the river. In

the later season (mid-August through mid-October), coho and char were harvested using seine nets in the river. Spawned sockeyes were harvested late in the season by family groups at traditional fall camps at Togiak Lake, at the headwaters high in the mountains.

In 1987, most sport fishing derived from six commercial sport businesses operating along the Togiak River. Most sport fishing effort occurred along the lower portions of the river, in the same areas as the subsistence net fishery (Fig. 4).

#### Sport Guide Perspectives

From the view of sport fishing guides interviewed in 1987, there really were few justifiable problems between subsistence fishermen and sport fishermen along the Togiak River in 1987. In their view, most fish stocks were relatively abundant. The fish were a common property resource open for use by the public. The river was public water and the gravel bars and upriver refuge lands were public lands. Although there had been a definite increase in sport fishing activities along the river in recent years, there still was room to fish. Recent permitting practices by the Togiak National Wildlife Refuge had the effect of concentrating some of the sport fishing effort to the lower portions of the river, away from upriver wilderness areas. Some sport guides were obtaining land use permits from the Togiak Native profit corporation, to use lands conveyed to the Native Corporation along the lower river. Other sport guides had leased private Native allotment inholdings on the refuge from certain land owners in Togiak for sport fishing camps. Subsistence fishermen from Togiak were seen only occasionally by the sport operators.

According to sport guides, competition for resources was not a significant issue because the guides practiced a catch-and-release policy. Most fish were returned to the water after being caught. The total number of fish actually kept was relatively small in comparison with the local subsistence and commercial fisheries. The catch and release estimates along the Kanektok River illustrate practices along the Togiak: an estimated 1,680 coho were retained and 22,364 coho caught and released on the Kanektok River in 1986 (Alaska Department of Fish and Game records). According to the sport industry, catch-and-release was good fishery management because it conserved fish. It was also good business practice because it extended potential fishing times and recreational use days along the rivers, thereby increasing business earnings which are calculated by the user day. Sport fishermen would have to quit activities after a relatively short time period if required to keep each fish, reaching individual bag limits set by the state.

Local Subsistence Fisher's Perspectives:  
Problem 1. Displacement of Elders

In contrast to the sport guides, Yup'ik fishermen reported several disruptions to traditional subsistence fishing caused by sport fishing. The first type of disruption was conflict at traditional fishing sites along the lower portion of the Togiak River. In 1987, 95 subsistence net sites were documented, with the greatest concentration of net sites along the lower 12 miles of the river (about 4.6 sites per river mile) (Fig. 3 and Table 1). During the early season (June through early August), most in-river subsistence fishing was along this lower river section, conducted by Yup'ik elders accompanied by younger children, setting and tending nets on day trips from Togiak. Elders have assumed this role because younger

Yup'ik males commonly were involved in the commercial salmon fishery in the marine waters of Togiak Bay, an activity which conflicted in time and location with subsistence fishing. Extended families had evolved specialized and complementary work roles during early summer: the older males assisted by grandchildren commonly fished for subsistence salmon, women processed the subsistence salmon by drying and smoking, and active adult males produced the family's income by commercial fishing.

Conflict occurred when Yup'ik elders traveled to set subsistence nets at traditional fishing sites and discovered non-Native strangers sport fishing. Traditional fishing sites were at special deep holes, eddies, and cul de sacs where salmon and char schooled. The sites commonly were named places which were identified with particular extended kinship groups in Togiak. Over the past several years, sport guides had discovered these traditional sites. Using motored skiffs, sport guides typically moved clients between a variety of places along the river, leaving them to cast for salmon while standing in hip boots on gravel bars or upland river banks. Thus, during the day from one to a dozen sport fishers were commonly encountered by Yup'ik elders at their traditional fishing sites, angling for fish (Figs. 4)

According to Yup'ik fishermen, over the past several years, conflicts between sport anglers and Yup'ik fishermen have resulted when attempts were made to simultaneously use both types of gear in the same fishing locations. The subsistence net is an efficient method for quickly catching large quantities of fish, and potentially can "clean out" a hole while sport anglers, who are paying thousands of dollars for a wilderness angling experience, watch. The actual frequency of incidents of direct confrontation between fishing groups was

difficult to assess, but according to Yup'ik fishermen, it was a major problem. Of interviewed households in Togiak, 23 of 31 reported observing the presence of sport fishers at traditional subsistence sites. Nine respondents reported actual incidents of conflict between fishing groups, including aggressive actions by sport fishermen against subsistence fishermen (shouting verbal insults, rock throwing, casting lures at fishing boats, and making low passes over boats with float planes) and by subsistence fishermen against sport fishermen (directing boats and nets at wading anglers). By contrast, sport guides reported that conflicts were rare and not significant problems.

Direct physical confrontation probably occurred less frequently than did displacement, which was the most typical response by Yup'ik fishermen to sport fishermen. Displacement from traditional sites was reported in 16 of 31 Togiak household interviews. Yup'ik elders reported they were "embarrassed" to use a set or seine net in front of strange sport anglers. If sport anglers were present at their traditional sites, Yup'ik fishermen reported they were compelled to "pass by" with the boat, forgoing fishing that day. Using another set net site was commonly not a culturally appropriate option because set net sites were identified with other kinship groups. Passing by the sport fisherman is a culturally appropriate response, for Yup'ik cultural practice dictates that direct confrontations between people with problems be avoided if possible. Custom dictates that subsistence parties defer to other groups encountered occupying or using a harvest area. Further, in traditional Yup'ik culture, strangers (that is, people outside the endogamous regional group, or non-relatives) are considered unpredictable and dangerous. Language barriers were additional factors, for Yup'ik elders typically were not fluent in English. Thus, avoidance rather than confrontation typically

resulted.

Displacement reportedly had not lead to a reduction in subsistence fishing output in Togiak. The estimated 1987 harvest was 3,680 sockeye, 846 king, 951 chum, and 1,172 coho salmon, which was above average. The community apparently was getting enough fish to eat. However, the presence of sport fishermen disrupted the time and place of normal subsistence fishing practices, making fishing less efficient and more costly for fishermen, and placing elders in a context of intimidation and fear. Intimidation of elders was particularly serious because of the gerontocratic tendencies of Central Yup'ik society, where older people by virtue of age are accorded high status, prestige, and respect from younger people. Insults to the elderly are among the worst violations in the culture and are not tolerated within the society.

Local Subsistence Fisher's Perspectives:  
Problem 2. Catch and Release Practices

Besides displacement, a second major problem for the Yup'ik was the catch and release practice of sport fishermen. What was understood to be good resource management and business practice by the sport industry was understood in traditional Yup'ik world view as dangerous abuse of the natural order which ultimately would lead to the destruction of life in the river. The complex local beliefs about catch and release are detailed in Wolfe (1989), so only a summary is provided here. For the Central Yup'ik, animals and plants in the natural world, including fish, are living beings with a conscious awareness and sensitivity toward the actions of people. One central rule of human conduct is never to waste fish and game which are taken as food. Harvests must be brought back to the family

and completely utilized as food for people or dogs, taking special care in the disposal of bones touched by human hands. The blatant waste of food is apprehended by the living beings of the fish stocks and ultimately results in the decline of fish populations.

Catch and release practices evoked a strong social and moral condemnation from Yup'ik respondents. It was characterized by 24 of 31 interviewed respondents as a serious problem. Catch and release was viewed as an abuse of the natural world. It perverted the natural order, leading to sickly, skinny, and ugly fish. And it led to the death and waste of a certain number of fish. Because fish would not swim past fish bones touched by human hands scattered about the river bottom, catch and release practices ultimately would result in the decline of the fish runs in the Togiak River (see Wolfe 1989).

Local Subsistence Fisher's Perspective:  
Problem 3. Trespass

A third major problem reported by Yup'ik fishermen was trespass on traditional lands. As stated above, traditional fishing sites were identified with particular extended kinship groups. Yup'ik social custom required that access to fishing sites be obtained through kinship linkages with the group identified with the site, or by requesting permission from the head of the kinship group. Reportedly, such requests were rarely denied. However, most sport fishing guides did not recognize or acknowledge the validity of the traditional land tenure system, and violated customary practice for accessing the subsistence sites. Recognizing the river as public waters and fish as a common property resource, most sport guides fished without concern about asking permission from local

families.

In fact, legal land ownership was complex along the river (Fig. 2). The uplands surrounding some fishing sites were private property, owned by the Togiak Native Limited, the village profit corporation, or owned by individuals as Native allotments granted by the federal government. Yup'ik respondents commonly complained of misuse of fishing camps by sport fishermen, such as trespass, fishing without permission, destruction of fishracks and cabins, pollution, and trash. Other uplands along the Togiak River were classified as federal refuge lands (in wilderness or non-wilderness status) for which federal permits were required for certain uses. The gravel bars fell under state jurisdiction (Department of Natural Resources) because they were the bottoms of navigable waters, and were relatively unregulated. Yup'ik fishermen were frustrated by this complex system of conflicting land ownership. In their view, sport fishermen could easily circumvent any efforts to enforce property rights on private lands and at traditional camps by moving between land categories to escape regulation.

### Conflict Resolution

In December of 1987, proposals to deal with the developing problems along the Togiak, Goodnews, and Kanektok rivers were submitted to the Board of Fisheries, a seven-member board established by the state to manage the state's fisheries. A dozen different proposals dealing with various problems were submitted by individual fishermen, local advisory committees, and traditional village councils. The problems allegedly created by sport fishing listed in the proposals were of several types: gear and area conflicts, trespass on private Native lands, wasteful fishing practices, pollution, and unfair state regulations which

allowed sport fishing while closing net fishing for conservation reasons.

The principal proposals requested closing all or portions of the rivers to sport fishing. As an example, the justification from the Togiak Advisory Committee proposal read:

"Sport fishermen and subsistence fishermen on the Togiak River are constantly in conflict over traditional subsistence sites. Since the river area closest to the village is the primary subsistence fishing area, a clear zone created by an exclusive use area would reduce conflict;"

while the justification from a Quinhagak subsistence fisherman read:

"Conflicts between sport fishermen, commercial, and subsistence fishermen of the village is out of hand... Sport fishermen are misusing the resource, leaving trash, dead fish and human waste in our drinking water."

Another proposal prohibited catch and release fishing practices on the Goodnews and Kanektok rivers, submitted by the Traditional Councils of Goodnews Bay and Quinhagak with the following justification:

"Currently sport fishermen are allowed to catch fish and release them while fishing on these two rivers. This practice results in some dead and diseased fish. The fish float downstream belly up and cannot be used for food. The fish is wasted, and has died for no good reason. To allow this waste is unsound management of a resource that the local residents value very highly. Most of the village residents are Yupiit Eskimos. It is against their religion to allow their food to be played with and wasted. It is a violation of their right to religious freedom to continue to allow this practice of catch and release. Out of respect for the religious beliefs of these people, and to halt the waste of fish, catch and release should be abolished in these two rivers."

These proposals were designed to restrict sport fishing along the rivers, to protect the interests of subsistence and commercial fishermen from the local communities. The interests representing these views included traditional councils of the villages and the local fish and game advisory committees.

The findings of several studies were presented as part of the ADFG report to the Board of Fisheries at the December, 1987 meeting, when the village proposals were considered (see Table 1) (Fall 1987; Wolfe et al. 1984; Wolfe 1987).

In addition to considering these scientific findings, the Board of Fisheries received information from the general public about the conflicts along the Kanektok, Goodnews, and Togiak rivers.

During the proceedings, the room was packed with people representing multiple subsistence and sport interests anxiously waiting to testify (Table 1). In public testimony, statements were made from the following groups: in opposition to the proposals were two sport fishing associations, three sport fishing guide businesses, and four individual sport fishermen; in support of the proposal were one Yup'ik non-profit corporation, a Native profit corporation, one commercial fishing association, two state fish and game advisory committees, one village elder, and a lawyer from the state-funded legal services representing Goodnews Bay village. Two federal representatives of the Togiak National Wildlife Refuge testified, asking that action be postponed in favor of a joint federal-state planning process.

The public participation was characterized by high levels of emotion, intense lobbying efforts, threats of legal action, and accusations of special interest bias in the deliberation process. The multiple interest groups gave complex and frequently contradictory information. Sport guides predicted dire consequences for their business interests if the proposals passed, while subsistence fishermen predicted dire consequences for future subsistence uses if they did not.

The public discussion of the proposals by the Board of Fisheries turned into difficult marathon deliberations stretching over several days, under the continual scrutiny of the public interests in attendance. One Board member with personal financial interests along the Togiak River (as a sport guide) excused himself from direct participation in deliberations because of potential conflict of interests. He

became a silent observer. A second Board member who was a subsistence and commercial fisherman in one of the villages did not excuse himself. Over the course of discussion, the proposals were subjected to multiple amendments and votes by Board members, almost all failing. Amendments were unsuccessfully introduced to develop compromise actions to address the issues: closing smaller portions of the river to sport fishing; limiting the closure only to the guiding industry, not unguided sport fishermen; limiting the closure to just a portion of the season; and limiting sport fishing within a certain distance of subsistence nets (this last amendment was passed for the Kanektok River). As the Board was split in its votes, no substantive changes were made in the status quo.

The final result of the deliberation was that a letter was sent by the Board of Fisheries to the state Governor's office. It requested that the responsibility for addressing the problem be passed to it. As yet, the Governor's office has not taken actions to significantly change the situation along the Togiak, Goodnews, or Kanektok rivers.

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TABLE 1

PARTICIPANTS REPRESENTED DURING DELIBERATION  
OF TOGIAK, KANEKTOK, AND GOODNEWS RIVER  
SUBSISTENCE-SPORT FISHERY PROPOSALS  
BOARD OF FISHERIES, DECEMBER 1987

DEPARTMENT OF FISH AND GAME REPORTS

Division of Subsistence  
Division of Commercial Fisheries  
Division of Sport Fisheries

PUBLIC TESTIMONY IN PERSON (Number in Parentheses)

Sport Interests

Sport Fishing Associations (2)  
Sport Fishing Guides and Lodges (3)  
Individual Sport Fishers (4)

Subsistence Interests

Native Non-profit Corporation (1)  
Native Corporation (1)  
Fishermen's Association (1)  
Fish and Game Advisory Committees (2)  
Village elder (1)  
Alaska Legal Services (1)

FEDERAL AGENCY TESTIMONY IN PERSON

U.S. Fish and Wildlife Service (2)

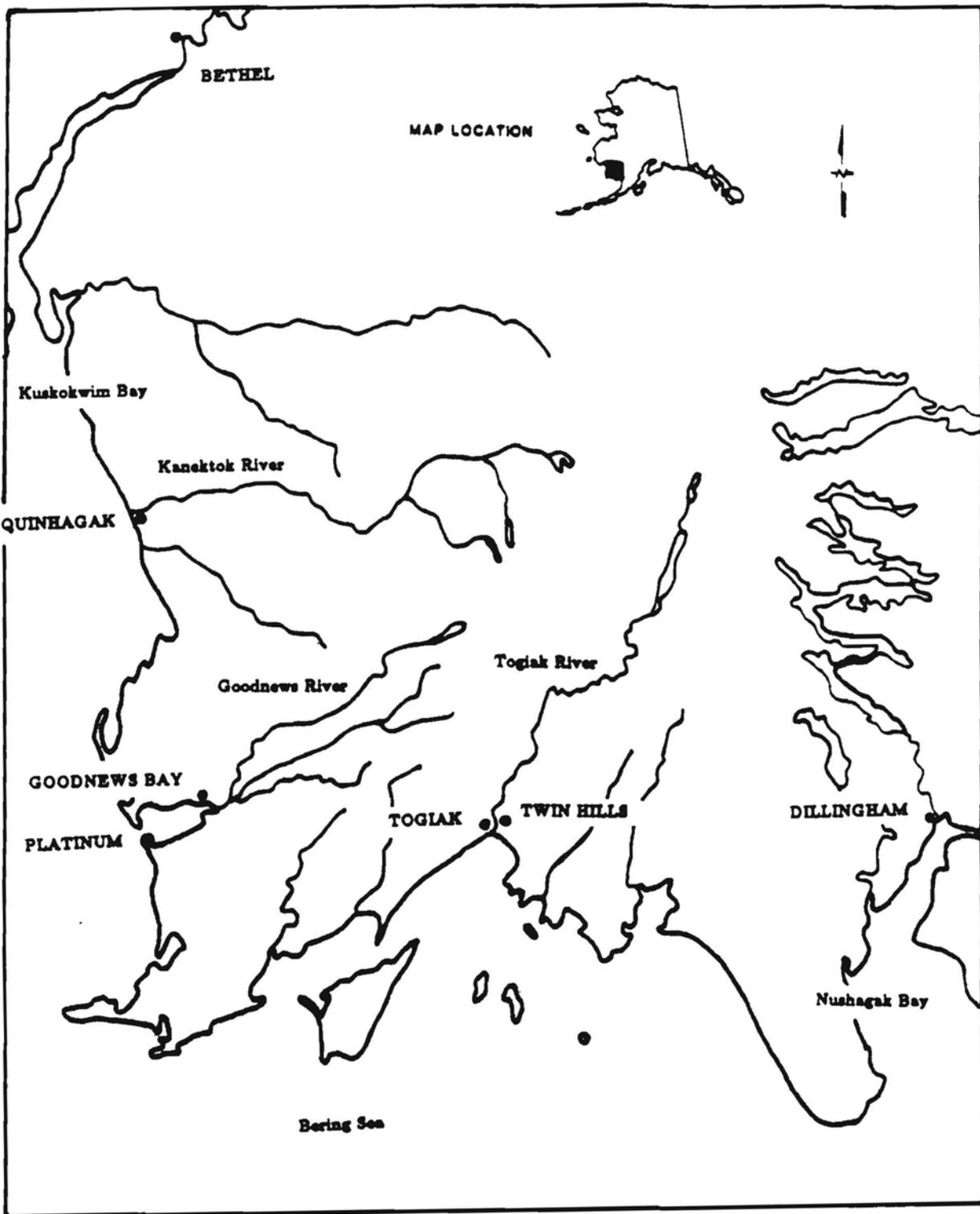


Fig. 1. The Togiak, Kanektok, and Goodnews Rivers in Western Alaska

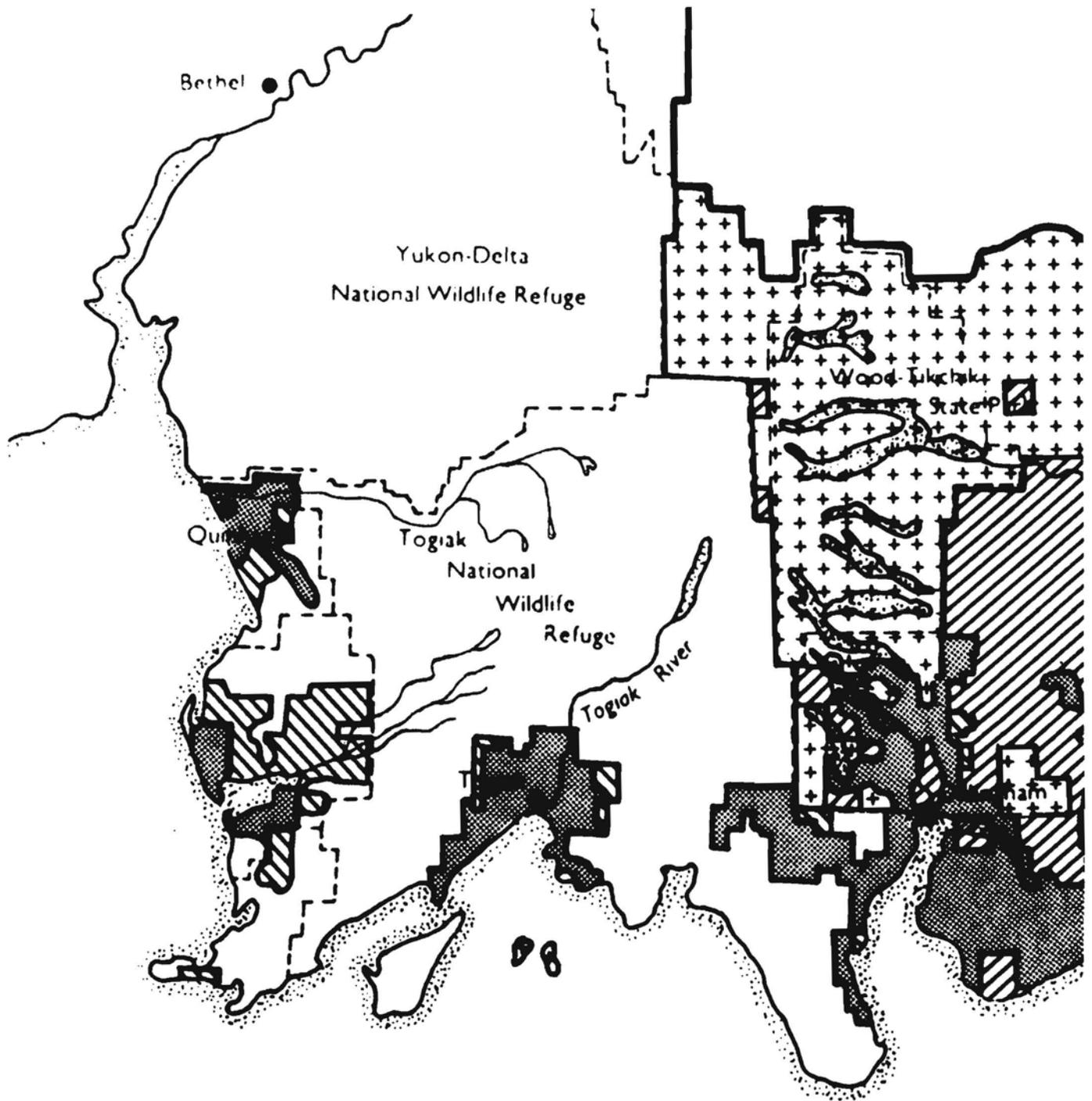
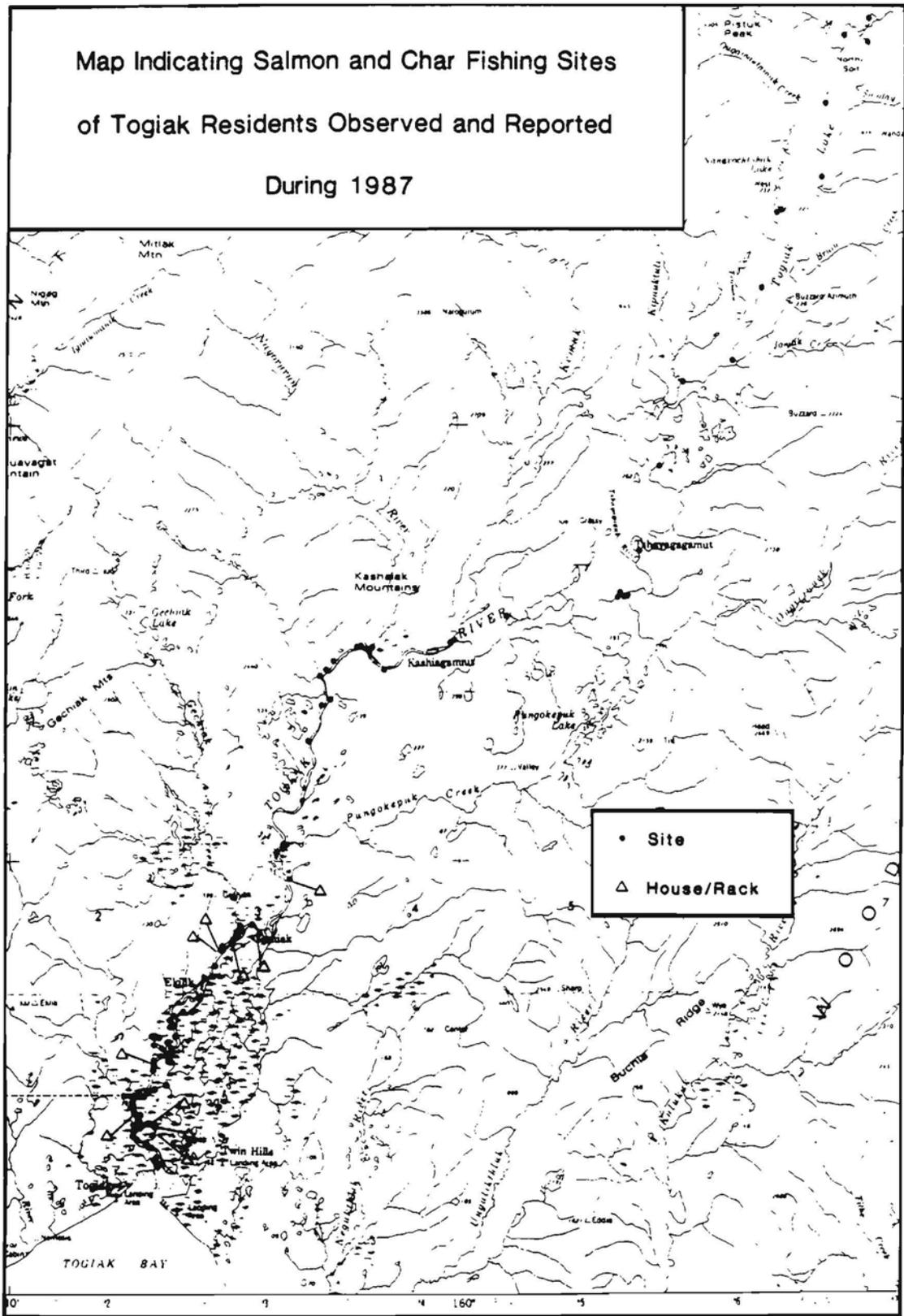
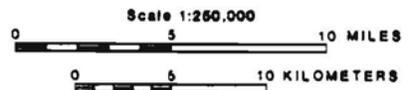
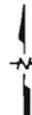


Fig. 2. Land Ownership in the Togiak River Area (Dot and Cross-hatch Patterns Indicate Native Lands)

Fig. 3



MAP LOCATION



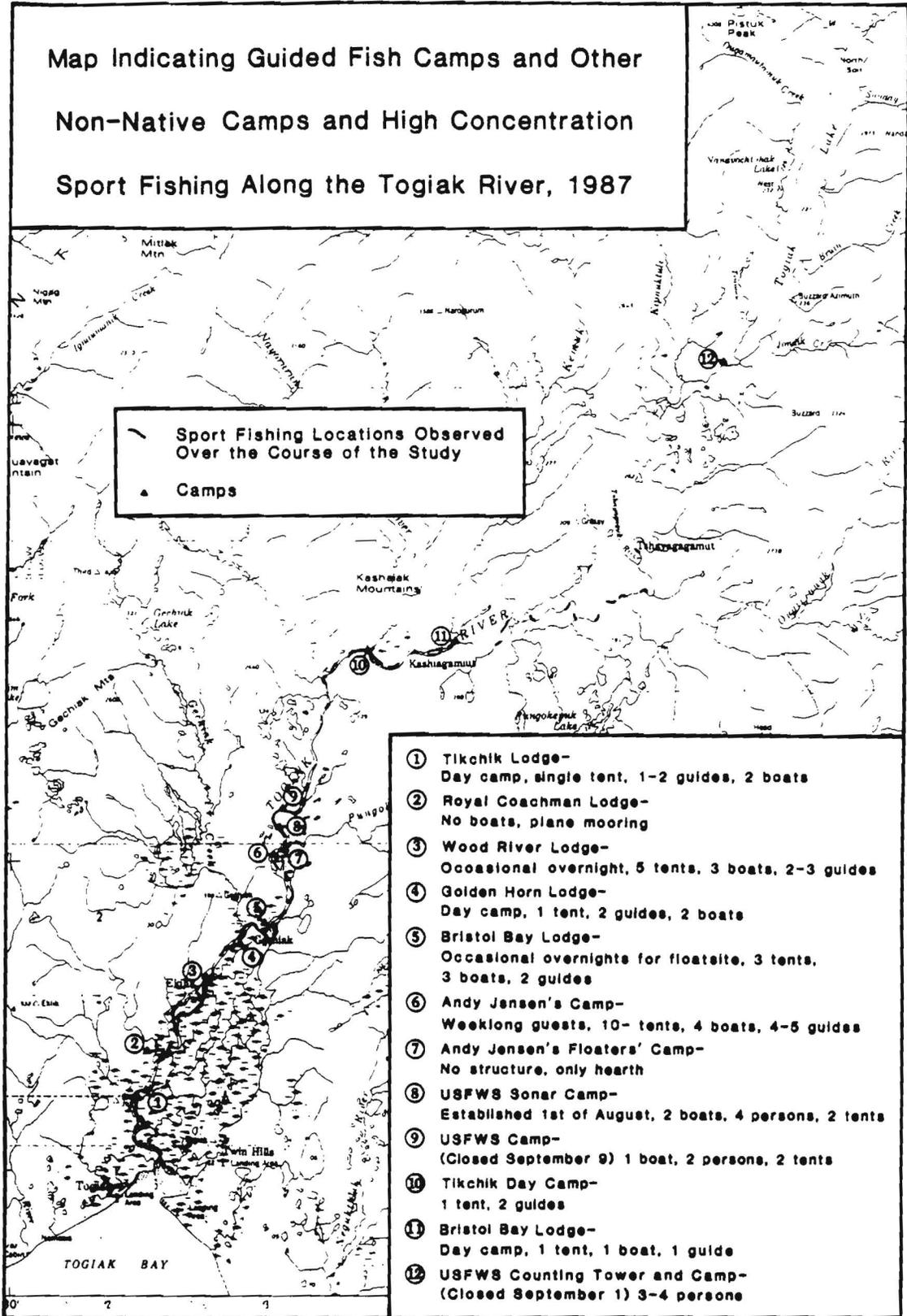
Based on a USGS map  
Universal Transverse Mercator Projection



State of Alaska  
Department of Fish and Game  
Subsistence Division

Fig. 4

**Map Indicating Guided Fish Camps and Other  
Non-Native Camps and High Concentration  
Sport Fishing Along the Togiak River, 1987**



**Table 2**  
**Subsistence Fishing Sites**  
**Togiak River, 1987**

	Net Sites	Nets Per Mi	Cum Miles
Mouth to Gechiak Ck	55	4.6	12
Gechiak Ck to Pungokepuk Ck	7	1.4	17
Pungokepuk Ck to Ongivinuk R	19	.8	41
Ongivinuk R to Togiak Lk	5	.3	58
Togiak Lk	9	.6	73