

Fishery Data Series No. 05-11

Southeast Alaska Recreational Cabin Survey, 2002

by

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and

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April 2005

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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ABSTRACT

We conducted a mail survey of parties reserving any of 75 U.S. Forest Service (USFS) recreational cabins located on cutthroat trout *Oncorhynchus clarki* and rainbow/steelhead *Oncorhynchus mykiss* systems in Southeast Alaska in 2002. The survey was used to estimate trout (cutthroat and rainbow, combined) and steelhead catch, harvest, and effort by users of these USFS cabins. The overall response rate to our survey was 78%. In 2002, anglers spent an estimated total of 17,170 hours (SE = 1,014) during 4,114 days (SE = 174) fishing at the 75 cabins surveyed to harvest 2,913 (SE = 392) trout and 53 (SE = 16) steelhead. Anglers also released another 19,698 trout (SE = 1,001) and 1,496 steelhead (SE = 754) for an overall retention rate of 15% for trout and 3.5% for steelhead. Comparing surveys done at USFS cabins in 1993 (prior to more restrictive sport fishing regulations), with surveys conducted in 1999 and 2002, the number of registered parties in 2002 remained approximately 50% of the 1993 total (similar to the 1999 total). The number of trout caught during 2002 was down by 45% from the 1993 levels but the number of steelhead caught doubled between 1999 and 2002; the number of steelhead caught during 2002 was 20% higher than the 1993 estimate.

Keywords: Harvest, catch, steelhead, cutthroat, trout, rainbow, effort, angler, Southeast Alaska, USFS, recreation cabin, postal survey, mail survey

INTRODUCTION

The Alaska Board of Fisheries (BOF) promulgated more restrictive bag limits and minimum size regulations for trout (cutthroat *Oncorhynchus clarki* and rainbow trout *O. mykiss* combined) and steelhead *Oncorhynchus mykiss* in Southeast Alaska in 1994, which were subsequently modified in 1997 and 2000. Current regionwide regulations for trout include a daily bag and possession limit of two fish from 11 to 22 inches in length. More restrictive regulations apply in a number of lakes and a few local areas with intensive fisheries (e.g., along the Juneau road system). Current regionwide regulations for steelhead include a daily bag limit of one fish, 36 inches or more in total length and an annual limit of two fish.

Sport harvest, effort, and catch of trout and steelhead (and other species) in Southeast Alaska are estimated annually through the Statewide Harvest Survey (SWHS). This mail survey is conducted by the Alaska Department of Fish and Game (ADF&G), Division of Sport Fish (Jennings et al. *In prep.*). Results of this survey show that 83% of cutthroat trout and 97% of steelhead trout harvested during 1999 in Southeast Alaska were taken in fresh water. The SWHS also shows that Southeast Alaska harvests of cutthroat trout, rainbow trout, and steelhead in fresh water have remained relatively stable since 1994, although the harvest of rainbow trout has fluctuated some during the last 3 years (Figures 1, 2, and 3). The more

restrictive regulations adopted by the Alaska Board of Fisheries in 1994 are largely responsible for the decline from relatively large harvests in the early 1990s. Total catch of steelhead reached a peak in 2000 when an estimated 24,885 (Figure 3) steelhead were caught (Walker et al. 2003) while total catches of rainbow trout and cutthroat trout have averaged 18,116 and 40,284, respectively, since 1990.

Because angler effort in most Southeast Alaska drainages is relatively low, sampling rates maintained by the SWHS yield only annual harvest estimates for a few of the largest or most heavily used freshwater systems in the region; i.e., a minimum of 12 responses are generally required to generate an estimate for a specific location. As a result, there is a demonstrable need to better evaluate remote fisheries in the region (Schwan 1990). There are USFS cabins near 50 or more important cutthroat lakes and steelhead streams in remote areas of Southeast Alaska. Because of recreational opportunities afforded by these cabins, sport fishing from these cabins accounts for a significant proportion of the freshwater trout harvest (e.g., over 30% for cutthroat trout in 1993 and 1994) in the region (Jones 1994, 1995). Periodic monitoring of angler effort, catch, and harvest at the USFS cabins prior to Alaska Board of Fisheries meetings helps us identify potential conservation concerns and areas where regulations might be liberalized, evaluate effects of regulations, and provide information for Board of Fisheries meetings.

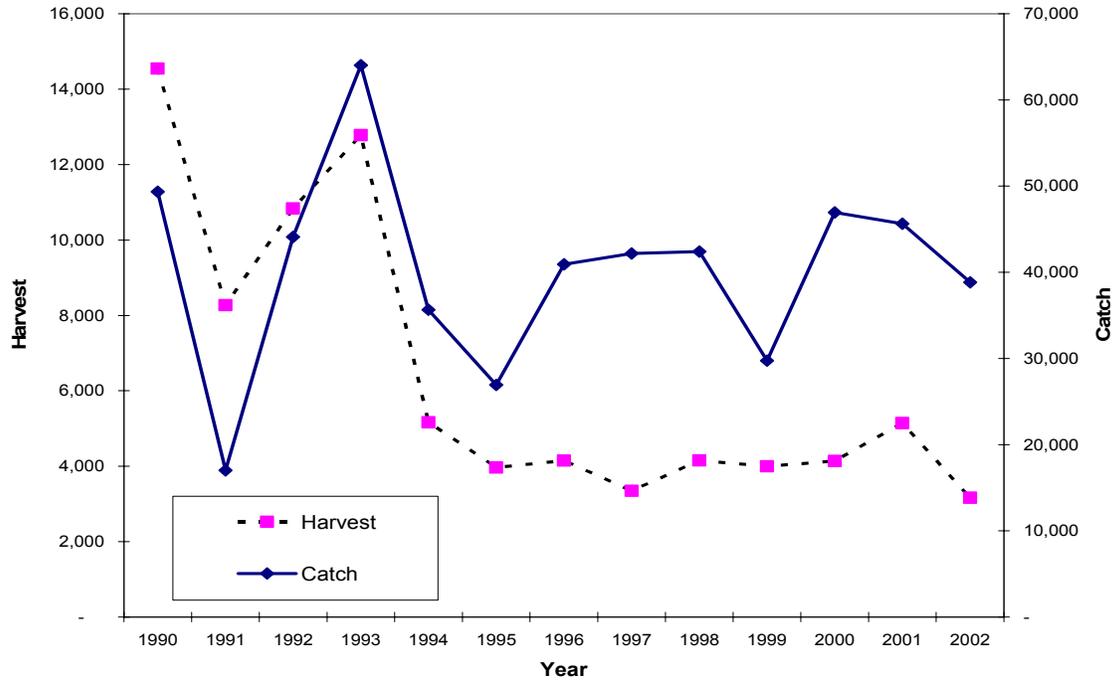


Figure 1.—Freshwater sport harvests and total catches of cutthroat trout in Southeast Alaska from the Statewide Harvest Survey, 1990–2002.

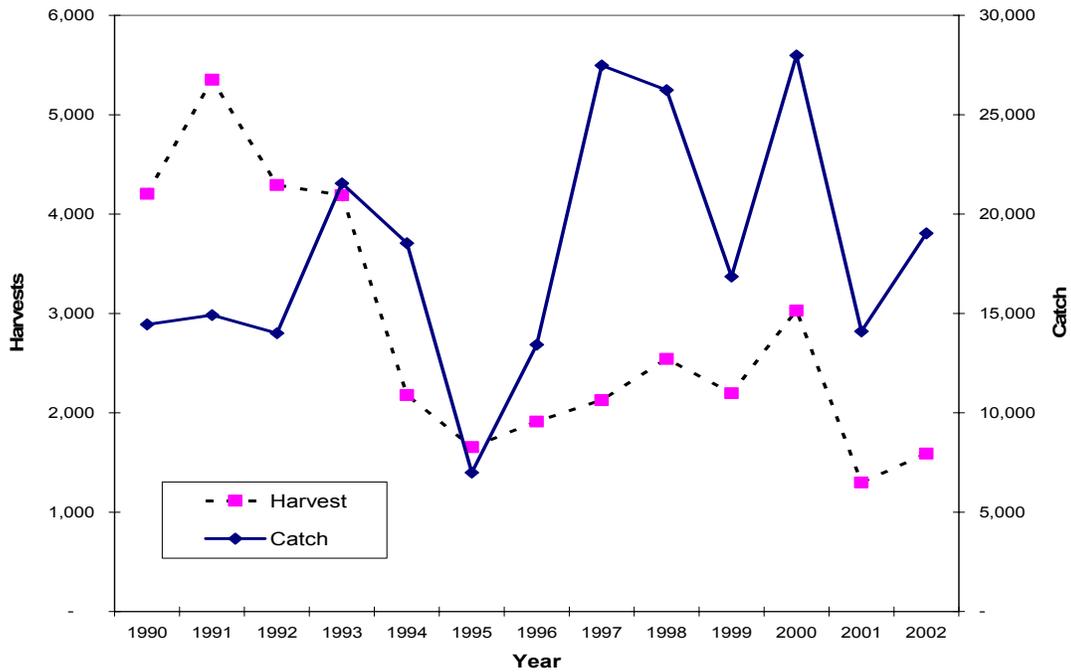


Figure 2.—Freshwater sport harvests and total catches of rainbow trout in Southeast Alaska from the Statewide Harvest Survey, 1990–2002.

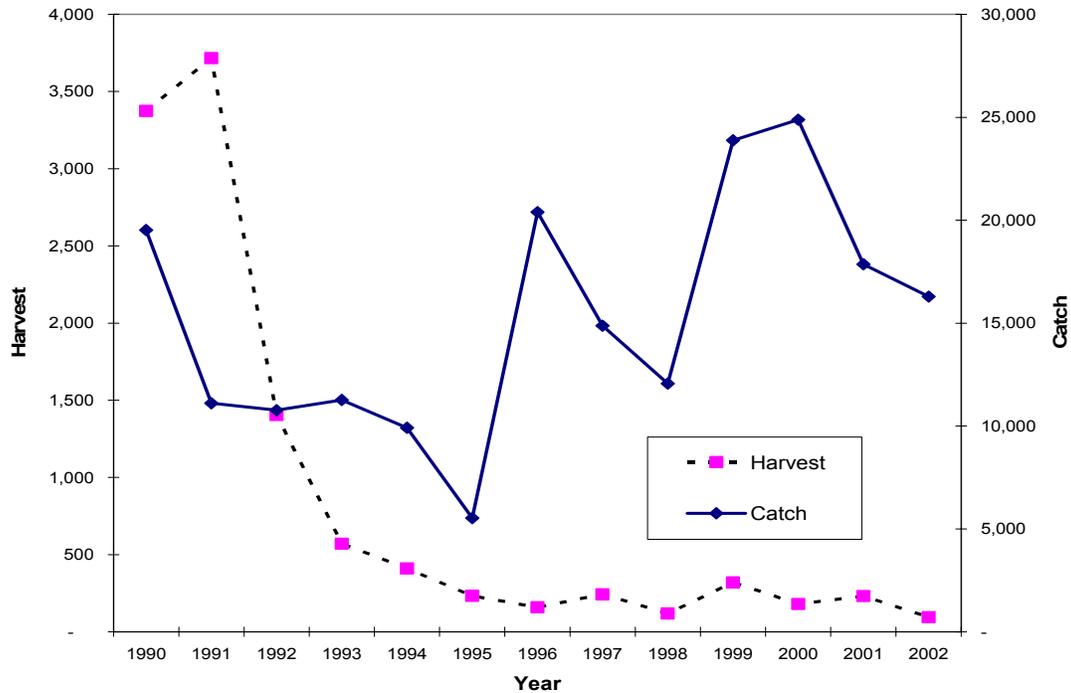


Figure 3.—Freshwater sport harvests and total catches of steelhead in Southeast Alaska from the Statewide Harvest Survey, 1990–2002.

This project queried users of 75 USFS recreational cabins in Southeast Alaska using a mail survey similar to that used in past years (Jones 1993, 1994, 1995, Jones and Kondzela 2001). All 75 cabins were near water bodies that had either cutthroat or rainbow trout, and 34 of the cabins were near streams that also have steelhead runs. The objective of sampling in 2002 was to estimate angler effort (i.e., total days fished and hours fished for trout), catch, and harvest of steelhead and trout (cutthroat and rainbow, combined) in 2002 by system (stream or lake) by parties registered to use these USFS cabins.

The survey also presented the opportunity to query USFS cabin users about the quality of their fishing experience (excellent, good, fair, poor) and their attitudes about fishing regulations for trout in Southeast Alaska. Anglers were asked to list particular systems where current regulations might be modified (i.e., allow bait or catch and release fishing only). Similar questions in previous years helped us to monitor the experiences and preferences of these users.

METHODS

A mail survey was used to estimate angler effort and trout and steelhead catch and harvest by registered users of 75 USFS cabins in 2002 (Appendices A1–B5). There are 136 USFS cabins in Southeast Alaska providing fishing opportunities ranging from none to both marine and freshwater. Sport Fish Area Management Biologists (AMB) throughout Southeast Alaska selected 75 cabins for the survey because the cabins were either near known cutthroat/rainbow systems or AMB desired angler use information. USFS cabins in the Yakutat area were not selected for the survey since the number of anglers who reserve cabins and fish in the Yakutat area is insignificant compared to total angler use in the area. The cabins chosen included 34 cabins on steelhead systems.

Mailing addresses of party “heads” that registered to use USFS cabins in 2002 were obtained from cabin reservation lists, and a questionnaire and cover letter (Appendices B1–B3) were sent to each one. It was not an objective of this study to

estimate catch, effort, or harvest of trout or steelhead by anglers that did not appear on USFS lists. Those anglers might include users with day access (i.e., hiker or float-plane), users with other lodging, or those who gained access through job related activities (i.e., employees of logging companies, ADF&G, or the USFS).

Because users in different seasons tend to have different objectives (e.g., spring steelhead and fall hunting), the survey was stratified by season: spring (January 1 to May 31), summer (June 1 to August 31) and fall (September 1 to December 31). For example, the total and average effort fished for trout in the summer stratum is higher than in the spring or fall (Appendix A2 and A3). Similarly, most reported effort for steelhead occurred in the spring stratum, simply because this is when most steelhead runs occur in Southeast Alaska. Also, providing questionnaires nearer the time of the visit allowed party heads to more accurately recall their visits.

USFS reservation lists were first requested in February 2002 and the scheduled mailing dates were May 31, Sept.30, and Dec. 31, 2002. Mailings were delayed by problems obtaining names and addresses from the USFS. The legal issue of privacy was raised by federal attorneys, and specific procedures were developed to maintain cabin users' privacy while providing us access to the desired data. Under this new procedure, the electronic file of names and addresses were withheld from us and only the completed mailing labels were provided; all names and addresses were coded so we would know only which person responded, but neither their name nor address. We then provided the USFS with the coded numbers of those individuals who had not responded to our mailings and the USFS regenerated mailing labels of these individuals for us.

Mailings to party heads in each stratum (i.e., spring, summer, and fall) were conducted separately. After three weeks, a reminder letter was sent to all non-respondents (Appendix B4). If, after three additional weeks, a response was still not received, a second reminder was sent (Appendix B5).

On many trout lakes and steelhead systems, there is more than one USFS cabin. Because angler catches at a given system are assumed a function

of the system (not the cabin) and time of year, estimated totals of catch by seasonal period and system were made by summing reported catches from anglers that fished a particular system where more than one cabin was located. Thus, non-response from users of one cabin would not lead to a biased total for the lake if responses occurred from another cabin(s). In contrast, angler catches at a given steelhead stream could be a function of the location of the cabin (i.e., better catch rates near salt water vs. higher up in the watershed). Thus, estimated totals for steelhead streams by season were made by summing estimated totals for individual cabins. In this case, non-response from all users of one cabin would have led to a biased total for the stream. The extent of such occurrences was tracked through the data analysis, including summations across seasonal periods.

While our questionnaire was designed to estimate effort by anglers fishing primarily for trout or steelhead, we also requested the total days fished and assumed that effort not spent fishing for trout was spent fishing for other species (Appendix B3) because some cabins provide fishing opportunities for a variety of salmon *Oncorhynchus* species as well as Dolly Varden *Salvelinus malma*. Data collected for trout and steelhead allowed estimation of effort in both angler-days and angler-hours for each species separately, whereas only angler-days were calculated for species other than trout and steelhead.

In each temporal stratum, the total harvest estimated from responding parties H_r at each cabin (for the steelhead systems) or lake (for the trout systems) was the sum over mailings $m = 1..3$:

$$H_r = \sum_{m=1}^3 H_{r,m} \quad (1)$$

Histograms of mean harvest per responding party, total reported harvest, and number of respondents for each mailing were used to decide if response to each mailing was similar. Because response to each mailing during the 2002 study was similar, the total harvest H at the cabin (for the steelhead systems) or lake (for the trout systems) was calculated as:

$$H = \left(\frac{N}{N_r} \right) H_r \quad (2)$$

where N_r = number of responding parties and N = number of parties on the USFS reservation list.

Variance in harvest estimates in each temporal stratum was computed using the formula for multiply-imputed data sets (Little 2002). Let \bar{U} be within-imputation variance, B the between-imputation variance and T the total variance. Let m be the number of imputations:

$$\bar{U} = \frac{1}{m} \sum_{i=1}^m \hat{U}_i \quad (3)$$

$$B = \frac{1}{m-1} \sum_{i=1}^m (\hat{H}_i - \bar{H})^2 \quad (4)$$

$$T = \bar{U} + \left(1 + \frac{1}{m}\right) B \quad (5)$$

Total effort E and catch C at each cabin or lake for trout and steelhead was estimated as above after substituting the appropriate variable for H .

The yearly estimates for each system are the sum of the seasonal estimates. When calculating estimates for steelhead, estimates for cabins on the same system were combined. For all other species, the yearly estimates by cabin were simply the sum of the seasonal estimates.

Occasionally, either catch or effort was not recorded by a respondent in a survey. When this occurred, multiple imputation techniques that use maximum likelihood estimation were employed to fill in missing items. This was not an attempt to estimate missing values, but rather simulate them, and adjust the variance on the uncertainty due to missing values. Since maximum likelihood estimators tend to be asymptotically unbiased, use of the maximum likelihood estimator preserves unbiased properties (Rice 1995). This method of imputation was preferable to a “hot-deck” type procedure where a missing value could be replaced with a sample drawn from existing responses. The small and highly skewed distribution of values in the responses to some questions would make hot-decking unstable. In mean imputation, an unbiased estimator is used but the variance is artificially small (Little 2002).

Use of multiple imputation yields more appropriate variances than mean imputation.

The proportion of party heads reporting either excellent, good, fair, and poor fishing experiences at each USFS cabin or lake was calculated as $p_r = E_r / E$ with E_r being the count of respondents reporting experience r and $E = \sum E_r$.

RESULTS

Of the 1,285 parties that reserved USFS cabins in Southeast Alaska during 2002, 1,006 responded to the survey for an overall response rate of 78% (Table 1). Given this high response rate, the likelihood of a substantial non-response bias was minimal. Approximately 85% (858) of the 1,006 parties that responded to the survey reported they used their cabin reservation during 2002. The average size of responding parties that used their cabin reservation was 3.4 (SE = 0.05) members; the average party size at the time the reservation was made was 3.2 (SE = 0.05). The number of nights the cabins were reserved by parties who used their reservation ranged from 1 to 10 nights and averaged 3.0 (SE = 0.07). Approximately 65% (558) of the 858 respondents using their reservation reported they had fished during their stay (Table 1).

Users from 44 different US states and 11 foreign countries reserved the USFS recreational cabins in Southeast Alaska included in our survey. Approximately 51% (656 of 1,285 total parties) gave an Alaska address when the reservation was made and are assumed to be Alaska residents. Other parties reserving cabins in Southeast Alaska during 2002 were from Japan, Hong Kong, Australia, Germany, Switzerland, and England.

Of all reservations, the Windfall Lake cabin, a 3.5-mile hike off the road system near Juneau, had the most registered parties—a total of 155 parties reserved the cabin in 2002 (Table 2). Peterson Lake, a 4.3-mile hike off the Juneau roadside, was the second highest with 102 registered parties.

Anglers fished an estimated total of 17,170 hours (SE = 1,014) during 4,114 days (SE = 174) at the USFS recreational cabins and harvested 2,913 trout (SE = 392) and 53 steelhead (SE = 16), and 885 Dolly Varden (SE = 138) (Table 2). Anglers

also released another 19,698 trout (SE = 1001) for an overall retention rate of 15% and released 1,496 steelhead (SE = 754) for an overall retention rate of 3.5%. Estimates of effort and catch of trout and steelhead were highly variable throughout Southeast Alaska, with some sites being more popular than others (Table 2). The Peterson and Windfall Lake cabins, which had the highest number of reservations, were not used as heavily for fishing as other cabins and produced only modest catches. The system with the most effort for trout was the Karta River system (three cabins) on Prince of Wales Island, where 2,419 angler-hours were spent to catch a total of 1,950 trout (1,711 released and 240 harvested) and 944 (66 trout harvested, 665 released and 107

steelhead released), and McDonald Lake (one cabin), with 955 angler-hours (53 trout harvested, 711 released and 16 steelhead released). These three systems also accounted for approximately 70% of steelhead caught (number caught and released plus the number harvested).

Parties who fished for trout were asked to rank their fishing experience. We received 494 replies to that question from party-heads (Table 3). The lake rated highest by ten or more anglers was Wilson Lake, with nothing but good to excellent reports on their fishing experience. Other lakes that were highly rated, but by fewer than 10 anglers, included Salmon Bay Lake (four responses), Baranof Lake (two responses), Hugh Smith (two responses) and Humpback Lake (six responses).

Table 1.—Number of parties responding to the cabin survey, number not responding, and numbers fishing for trout, steelhead, and all species, by mailing and survey stratum.

Survey strata	Type of response	Number of parties	Number who used reservation	Parties who fished	Mean size of party	Alaska resident	Other US states	Foreign country
Spring (254 parties)	Responded 1st mailing	114	98	55	2.9	80	32	2
	Responded 2nd mailing	44	32	19	3.1	27	17	0
	Responded 3rd mailing	25	25	17	3.8	16	9	0
	Total responding	183	155	91	3.1	123	58	2
	Undeliverable	20				14	4	2
	No response	51				42	9	
Summer (818 parties)	Responded 1st mailing	401	346	264	3.3	220	181	2
	Responded 2nd mailing	172	146	103	3.1	94	67	11
	Responded 3rd mailing	79	63	50	3.7	53	26	0
	Total responding	652	555	417	3.3	367	274	13
	Undeliverable	38				27	10	1
	No response	128				72	53	3
Fall (213 parties)	Responded 1st mailing	113	97	35	2.9	109	4	0
	Responded 2nd mailing	38	36	9	2.9	38	0	0
	Responded 3rd mailing	20	15	6	3	19	1	0
	Total responding	171	148	50	2.9	166	5	0
	Undeliverable	8				7	1	0
	No response	34				32	2	0
All combined (1,285 parties)	Responded 1st mailing	628	541	354	3.1	409	217	4
	Responded 2nd mailing	254	214	131	3.1	159	84	11
	Responded 3rd mailing	124	103	73	3.5	88	36	0
	Total responding	1006	858	558	3.2	656	337	15
	Undeliverable	66				48	15	3
	No response	213				146	64	3

Table 2.—Number of registered parties, responding parties, and total estimated effort (angler-days and angler-hours) by target species, fish kept and released at USFS recreational cabins in Southeast Alaska in 2002.

System ^a	Number registered	Number responding	Total days fished	Trout (cutthroat and rainbow)				Steelhead		Dolly Varden	
				Days fished	Hours fished	Harvested	Released	Harvested	Released	Harvested	Released
Admiralty Cove	54	45	128	88	259	15	76	0	0	40	323
Anan Bay	20	16	28	28	166	6	52	0	6	3	27
Avoss Lake	2	2									
Bakewell Lake	10	6	127	115	467	110	288	0	0	7	41
Baranof Lake	9	7	11	11	44	12	51	0	0	1	10
Black Bear Lake	13	7	23	23	56	14	114	0	0	2	15
Castle River (2)	34	28	212	70	314	61	351	0	0	9	133
Checats Lake	5	3	47	47	140	78	113	0	0	8	9
Control Lake	30	26	197	103	386	6	402	0	16	22	419
Davidof lake	2	2	14	14	18	1	10	0	0	0	0
DeBoer Lake	5	5	19	19	88	3	0	0	0	0	0
Distin Lake (2)	6	5	5	5	17	2	15	0	0	1	3
Duncan Salt Chuck	12	12	36	31	80	23	297	0	0	5	37
Eagle Lake	4	3	12	13	56	16	17	0	0	1	9
Ella Lake	7	4	27	27	74	23	81	0	0	15	22
Essowah Lake	4	4	24	25	60	3	12	0	0	2	1
Fish Creek	55	44	303	258	1,167	66	665	0	107	51	455
Florence Lake	18	12	54	54	126	77	405	0	0	20	168
Goulding Lake	9	8	46	33	154	16	153	0	0	0	0
Harding River	6	3	5	5	13	2	5	0	5	3	5
Hasselborg Lake (3)	31	26	169	144	640	576	2,009	0	0	31	168
Heckman Lake	3	3	13	13	64	0	11	0	3	0	8
Helm Bay	16	12	20	3	3	0	6	0	0	0	0
Honker Lake	8	6	37	12	17	25	64	0	8	29	47
Hugh Smith Lake	3	3	9	9	38	4	70	0	0	0	0
Humpback Lake	7	6	118	118	810	66	1,746	0	62	2	781
Jim's Lake	11	8	85	85	144	0	293	0	0	1	7
Jordan Lake	31	24	175	160	793	64	536	3	66	8	65
Kadake Creek	9	8	103	87	584	7	133	0	65	0	26
Kah Sheets Creek											
Kah Sheets Lake	33	27	173	76	390	46	170	0	18	37	68
Karta (3)	75	54	830	462	2,419	240	1,711	25	919	115	986

-continued-

Table 2.—Page 2 of 2.

System ^a	Number registered	Number responding	Total days fished	Trout (cutthroat and rainbow)				Steelhead		Dolly Varden	
				Days fished	Hours fished	Harvested	Released	Harvested	Released	Harvested	Released
Kathleen Lake	7	5									
Kegan Creek (2)	34	30	257	123	444	31	391	3	19	6	65
Kook Lake	8	6	23	23	44	15	87	0	0	4	55
Lake Alexander	4	2	1	1	2	0	0	0	0	0	0
Lake Eva	23	21	274	189	422	50	676	1	8	52	1,130
Manzanita Lake (2)	20	16	141	121	700	49	645	2	13	8	105
Martin Lake	2	2	16	15	45	4	311	0	0	0	4
McDonald Lake ^c	21	18	254	175	955	53	711	0	16	28	658
Orchard Lake	6	5	15	10	33	16	119	0	0	0	2
Patching Lake	17	14	83	63	212	28	370	0	0	1	27
Petersburg Lake	3	3	46	46	264	6	154	0	26	0	3
Peterson Lake	102	76	51	42	95	4	62	0	0	1	58
Plotnikof Lake	7	5	51	51	89	89	413	0	0	18	100
Rainbow Lake	3	2	5	5	28	6	23	0	2	2	7
Red Bay Lake	24	16	68	60	259	37	215	9	53	17	67
Reflection Lake	7	6	83	66	304	14	817	0	0	4	26
Salmon Bay Lake	10	8	84	54	198	34	299	0	0	33	218
Salmon Lake	41	31	92	72	211	16	87	0	0	132	310
Sarkar Lake	26	18	84	80	299	58	153	2	0	10	75
Shiple Bay	7	5									
Sitkoh Lake (2)	18	15	101	57	202	35	200	0	22	47	101
Staney Creek	30	23	47	25	81	6	31	0	2	4	13
Suloia Lake	1	0									
Sweetwater Lake	31	23	89	49	144	3	89	0	0	1	17
Turner Lake (2)	50	35	216	168	511	251	901	0	0	34	172
Twin Lakes	10	8	2	2	2	0	0	0	0	0	0
Virginia Lake	24	19	143	137	630	122	797	0	0	15	193
Wilson Lake (2)	18	16	135	135	644	298	1,639	2	0	1	12
Windfall Lake	155	126	72	67	264	8	290	0	0	46	250
Winstanley Lake	7	5	42	25	104	48	105	0	0	2	6
Young Lake (2)	37	28	134	118	398	71	258	5	60	9	27
Totals	1,285	1,006	5,656	4,114	17,170	2,913	19,698	53	1,496	885	7,531

Note: Standard errors for effort, catch, and harvest statistics listed can be found in Appendix A4.

^a If more than one cabin occurs at a given system, the number is listed in parentheses.

Table 3.—Summary of how parties rated cutthroat trout fishing from the cabins they visited during 2002.

System	Ratings by fishing parties			
	Excellent	Good	Fair	Poor
Admiralty Cove		3	6	7
Anan Bay			1	
Avoss Lake				
Bakewell Lake	3			2
Baranof Lake		2		
Black Bear Lake	1	1		1
Castle River	1	7	2	9
Checats Lake	1		1	
Control Lake	1	4	9	1
Davidof Lake				2
DeBoer Lake			1	2
Distin Lake		1		1
Duncan Salt Chuck	1	1		1
Eagle Lake			1	1
Ella Lake		1	1	1
Essowah Lake			2	1
Fish Creek	8	10	7	6
Florence Lake	1	1		2
Goulding Lake	1	3	1	
Harding River				1
Hasselborg Lake	5	3	2	6
Heckman Lake				2
Helm Bay				1
Honker Lake				2
Hugh Smith Lake	1	1		
Humpback Lake	3	2		1
Jim's Lake		1	2	4
Jordan Lake	3	5	2	10
Kadake Creek		1		5
Kah Sheets Lake	2	2	3	1
Karta	5	9	14	8
Kathleen Lake				

System	Ratings by fishing parties			
	Excellent	Good	Fair	Poor
Kegan Creek		5	8	4
Kook Lake				3
Lake Alexander				1
Lake Eva	2	7	1	6
Manzanita Lake	4	3	2	6
Marten Lake		1	1	
McDonald Lake	2	5	4	3
Orchard Lake	1	1		1
Patching Lake		5	1	4
Petersburg Lake	1			1
Peterson Lake		1	9	6
Plotnikof Lake			1	1
Rainbow Lake			1	1
Red Bay Lake	1		3	4
Reflection Lake	1	1	1	2
Salmon Bay Lake	1	3		
Salmon Lake	4	2	3	4
Sarkar Lake	3	3	3	2
Shipley Bay				
Sitkoh Lake	3	3	3	2
Staney Creek	1		4	1
Suloia Lake				
Sweetwater Lake	1	1	5	4
Turner Lake	2	11	3	7
Twin Lakes			1	
Virginia Lake	1	2	4	8
Wilson Lake	4	7		
Windfall Lake	4	6	7	10
Winstanley Lake	1	1	1	1
Young Lake		5	3	5
Total	74	131	124	165
Percent of total	15	27	25	33

The lowest-rated lake was Peterson Lake near Juneau: 15 of 16 replies rated the fishing as poor or fair. For many systems, responses were distributed among all four categories. Region-wide, 41% of responses reported trout fishing as good or excellent fishing, and 59% ranked the trout fishing fair or poor.

There was a wide diversity of comments from responses to our question about evaluating our current trout regulations in specific watersheds (Appendix B2). We received a total of 489 comments from 315 unique respondents; 399 of these comments were related to trout regulations and 96 were general or unclear comments which

were not related to regulations and ranged from the condition of the cabin to their fishing experience (Table 4). Fifty-three (53) responses contained recommended changes for specific river or lake systems and ranged from recommending total catch-and-release to liberalization of size and bag limits (Table 5). Six comments regarding Fish Creek were received, with four of the six recommending catch-and-release (C&R) fishing, whereas four out of five comments received about Karta River encouraged C&R (one comment opposed C&R). During the 1999 cabin survey, seven comments were received recommending more restrictive regulations on the Karta system. Several

Table 4.—Summary of 489 comments (from 315 unique responses during 2002) to whether current trout regulations need to be changed in Southeast Alaska.

Category	Number	Percent of total
KEEP SAME and/or NON-SPECIFIC COMMENTS		
Unclear or general comments	96	20
Leave regulations same	70	14
Base management on biology/research	10	2
MORE CONSERVATIVE REGULATIONS		
Make regulations more conservative	11	2
Support catch-and-release only	99	20
Hook type regulation (single, barbless)	14	3
Support fly-fishing only	32	7
Restrict harvest of nonresidents	2	0
LESS CONSERVATIVE REGULATIONS		
Liberalize regulations	40	8
Oppose catch-and-release only	19	4
Oppose fly-fishing only	33	7
Decrease minimum size limits	7	1
Increase harvest limits	6	1
Allow the use of bait	4	1
Increase opportunity for consumption	43	9
Reevaluate "Trophy Lake" regulations	3	1
Total number of regulatory comments	489	100

comments were also received with regulatory recommendations for systems without USFS recreational cabins: three for systems adjacent to the Juneau road system, two for Prince of Wales Island, and one relating to all Stikine River tributaries.

Approximately 90% of the comments received regarding regulation changes were general and did not pertain to any particular system or specific fishery. The comments were summarized into three categories: (Keep Same and/or Non-Specific Comments, More Conservative, and Less Conservative) and the percentage of responses falling into each category were almost evenly split, 36%, 32% and 32%, respectively (Table 5).

Comments that recommended more restrictive trout regulations totaled 158, of which 99 (63%) recommended catch-and-release for all trout, 32 (20%) recommended fly-fishing-only waters, and 14

(9%) preferred hook or gear restrictions (i.e., single barbless hooks).

There were 155 comments that recommended less restrictive trout regulations. Of these, 43 (28%) suggested increased opportunities for harvest, 40 (26%) were generally in favor of liberalized bag limits, while 33 (21%) were opposed to any fly fishing-only regulation.

Most of the trout fishing effort (71% of the total hours fished) and resulting catch (87%) occurred from June through September (Table 6). Current regulations allow anglers to use bait regionwide from September 15 to November 15 except in trophy trout lakes, "high-use" lakes, and fall-run steelhead systems. Assuming that half of the September and November catch occurred when the use of bait was allowed, about 2,163 trout (13% of total) were caught when bait was allowed in fresh water. We do not know if these fish were caught with bait, but the use of bait is a concern with trout because the mortality rate is high for cutthroat caught and released using bait (Mongillo 1984, Wright 1992).

Because the response rate to this survey was not 100%, histograms of mean harvest per responding party, total reported harvest, and number of respondents for each mailing were used to decide if response to each mailing was similar. If consistent trends between mailings could be established, then adjustments for non-respondents could be made. Harvest rates per responding party for cutthroat trout during the spring sharply increased by mailing while release rates during the summer decreased sharply by mailing (Appendix A2). These trends were contrary to patterns observed in past surveys (Appendix A4). Also, with only three mailouts, there is a high probability ($p = 0.33$) of observing a trend even when the responses are randomly assigned to a mailout. Fewer than 30% of our response categories showed a trend, so they were considered sampling artifacts and ignored when expanding for non-responding parties. Similarly, rates of fish release and angler-hours per responding party for steelhead increased by mailing during the summer. These potential trends were also ignored due to the low number of respondents in this stratum that fished for steelhead (6, 2, and 3, Table 1), and the general absence of steelhead from streams during the summer.

Table 5.—Summary of comments received in 2002 that are specific to a system or area.

System	Number of comments	Specific comment
Admiralty Cove	2	2 C&R or fly fishing only
Castle River	2	Castle River should become C&R or fly fishing only. Consider C&R
Fish Creek	6	3 C&R; 1 C&R Fly-only; Keep regs same; Trout limits should be raised to 5/day
Hasselborg Lake	4	2 Regs are fine; 1 C&R Fly Fish only; Hasselborg should be liberalized for the take of small trout.
Jim's Lake	1	Trophy fish limit is extreme, adopt reasonable limit for small fish
Kadake Creek	1	No problem with low bag limit, but would like no bait, single barbless hook. Steelhead should remain catch and release
Karta	5	3 Fly fishing-only; 1 C&R, 1 Don't make fly fishing or C&R only
Kegan Creek	3	Don't make it fly fishing only; Release fish>18"; limit number of people from lodge
Lake Eva	2	2 Small bag limits, intense pressure from small cruise ships
Manzanita Lake	1	Don't limit Manzanita to flies only
Marten Lake	1	Liberalize bag limits
Patching Lake	1	Evaluate "trophy" fish regulations for this system
Petersburg Lake	2	2 C&R for steelhead
Peterson Lake	1	Peterson lake should be catch and release
Red Bay Lake	1	Trout regulations are ok but steelhead regulations need to be looked at.
Salmon Lake	2	Bag and size limits would help; Current limits on rainbow and cutthroat reasonable
Sarkar Lake	1	Sarkar Lake should not be catch and release or fly fishing only
Turner Lake	3	2 Do not restrict to flies only; Two cutthroat per day bag limit with maybe some sort of slot limit would be reasonable; No change in regulations
Virginia Lake	4	3 Liberalize regulations; No system should have size limit or be C&R only, .
Wilson Lake	1	Bag limits are absolutely needed.
Windfall Lake	1	Should be catch and release at Windfall.
Young Lake	1	The minimum size limit for cutthroat should be lowered from 14" to 12" in Youngs lake

Comments received regarding non-surveyed systems:

- Cowee creek, Montana creek, Peterson Creek, and Windfall system catch and release single barbless hook artificial only April through June.
- The dolly varden limit off the Juneau road system should be increased to five per day especially in Montana Creek.
- Ward lake, Ketchikan creek, and Naha river should be catch and release.
- Catch and release for entire Naha drainage for all fish except salmon.
- All Stikine river tribs. Should be catch and release or flyfishing only.
- Open systems like the Thorne river, Staney, and Ratz to let us keep a few a year and maybe even to use eggs again.
- Only the Juneau road system should have size limit or be catch and release only.

Table 6.—Reported trout effort and catch by month (2002) for all cabins in the survey.

Month	Days fished	Hours fished	Reported catch	
			Number	Percent
January	12	71	41	0.3%
February	6	24	0	0.0%
March	14	20	3	0.0%
April	251	1455	387	2.4%
May	340	1625	658	4.1%
June	427	1625	2173	13.4%
July	541	2106	4098	25.3%
August	727	2709	5419	33.4%
September	381	1334	2337	14.4%
October	143	468	903	5.6%
November	72	188	183	1.1%
December	9	9	1	0.0%
Total	2,922	11,632	16,203	100.0%

(Numbers not expanded for non-response.)

DISCUSSION

The overall response rate of 78% to this survey was nearly identical to the 77% response rate observed during the first Southeast Alaska cabin survey conducted in 1992 (Jones 1993) and the 78% observed in 1999. The overall response rate dropped to 65% in 1993 (Jones 1994), and 39% in 1994 (Jones 1995). Starting in 1994, cabin users were surveyed only once every three years. The return to high response rates in 1999 and 2002 suggest cabin users were receptive to this decision.

The estimated total freshwater catch of trout (cutthroat and rainbow, combined) from the 2002 SWHS for Southeast Alaska totaled 57,855 (no

SE available at time of publishing). Estimated total trout catch from the 2002 USFS cabin survey was 22,611 or 39% of the SWHS estimate. This suggests that these cabins provide access to a substantial proportion of the remote fishing opportunities for trout in the region. During 1999 the estimated total trout catch from the 1999 USFS cabin survey was 58% of the SWHS estimate.

Overall catch rates for trout in 2002 were comparable with prior recreational cabin survey results. During 2002, anglers caught an average of 1.3 trout per targeted angler-hour at recreational cabins. This compares to an average of 1.8, 0.6, 1.3, and 1.8 trout per angler-hour at recreational cabins during 1999, 1994, 1993, and 1992, respectively (Jones and Kondzela 2001; Jones 1995; Jones 1994; Jones 1993). The catch per unit effort for trout in 2002 was highest at Martin, Plotnikof, and Honker lakes, with average catch rates of 7.1, 5.6, and 5.1 trout per angler-hour, respectively.

Comparison of total catches in 1999 with the cabin survey done in 1993, before the regional trout regulations were revised in 1994 (Table 7), showed that both the number of cabin reservations and total catches were higher in 1993. Cabin reservations were approximately 49% lower in 1999 than in 1993; the number of cabin reservations increased slightly during 2002. Trout catches were 28% lower in 1999 than in 1993 and decreased an additional 24% during 2002. While steelhead catches were 38% lower in 1999 than in 1993, the number of steelhead caught during 2002 was twice the number caught during 1999. It is unknown why cabin reservations have declined since 1993; however, high air charter costs may be one factor since the most heavily reserved cabins are accessible by trail from the Juneau road system.

The harvest rate for both trout and steelhead during 2002 was more than double the estimated harvest rate in 1999. During 1999 anglers reported harvesting 7% of their trout catch and 1% of their steelhead catch while in 2002 anglers

had an overall harvest rate of 15% for trout and 3% for steelhead. At the 2000 Alaska Board of Fisheries meeting the Southeast Alaska, minimum size limit for trout was reduced from 12 inches to 11 inches; thus there were less restrictive regulations in place during the 2002 cabin survey.

The minimum size limit for steelhead remained very restrictive, with only 1 fish/day and 2 fish/year over 36 inches; approximately 5% to 7% of the steelhead in Southeast Alaska are estimated to be available for legal harvest (Harding and Brookover 2003)

There was initially a problem getting the names and addresses of the persons who reserved the recreational cabins from the USFS. The legal issue of privacy was raised by federal attorneys and specific procedures (see methods section) were developed to maintain the cabin users' privacy while providing us access to the desired data. This delayed the first scheduled mailing from June 1 to August 27, 2002. The other two scheduled mailing dates were accomplished in the anticipated time frame (scheduled for October 1 and actually mailed October 23; scheduled for January 1, 2003 and actually mailed January 9, 2003). Steps are being taken to prevent this problem from occurring during the next scheduled survey in 2005 but the problem has not yet been resolved. Another problem with the data received from the USFS during 2002 was that reservations for the Kah Sheets Creek cabin were not included, and thus no estimates of angler use, harvest, or catch are available for 2002.

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Table 7.—Comparison between the 1993 (**pre-regulation change**), 1999, and 2002 Cabin Survey estimates of total catch for trout (**cutthroat and rainbow**) and steelhead in systems that were surveyed in all years.

System	Registered parties			Trout catch			Steelhead catch		
	1993	1999	2002	1993	1999	2002	1993	1999	2002
Admiralty Creek	67	55	54	442	157	91	5	5	0
Anan River	15	22	20	107	10	58	10	3	6
Bakewell Lake	17	8	10	545	456	398			
Baranof Lake	16	7	9	500	104	63			
Castle River	29	36	34	802	1,080	413	2	5	0
Distin Lake	29	11	6	154	95	17			
Eagle Lake	5	7	4	9	410	33			
Ella Lake	86	13	7	2,539	449	104			
Essowah Lake	9	4	4	7	11	15			
Fish Creek	74	51	55	474	524	730	474	160	107
Florence Lake	27	18	18	2,187	405	481			
Goulding Lake	9	6	9	76	287	169			
Hasselborg Lake	87	26	31	2,992	1,595	2,584			
Heckman Lake	33	21	3	1,267	434	11	20	20	3
Hugh Smith Lake	11	3	3	8	48	74			
Humpback Lake	33	7	7	2,818	776	1,812			62
Jim's Lake	29	20	11	835	403	293			
Jordan Lake	36	26	31	283	691	600	33	43	69
Kadake Creek	7	7	9	75	32	140	0	52	65
Kah Sheets Lake/Ck	44	43	33	319	228	215	5	39	18
Karta ^a	112	46	75	3,125	1,313	1,951	327	195	944
Kegan Creek	48	25	34	1,047	236	432			
Kook Lake	14	8	8	141	506	102			
Lake Alexander	31	9	4	550	122	0			
Lake Eva	38	20	23	477	1,738	726			9
Manzanita Lake	61	15	20	1,247	2,392	694	0	2	15
McDonald Lake	33	15	21	282	831	764	216	6	16
Orchard Lake	18	6	6	1,274	198	135			
Patching Lake	25	7	17	1,639	76	398			
Petersburg Lake	21	17	3	17	152	160	0	23	26
Red Bay Lake	18	9	24	32	40	252			61
Reflection Lake	20	12	7	121	249	832			
Salmon Bay Lake	29	15	10	646	728	333	38	44	0
Sarkar Lake	51	26	26	175	263	210	0	3	2
Salmon Lake	42	30	41	463	345	102			
Sitkoh Lake	35	22	18	342	820	234	5	80	22
Staney Creek	76	34	30	666	95	37			2
Sweetwater Lake	74	12	31	986	78	92			
Turner Lake	77	40	50	752	848	1152			
Virginia Lake	19	19	24	1,201	1,264	919			
Wilson Lake	42	17	18	4,410	4,913	1937			
Young Lake	68	37	37	721	1,007	329	0	19	
Total	1,615	832	885	36,753	26,409	20,093	1,135 ^a	699 ^a	1,428

^a In the Karta system in 1993, Salmon Lake was not surveyed for steelhead catch.

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**APPENDIX A:
SUPPLEMENTAL SURVEY DATA FOR 2002**

Appendix A1.—Surveyed USFS recreational cabins in Southeast Alaska by ranger district, system, cabin name, presence of steelhead and trout, and 2002 ADF&G trout regulations.

USFS Ranger District	Freshwater system/lake	Cabin name	Steelhead	Trout	Minimum size regulations ^a
Admiralty Island	Admiralty Creek	Admiralty Cove	yes	yes	11"
Admiralty Island	Distin Lake	Distin Shelter		yes	25"
Admiralty Island	Distin Lake	Sportsmen		yes	25"
Admiralty Island	Florence Lake	East Florence		yes	Bait Lake
Admiralty Island	Hasselborg Lake	Big Shaheen		yes	25"
Admiralty Island	Hasselborg Lake	Hasselborg Creek		yes	11"
Admiralty Island	Hasselborg Lake	Little Shaheen		yes	25"
Admiralty Island	Jim's Lake	Jim's Lake		yes	25"
Admiralty Island	Lake Alexander	Lake Alexander		yes	14"
Admiralty Island	Lake Kathleen	Lake Kathleen		yes	11"
Admiralty Island	Young Lake	North Young Lake		yes	14"
Admiralty Island	Young Lake	South Young Lake	yes ^b	yes	14"
Juneau	Peterson Lake	Peterson Lake		yes	14"
Juneau	Turner Lake	East Turner Lake		yes	C&R
Juneau	Turner Lake	West Turner Lake		yes	C&R
Juneau	Windfall Lake	Windfall Lake	yes	yes	14"
Ketchikan	Fish Creek	Fish Creek	yes	yes	11"
Ketchikan	Heckman Lake	Heckman Lake	yes	yes	14"
Ketchikan	Jordan Lake	Jordan Lake	yes	yes	14"
Ketchikan	McDonald Lake	McDonald Lake	yes	yes	14"
Ketchikan	Orchard Lake	Plenty Cutthroat		yes	25"
Ketchikan	Patching Lake	Patching Lake		yes	25"
Ketchikan	Rainbow Lake	Rainbow Lake		yes	11"
Ketchikan	Reflection Lake	Reflection Lake	yes	yes	25"
Misty Fjords	Bakewell Lake	Bakewell		yes	14"
Misty Fjords	Ella Lake	Ella Narrows		yes	25"
Misty Fjords	Ella Lake	Red Alders		yes	25"
Misty Fjords	Hugh Smith Lake	Hugh Smith Lake		yes	11"
Misty Fjords	Humpback Lake	Humpback Lake		yes	25"
Misty Fjords	Manzanita Lake	Beaver Camp	yes	yes	25"
Misty Fjords	Manzanita Lake	Manzanita Lake	yes	yes	25"
Misty Fjords	Upper Checats Lake	Checats		yes	11"
Misty Fjords	Wilson Lake	Wilson Narrows		yes	25"
Misty Fjords	Wilson Lake	Wilson View		yes	25"
Misty Fjords	Winstanley Lake	Winstanley Lake		yes	11"
Petersburg	Castle River	Castle Flats	yes	yes	11"
Petersburg	Castle River	Castle River	yes	yes	11"
Petersburg	DeBoer Lake	DeBoer Lake		yes	11"
Petersburg	Duncan Salt Chuck	Salt Chuck East	yes	yes	11"
Petersburg	Kadake Creek	Kadake Bay	yes	yes	11"
Petersburg	Kah Sheets Creek	Kah Sheets Bay	yes	yes	11"

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USFS Ranger District	Freshwater system/lake	Cabin name	Steelhead	Trout	Trout regulations ^a
Petersburg	Kah Sheets Lake	Kah Sheets Lake	yes	yes	14"
Petersburg	Petersburg Lake	Petersburg Lake	yes	yes	14"
Prince of Wales	Control Lake	Control Lake	yes	yes	11"
Prince of Wales	Honker Lake	Honker Lake		yes	11"
Prince of Wales	Karta	Karta Lake	yes	yes	14"
Prince of Wales	Karta	Karta River	yes	yes	14"
Prince of Wales	Karta	Salmon Lake		yes	14"
Prince of Wales	Red Bay Lake	Red Bay Lake	yes	yes	14"
Prince of Wales	Salmon Bay Lake	Salmon Bay Lake	yes	yes	14"
Prince of Wales	Sarkar Lake	Sarkar Lake	yes	yes	14"
Prince of Wales	Shipley Lake	Shipley Bay	yes	yes	11"
Prince of Wales	Staney Creek	Staney Creek	yes	yes	14"
Prince of Wales	Sweetwater Lake	Sweetwater Lake		yes	11"
Prince of Wales	Black Bear	Black Bear Lake		yes	11"
Prince of Wales	Essowah Lake	Essowah Lake		yes	11"
Prince of Wales	Kegan Creek	Kegan Cove	yes	yes	14"
Prince of Wales	Kegan Creek	Kegan Creek	yes	yes	14"
Sitka	Avoss Lake	Avoss Lake		yes	11"
Sitka	Baranof Lake	Baranof Lake		yes	14"
Sitka	Davidof Lake	Davidof Lake		yes	11"
Sitka	Goulding Lake	Goulding Lake		yes	14"
Sitka	Kook Lake	Kook Lake		yes	14"
Sitka	Lake Eva	Lake Eva	yes	yes	14"
Sitka	Plotnikof Lake	Plotnikof Lake	yes ^b	yes	11"
Sitka	Salmon Lake	Salmon Lake	yes	yes	14"
Sitka	Sitkoh Lake	Sitkoh Lake East	yes	yes	14"
Sitka	Sitkoh Lake	Sitkoh Lake West	yes	yes	14"
Sitka	Suloia Lake	Suloia Lake		yes	11"
Wrangell	Anan River	Anan Bay	yes	yes	11"
Wrangell	Eagle Lake	Eagle Lake		yes	25"
Wrangell	Harding River	Harding River	yes	yes	11"
Wrangell	Martin Lake	Martin Lake		yes	11"
Wrangell	Twin Lakes	Twin Lakes		yes	11"
Wrangell	Virginia Lake	Virginia Lake		yes	14"
Total number of cabins			34	75	

^a 11" = 11 inch minimum size; 14" = 14 inch minimum size; 25" = 25 inch minimum size; C&R = catch and release only; Bait Lake = bait allowed, no minimum size.

^b Plotnikof Lake and Young Lake both have cabins that are located above barrier falls on streams with steelhead. At Plotnikof Lake you can take about a 4-mile boat ride to the outlet stream, and then a 4- to 5-mile trail leads to the stream below the barrier falls where you can fish steelhead, so it is listed as a system with steelhead in this table. At Young Lake, it is possible to hike down the outlet stream and access the creek below the barrier falls to fish steelhead.

Appendix A2.—Standard errors of estimates (in Table 2) by system for effort (days and hours fished), and fish kept and released by species in Southeast Alaska in 2002.

System	Total days	Trout		Dolly Varden		Trout		Steelhead	
		Days	Hours	Kept	Released	Kept	Released	Kept	Released
Admiralty Cove	17	20	61	14	119	7	26		
Anan Bay	19	19	151	3	41	7	87	0	7
Bakewell Lake	19	17	125	3	25	55	83		
Baranof Lake	1	1	24	2	5	11	45		
Black Bear Lake	5	5	16	1	17	14	26		
Castle Flats	53	31	124	7	49	22	94		
Checats Lake	6	6	50	5	4	13	73		
Control Lake	58	21	97	23	279	5	175	0	9
Davidof Lake	2	2	2	0	0	1	10		
De Boer Lake	15	15	76	0	0	2	0		
Distin Lake	1	0	1	1	3	2	5		
Duncan Salt Chuck	8	6	26	3	33	10	189		
Eagle Lake Cabin	5	5	30	1	5	20	19		
Ella Lake	4	6	6	13	15	11	30		
Essowah Lake	12	12	32	2	1	2	9		0
Fish Creek	38	30	164	15	102	18	150	0	35
Florence Lake (East)	9	9	16	8	48	16	186		
Goulding Lake	14	10	69	0	0	7	53		
Hasselborg Creek	13	15	99	1	8	3	392		
Heckman Lake	7	7	49	0	5	0	10	0	3
Helm Bay	3	3	3	0	0	0	5		
Honker Lake	13	11	1	28	44	24	38	0	8
Hugh Smith Lake	1	1	13	0	0	4	10		
Humpback Lake	30	29	226	1	718	54	915	0	56
Jim's Lake	27	27	31	1	4	0	73		
Jordan Lake	34	33	171	4	24	40	189	2	29
Kadake Bay	13	14	136	0	27	5	44	0	23
Kah Sheets Lake	37	28	177	17	39	25	70	0	15

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System	Total days	Trout		Dolly Varden		Trout		Steelhead	
		Days	Hours	Kept	Released	Kept	Released	Kept	Released
Karta (3)	92	84	546	38	240	121	443	14	748
Kegan Creek (2)	53	38	153	5	39	15	120	1	7
Kook Lake	8	8	7	2	31	11	19		
Lake Eva	51	51	91	13	388	13	158	0	1
Manzanita Lake (2)	31	35	345	3	54	14	209	1	8
Marten Lake	8	8	23	0	3	4	291		
McDonald Lake	33	33	303	9	226	23	342	0	6
Patching Lake	18	18	59	1	17	16	90		
Petersburg Lake	5	5	134	0	3	6	113	0	12
Peterson Lake	7	9	20	2	33	4	42		
Plotnikof Lake	33	33	68	19	184	30	263		
Rainbow Lake	1	1	20	0	3	2	6	0	1
Red Bay Lake	15	15	96	8	37	15	161	6	35
Reflection Lake	19	19	101	3	28	8	584		
Salmon Bay Lake	22	23	101	37	146	17	87		
Salmon Lake Cabin									
Sitka	13	15	63	101	118	7	24		
Sarkar Lake	16	17	88	4	46	17	39	1	0
Sitkoh Lake (2)	26	22	72	23	42	16	67	0	4
Staney Creek	18	9	31	4	6	7	64	0	1
Sweetwater Lake	27	10	46	1	6	3	32		
Turner Lake (2)	45	41	175	27	105	244	358	0	0
Virginia Lake	24	34	216	5	50	29	228		
Wilson Lake (2)	29	29	238	1	16	248	758	1	0
Windfall Lake	10	10	60	39	122	3	116		
Winstanley Lake	12	9	25	3	5	22	33		
Young Lake (2)	29	31	132	7	19	39	62	4	54

Note: If multiple cabins occur at a given system, the number is listed in parentheses.

**APPENDIX B:
QUESTIONNAIRE AND REMINDER LETTERS**

Alaska Department of Fish and Game
RECREATIONAL CABIN SURVEY

Dear Angler;

Thank you for participating in this important survey. You are receiving this survey because you reserved the cabin at (MERGE NAME OF CABIN HERE), beginning on (MERGE START DATE HERE). It is important to return the survey to us whether you fished or not; if you did fish the data you provide will help us maintain healthy fish stocks. Thank you for your time and if you have any questions regarding this survey you may call me at (907) 465-4311 or email me roger_harding@fishgame.state.ak.us. Again, thank you for your time and I look forward to receiving your survey.

Sincerely,

Roger Harding
Fisheries Biologist
Division of Sport Fish

Lake or Stream system

Date of reservation

GENERAL QUESTIONS

1. Did you stay at the U.S. Forest Service cabin you reserved at the location and date above?

Yes No

If you answered YES, please go to question 2. If you answered NO, did someone else use your reservation?

Yes No

If your cabin reservation was not used, this is all the information we need. Please return this form in the enclosed envelope. Thanks for your help.

2. How many people stayed at the cabin? _____

3. Did anyone in your party fish during your stay?

Yes No I don't know.

If you answered YES, please go to Question 4. If you answered NO or I don't know, this is all the information we need. Please return this form in the enclosed envelope. Thanks for your help.

4. If you fished for cutthroat or rainbow trout during your stay at the cabin, please rate the overall quality of your fishing experience:

Poor Fair Good Excellent

5. Some people have suggested that bag or size limits for trout in particular systems in Southeast Alaska should be liberalized. In contrast, others think that particular systems should be considered as catch and release or flyfishing only. If you share either of these concerns, please list the particular systems and provide clarifying comments for us to consider.

7. Please complete the information on the back of this form and return the form in the enclosed envelope. Thanks for your assistance.

<SEQUEN>

Appendix B3.–Recreational cabin user Questionnaire, Side B.

Please provide information for **each person** that fished during your reservation at the cabin. If you do not recall the exact numbers, please estimate. In totaling the number of days fished, consider any part of a day as a whole day.

Angler #	Total Days Fished	Effort for trout or steelhead		Cutthroat/Rainbow Trout		Steelhead		Dolly Varden	
		Days	Hours	Kept	Released	Kept	Released	Kept	Released
1	5	3	17	0	12	0	2	0	0
2	4	0	0	2	6	1	0	0	12

Comments:

* Numbers in the shaded boxes provide an example for a party of two anglers. Angler #1 fished during 5 days but only 3 of those days fishing were spent targeting trout or steelhead, with the remaining two days directed at catching either Dolly Varden or salmon. Angler #1 fished 17 hours primarily for trout or steelhead and caught a total of 12 cutthroat trout and released all 12, caught and released 2 steelhead, didn't catch any Dolly Varden.

Angler #2 fished for 4 days but did not target trout or steelhead so had 0 days and 0 hours spent for trout or steelhead. Even though angler #2 wasn't targeting trout, he caught 8 cutthroat trout and kept 2 and caught and kept a steelhead and released 12 Dolly Varden.

Appendix B4.—First reminder letter to survey non-respondents.

Dear Angler:

Some time has passed since I first requested information about your fishing activities in (name of system). I still have not received your reply.

Even if you did not fish during your stay, your response to the general questions on the first page of the survey questionnaire is important. If you haven't completed the questionnaire, please answer the questions that pertain to your trip and return the questionnaire in the enclosed postage-paid envelope.

Each questionnaire is significant to the outcome of our study. We are very interested in your fishing and experiences in this system, and the information you provide will enhance our understanding of the existing sport fishery.

If you have already returned the questionnaire, please disregard this letter and accept my sincere thanks.

Sincerely,

Roger Harding
Fisheries Biologist
Alaska Dept. of Fish and Game
P.O. Box 240020
Douglas, Alaska 99824
Phone (907) 465-4270

Dear Angler:

I have not yet received a completed cabin survey questionnaire regarding your use of <name of system>. Even if you did not use the cabin or fish during your stay, your response to the general questions on the first page of the survey questionnaire is important. Please complete the questionnaire and return it in the postage-paid envelope that is provided for your use. Your response will be considered confidential.

Please do not underestimate the importance of your fishing activities. The information you provide is valuable to our study, and may have significant impact on the future management of our sport fish resources.

If you have already returned your questionnaire, please disregard this letter and accept my sincere thanks.

Sincerely,

Roger Harding
Fisheries Biologist
Alaska Dept. of Fish and Game
P.O. Box 240020
Douglas, Alaska 99824
Phone (907) 465-4270