

**Summary of Public Education, Outreach and
Information Activities Conducted by Southcentral
Region's Information and Education Program,
July 1, 1998-June 30, 1999**

by

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and

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December 2000



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Weights and measures (metric)		General		Mathematics, statistics, fisheries	
centimeter	cm	All commonly accepted abbreviations.	e.g., Mr., Mrs., a.m., p.m., etc.	alternate hypothesis	H_A
deciliter	dL	All commonly accepted professional titles.	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
gram	g	and	&	catch per unit effort	CPUE
hectare	ha	at	@	coefficient of variation	CV
kilogram	kg	Compass directions:		common test statistics	F, t, χ^2 , etc.
kilometer	km	east	E	confidence interval	C.I.
liter	L	north	N	correlation coefficient	R (multiple)
meter	m	south	S	correlation coefficient	r (simple)
metric ton	mt	west	W	covariance	cov
milliliter	ml	Copyright	©	degree (angular or temperature)	°
millimeter	mm	Corporate suffixes:		degrees of freedom	df
Weights and measures (English)		Company	Co.	divided by	÷ or / (in equations)
cubic feet per second	ft ³ /s	Corporation	Corp.	equals	=
foot	ft	Incorporated	Inc.	expected value	E
gallon	gal	Limited	Ltd.	fork length	FL
inch	in	et alii (and other people)	et al.	greater than	>
mile	mi	et cetera (and so forth)	etc.	greater than or equal to	≥
ounce	oz	exempli gratia (for example)	e.g.,	harvest per unit effort	HPUE
pound	lb	id est (that is)	i.e.,	less than	<
quart	qt	latitude or longitude	lat. or long.	less than or equal to	≤
yard	yd	monetary symbols (U.S.)	\$, ¢	logarithm (natural)	ln
Spell out acre and ton.		months (tables and figures): first three letters	Jan,...,Dec	logarithm (base 10)	log
Time and temperature		number (before a number)	# (e.g., #10)	logarithm (specify base)	log ₂ , etc.
day	d	pounds (after a number)	# (e.g., 10#)	mideye-to-fork	MEF
degrees Celsius	°C	registered trademark	®	minute (angular)	'
degrees Fahrenheit	°F	trademark	™	multiplied by	x
hour (spell out for 24-hour clock)	h	United States (adjective)	U.S.	not significant	NS
minute	min	United States of America (noun)	USA	null hypothesis	H_0
second	s	U.S. state and District of Columbia abbreviations	use two-letter abbreviations (e.g., AK, DC)	percent	%
Spell out year, month, and week.				probability	P
Physics and chemistry				probability of a type I error (rejection of the null hypothesis when true)	α
all atomic symbols				probability of a type II error (acceptance of the null hypothesis when false)	β
alternating current	AC			second (angular)	"
ampere	A			standard deviation	SD
calorie	cal			standard error	SE
direct current	DC			standard length	SL
hertz	Hz			total length	TL
horsepower	hp			variance	Var
hydrogen ion activity	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

FISHERY MANAGEMENT REPORT NO. 00-14

**SUMMARY OF PUBLIC EDUCATION, OUTREACH AND
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REGION'S INFORMATION AND EDUCATION PROGRAM,
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INTRODUCTION

BACKGROUND INFORMATION

The public education, outreach and information activities for the Southcentral Region of Sport Fish Division now fall under the umbrella of a newly established regional “Information and Education” program. Aquatic education in Southcentral Alaska began in 1989 with an experimental classroom salmon egg incubation program supported by the former Fisheries Rehabilitation Enhancement Division (FRED) of the Alaska Department of Fish and Game (ADF&G). This program was based out of the Big Lake Hatchery and initially concentrated on Matanuska-Susitna Valley schools, but by school year 1990/1991 supported projects in five Matanuska-Susitna Valley and five Anchorage area schools.

During this same time frame, FRED Division had plans to initiate a project to conduct research on stream rehabilitation techniques and structures the division was planning to construct in Anchorage area streams, with emphasis on Campbell Creek. The program was to be funded in part by the Alaska Science and Technology Foundation (ASTF), which was interested in the development of low cost stream restoration techniques that the general public and other agencies could afford and utilize along streams around Alaska. The projects would be small in design and materials would be inexpensive and easy to install.

A union of the fledgling aquatic education program and the new stream restoration effort occurred in July 1991 when the new project biologist realized there was an opportunity to combine these efforts to create an educational outreach program, which was named the Salmon Trout Restoration Education and Aquatic Management (STREAM) Program.

The main goal of the program was, as it remains today, to increase the public’s awareness of Alaska’s healthy wild salmon stocks through education and the offering of hands-on opportunities. In this way it is hoped that they will become personally involved and become better stewards of this valuable resource. In 1996, the STREAM Program was transferred to the Division of Sport Fish (DSF). At that time, angler education and outreach became the main goal of the STREAM Program.

The STREAM Program’s activities have been modeled after other existing agency aquatic education and outreach programs such as the Oregon Department of Fish and Wildlife’s (ODF&W) Salmon Trout Enhancement Program (STEP) and the federal Canada Department of Fisheries and Ocean’s (DFO) Salmonid Enhancement Program (SEP) in British Columbia. Components of these programs have been incorporated into STREAM Program activities; however, these programs use activities to concentrate on enhancement of depleted salmon stocks while the ADF&G program focuses on maintaining existing healthy stocks around the state. Salmonid enhancement is not an integral part of the STREAM Program.

The STREAM Program continues to expand its efforts and in 1999 moved into surrounding areas of Southcentral Alaska and Interior Alaska including Kodiak Island and Fairbanks. It continues to support projects in the Anchorage area, Kenai Peninsula, Matanuska-Susitna Valley and the Copper River area. The program also continues to support Cooperative Extension Service (CES) classroom salmon egg incubation projects statewide on a technical basis since this program was established in the early 1990s.

The success and popularity of the STREAM program is due to the high visibility of the program. Staff are in the schools and field with the students and volunteers that have the desire to learn more about Alaska's salmon resources. This not only allows the department to inform the public, but also enables the public to become more aware of the department's concerns and to understand why and how the resource is managed.

In 1997, the region identified the need to dedicate personnel and resources to responding to the increasing demands of the public for information about sport fishing and Alaska's fish resources. This was accomplished by hiring staff specifically to respond to public inquiries and to develop informational materials to address these needs. In addition, the region committed to constructing a fishery information center in FY99 that was more accessible and conducive to distributing information and services to the public. Finally, the region committed to take an active role in the development and maintenance of regional sport fish web pages to meet the growing need for information distribution to the public. These expanded activities were joined with the STREAM Program to form the region's current "Information and Education Program."

FY 1999 ACTIVITIES (JULY 1, 1998–JUNE 30, 1999)

The STREAM Program accomplishes its goals in many ways, but primarily incorporates and develops hands-on activities to increase the public's awareness of our salmon resources. The program focuses on education and outreach as its primary tools to accomplish its goals; however, with the ever increasing demand for educational activities and materials, the time consuming small scale stream restoration outreach activities have decreased significantly since the early days of the program.

Activities conducted by the STREAM Program are summarized in two categories, education and outreach. Education activities include: classroom salmon egg incubation, classroom visits and presentations, field educational experiences, teacher workshops/in-services, adopt-a-stream program and educational materials. The outreach component includes: stream restoration/habitat activities; shows and special events; fulfilling requests for information, materials and equipment; and continuing and enhancing media coverage. These activities are summarized below for fiscal year 1999.

EDUCATION

Classroom Salmon Egg Incubation

As one of the original aquatic education tools, classroom salmon egg incubation activities have long been the backbone of the educational effort in Southcentral Alaska. Classroom salmon egg incubation came to Alaska using technology developed by the DFO-SEP in British Columbia. Classroom salmon egg incubation projects are used as a part of SEP's Salmonids in the Classroom program. Since its origins at the Big Lake Hatchery, these projects now exist in 60 ADF&G STREAM Program-sponsored schools in Southcentral Alaska and statewide in approximately 60 Cooperative Extension Service (CES)-sponsored schools. These projects continue to be for educational purposes only and not for enhancement.

Most schools are using 29-gallon aquariums with standard undergravel filter plates, powerheads and aquarium gravel. The tanks are insulated and darkened using 1-inch high density Styrofoam and the recirculated water is refrigerated using specially designed refrigeration units. If schools

are on a city-treated water system they must dechlorinate their water before introduction into their tank. These systems incubate up to 250 eggs. Coho salmon *Oncorhynchus kisutch* is the species used to obtain salmon eggs for Southcentral Alaska school projects because its egg development stages from spawning to fry emergence coincide best with a school year. Arctic char *Salvelinus alpinus* eggs were used for a pilot project in the Fairbanks area this year.

Anchorage area incubator equipment is funded cooperatively between CES and the STREAM Program. The CES receives approximately \$5,000 from EXXON U.S.A. to purchase refrigeration units for Anchorage schools. CES orders these units from Canada and turns them over to the STREAM Program for distribution. The STREAM Program supplies the other equipment and accessories required. Schools in other districts (Matanuska-Susitna, Kenai Peninsula and Copper River) are responsible for acquiring their own equipment or can receive assistance from the STREAM Program if they purchase a refrigeration unit themselves.

Several schools utilize a technique developed by the STREAM Program where the school cannot afford to purchase a refrigeration unit. This technique uses a small one-gallon aquarium inside of a refrigerator, which chills the water, to incubate approximately 50 salmon eggs through the fry stage.

The classroom salmon egg incubation program enables students and teachers, as well as parents, to witness and monitor the early development of a salmon from egg to fry, probably the least understood stages of the salmon's life cycle, but a period we as humans have great control over. Classes are responsible for monitoring tank temperature on a daily basis and performing water exchanges once a week. Classroom salmon egg incubation projects focus on increasing student awareness of salmonid life histories, biology, anatomy and habitat requirements of these fish.

Educational materials have been developed and continue to be developed to complement this program. The STREAM Program modified the primary version of Salmonids in the Classroom with permission from DFO. The curriculum package has been well received and the intermediate version of this same series is still in the process of being modified. A Guide to Classroom Salmon Egg Incubation in Alaska was published this year and is also being distributed to teachers. A modified life-cycle poster originally produced by the Washington Department of Fish and Wildlife (WDF&W) and salmon egg vial displays constructed by high school students are also made available to educators.

In 1999, 42 Anchorage area schools conducted classroom salmon egg incubation projects (Table 1); an increase of 1 from the previous year. There were 13 participating schools in the Matanuska-Susitna Valley area, an increase of 2 schools from the previous year; 3 schools on the Kenai Peninsula, an increase of 1 school from the previous year; 1 school in the Copper River basin, no change from the previous year; and 1 school in the Fairbanks area, where there had been no previous project (Table 1).

In late September and early October, classes from Anchorage and the Matanuska-Susitna Valley came to Campbell Creek and Spring Creek, respectively, to participate in a coho salmon egg take. The children witnessed the beginning of life of a salmon and left with up to 250 fertilized eggs, which they then observed and monitored throughout the winter. Schools on the Kenai Peninsula received their coho salmon eggs at the eyed stage from the Fort Richardson Hatchery in Anchorage because there is no local egg-take site currently available. Those eggs were

Table 1.-Schools participating in salmon egg incubation projects, by area, 1999.

<u>ANCHORAGE</u>	<u>MATANUSKA-SUSITNA</u>
Alpenglow Elementary	Academy Charter
Anchorage Montessori	Butte Elementary
Aurora Elementary	Colony MS
Baxter Elementary	Finger Lake Elementary
Bear Valley Elementary	Goose Bay Elementary
Birchwood ABC	Midnight Sun
Central JHS	Palmer MS
Chester Valley Elementary	Sherrod Elementary
Chinook Elementary	Snowshoe Elementary
Chugiak HS	Swanson Elementary
College Gate Elementary	Tanaina Elementary
Denali Elementary	Wasilla HS
Dimond HS	Wasilla MS
Eagle River Elementary	
Fairview Elementary	Total 13
Girdwood	
Gladys-Wood Elementary	
Goldenview MS	<u>KENAI PENINSULA</u>
Homestead Elementary	Nikiski Elementary
Huffman Elementary	Sears Elementary
Inlet View Elementary	Tustumena Elementary
Kasuun Elementary	
Kincaid Elementary	Total 3
King Career Center	
Klatt Elementary	
Lake Otis Elementary	<u>COPPER RIVER</u>
Mirror Lake MS	Kenny Lake Elementary
Mt. View Elementary	
Nunaka Valley Elementary	Total 1
Ocean View Elementary	
O'Malley Elementary	
Orion Elementary	<u>FAIRBANKS</u>
Rabbit Creek Elementary	Weller Elementary
Rogers Park Elementary	
St. Elizabeth Ann Seton	Total 1
Scenic Park Elementary	
Service HS	
Susitna Elementary	
Taku Elementary	
Tudor Elementary	
Turnagain Elementary	
Williwaw Elementary	
Total 42	

shipped at no charge via commercial air carrier. Copper River basin schools currently receive fertilized coho salmon eggs from an egg take at the privately operated Solomon Gulch Hatchery in Valdez. The Fairbanks project received eyed Arctic char eggs from the Fort Richardson Hatchery to pilot a project in that area. The classroom eggs eventually hatched and turned into fry at which point the class received salmon food supplied by the Fort Richardson Hatchery. The coho fry were released in mid-May in landlocked lakes: Taku-Campbell Lake in Anchorage, Matanuska Lake in Palmer, several lakes in the Kenai/Soldotna area, and Strelna Lake near Kenny Lake. The Arctic char fry in Fairbanks were released into Chena Lake.

Egg-take and release summary information for each area can be found in Table 2. Anchorage area events continue to account for the largest amount of participation during egg takes (1,462 students, 54 classes) and releases (1,200 students) due to the large number of schools participating. Egg takes in Anchorage were held over a 2-day period for classes to attend. An egg take was conducted on a third day (Saturday) for instructors who could not attend with their class. The fry release in the Anchorage area, and this year in Kodiak, were the only organized releases in the region where classes came out on a single day to release their fry. In 1999 the program saw an increase in egg-take participation in the Matanuska-Susitna Valley (335 students, 17 classes in 1999 as compared to 200 students the previous year).

Egg shipments to the three Kenai Peninsula schools were successful and approximately 120 students released fry at Chugach Estates and Centennial lakes. Longmere Lake is also a designated fry release location but has yet to be used as a release site by any of the Kenai Peninsula schools.

Kenny Lake School in the Copper River basin successfully incubated, hatched, and then released fry in Strelna Lake.

Weller Elementary School in Fairbanks successfully incubated their Arctic char eggs to the fry stage and 25 students released their fry into Chena Lake.

Lakes that are approved for school fry releases are landlocked so that school-raised fry cannot mix with wild salmon in anadromous systems. Teachers may also elect to sacrifice their fry if they do not wish to release them. Classes may, by state policy, also release their fry into the system from which the eggs originated; however, projects sponsored by the STREAM Program are not offered this option in Southcentral Alaska.

Classroom Visits and Presentations

Making presentations to groups of people is one of the more conventional means of getting information out to interested groups. The STREAM Program, however, prefers to be very visual and hands-on when staff visit classrooms or adult groups to present topics relating to salmon. The STREAM Program attempts to make presentations interactive, where the audience must participate in some fashion. This may mean asking questions to the audience during the presentation or by giving them a hands-on activity to do while a presentation is occurring. Hands-on activities include puzzles, rubber stamps, fish dissections, and button making. Presentations focus on many salmon-related topics including salmon life histories, biology, habitat requirements, anatomy (dissections), coded wire tag demonstrations, watersheds, stream ecology or fishing.

Table 2.-School egg-take and release information, 1999.

Date	Location	Stream/Lake	Number Students
Anchorage			
Egg Take			
09/24/98	Anchorage	Campbell Creek	697 (26 classes)
09/25/98	Anchorage	Campbell Creek	640 (28 classes)
09/26/98	Anchorage	Campbell Creek	125
Total		3	1,462 (54 classes)
Released			
05/14/99	Anchorage	Taku-Campbell Lake	1,200
Total		1	1,200
Matanuska-Susitna Valley			
Egg Take			
10/01/98	Palmer	Spring Creek	156 (8 classes)
10/02/98	Palmer	Spring Creek	179 (9 classes)
Total		2	335 (17 classes)
Released			
05/99	Palmer	Matanuska Lake	200
Total		1	200
Kenai Peninsula			
Egg Take			
11/10/98	Anchorage	Ft. Rich Hatchery	N/A
Total		1	0
Released			
05/99	Soldotna	Chugach Estates L.	30
05/99	Kasilof	Centennial Lake	90
05/99	Soldotna	Longmere Lake	0
Total		2	120
Copper River			
Egg Take			
10/98	Valdez	Solomon Gulch	28
Total		1	28
Released			
5/99	Kenny Lake	Strelna Lake	22
Total		1	22
Fairbanks			
Egg Take			
01/99	Anchorage	Ft. Rich Hatch.	N/A
Total		1	0
Released			
5/99	Weller Elementary	Chena Lake	25
Total		1	25

Table 3 contains summary information on classroom visits and presentations for 1999. During this year, 73 presentations (up from 45 in 1998) were made to groups ranging in size from 13 to 200. Various presentations were made to 3,424 individuals from kindergarten through adult age levels. Almost 75% of the presentations were conducted for elementary age children, 10% to junior high students, 12% to high school students, and 3% to adult groups.

In 1999 the STREAM Program continued the salmon dissection program, where teachers could pick up salmon from a designated location to conduct dissections in the classroom or they could have STREAM Program staff bring fish and lead the dissection. North Alaska Fisheries, a local fish processor in Anchorage, donated 300 pink salmon to support the program again this year. With those fish, along with coho salmon from the Elmendorf Hatchery and school egg takes, the STREAM program distributed 820 fish, which were utilized by 2,974 students for classroom dissections this year. In many instances, coded wire tag demonstrations were conducted, where tags were removed from the heads of specimens. The majority of school presentations this year were requests for salmon dissections and life cycle/habitat requirements. The STREAM Program also piloted a project to introduce students to fly tying in the classroom. ADF&G staff and volunteers from the Alaska Fly Fishers visited 8 classrooms and worked with 186 students to tie the four life-history patterns (egg, eyed egg, alevin, fry) they would observe in classroom incubators. The project was very successful and will be expanded in FY00.

Field Educational Experiences

The STREAM Program occasionally receives requests from groups to lead outdoor presentations at a local stream or river. These talks range from assisting a Girl Scout Troop earn a nature badge to more detailed discussions with technical groups to consult on stream problems. Most of the field trips are based on a watershed perspective so that participants can become more aware of the “big picture,” that fish and aquatic organisms require more than just water to survive and how man’s impacts on a watershed can impact aquatic life. Hands-on activities usually accompany these presentations and typically several sites may be visited along a stream to discuss changes that have occurred in the system. Hands-on activities may include: sampling aquatic macroinvertebrates using nets, trapping juvenile salmonids or testing water quality with test kits. All these activities are incorporated into the presentation so that the “big picture” becomes clear.

In 1999, 17 streamside presentations were made to 477 attendees (Table 4). Most of the requests were made by an organization or group that wanted to educate its members about a specific stream or watershed topic. The STREAM Program also trained two high school students to run hatchery tours at the Fort Richardson and Elmendorf Hatcheries. This project was expanded following a pilot project in FY98. These training sessions were also included in this category as field experiences.

Teacher Workshops/In-Services

Teachers are becoming more interested in educating their students about salmon and streams. If trained properly, these teachers can assist the department in getting the word out in their classrooms. This becomes even more important when demand for STREAM Program staff class visitations exceeds available time. It is for this reason that the proper training of instructors is a high priority of the STREAM Program. Time is well spent when you can assemble several teachers together at a single time rather than on a one-on-one basis. Teacher workshops are

Table 3.-Classroom visits and presentations conducted by the ADF&G STREAM Program, 1999.

Date	School	# Students	Age Group	Subject
09/22/98	Mt. View Elementary	58	Elementary	Salmon life cycle (LC), habitat, stamps
09/30/98	Finger Lake Elem.	21	Elementary	Egg-take and ice fishing talk
10/06/98	Kenai R. Ed. Coalition	15	Adult	STREAM Program activities
10/14/98	Northstar Elementary	77	Elementary	Salmon dissections/CWT (3 classes)
10/14/98	Gladys Wood Elem.	80	Elementary	Salmon dissections/CWT (3 classes)
10/15/98	Williwaw Elementary	20	Elementary	Salmon life cycle, requirements, stamps
10/27/98	Girdwood School	28	Elementary	Salmon LC, incubation, water quality
11/12/98	Inlet View Elementary	21	Elementary	Salmon dissections/CWT
11/12/98	Birchwood ABC	82	Junior High	Salmon dissections/CWT (4 classes)
11/13/98	Inlet View Elementary	25	Elementary	Fly tying – 4 egg patterns – 6 volunteers
11/16/98	Palmer Middle ^a	128	Junior High	Lake slides, watersheds, habitat (4 classes)
11/17/98	Palmer Middle ^a	128	Junior High	Lake slides, watersheds, habitat (4 classes)
11/17/98	Dillingham Elementary	75	Elementary	Salmon LC, requirements, stamps etc. (3 classes)
11/18/98	Koliganek HS	18	High School	Watersheds, Nushagak River
11/18/98	Koliganek Elem./MS	67	Elem/Jr. High	Hands-on activities, careers
11/19/98	Dillingham High	90	High School	Watersheds, genetics, scales, incubation project
11/24/98	Goose Bay Elem. ^a	28	Elementary	Lake slides, watersheds, habitat, activities
11/24/98	Klatt Elementary	40	Elementary	Salmon dissections/CWT (2 classes)
12/02/98	Scenic Park Elementary	28	Elementary	Salmon dissection
12/03/98	Huffman Elementary	55	Elementary	Salmon dissections (2 classes)
01/02/99	4H/AK Fly Fishers ^a	15	All	Stocked lakes, habitat, fly tying, fishing
01/11/99	Northstar Elem. (KOD)	45	Elementary	LC stamp, fish prints, fish art (2 classes)
01/11/99	Northstar Elementary	56	Elementary	Careers, STREAM slide show (2 classes)
01/12/99	Main Elem. (KOD)	50	Elementary	LC stamp, habitat, tagging, buttons (2 classes)
01/12/99	Main Elementary	45	Elementary	LC stamp, habitat, buttons (2 classes)
01/12/99	Northstar Elementary	30	Elementary	LC, habitat, stamps, tagging
01/12/99	Northstar Elementary	82	Elementary	Watershed, sampling, creek visit (3 classes)
01/12/99	Hatchery Mgr. meeting	30	Adult	STREAM Program slide presentation
01/13/99	Petersen Elem. (KOD)	100	Elementary	LC, habitat, stamps, tagging (4 classes)
01/13/99	East Elem. (KOD)	75	Elementary	LC, habitat, stamps, tagging (3 classes)
01/22/99	Mt. View Elementary	23	Elementary	Fly tying prep talk
01/22/99	Anchorage Montessori	26	Elementary	Salmon dissection
01/25/99	Mt. View Elementary	23	Elementary	Fly tying – 4 egg patterns – 6 volunteers
01/27/99	Snowshoe Elementary	60	Elementary	Salmon dissections/CWT (2 classes)
01/29/99	Turnagain Elementary	67	Elementary	Salmon dissection (2 classes)
02/01/99	Denali Elementary	21	Elementary	Fly tying – 4 egg patterns – 9 volunteers
02/05/99	Bear Valley Elementary	25	Elementary	Fly tying – 4 egg patterns – 6 volunteers
02/08/99	Fairview Elementary	13	Elementary	Fly tying – 4 egg patterns – 7 volunteers
02/09/99	Anch. Pioneers Home	28	Adult	STREAM Program slide presentation

-continued-

Table 3.-Page 2 of 2.

02/12/99	Aurora Elementary	26	Elementary	Fly tying – 4 egg patterns – 9 volunteers
02/17/99	Houston High School ^a	60	Elementary	Career day presentations
02/25/99	Snowshoe Elem. ^a	50	Elementary	Lake slides, watersheds, habitat, activities
02/25/99	Williwaw Elementary	22	Elementary	Alevin, incubator talk
02/26/99	Glacier View Elem.	20	Elementary	Lake slides, watersheds, habitat, activities
03/01/99	Copper Center School	35	Elementary	Kyla Becker artwork award presentation
03/01/99	Kenny Lake School	18	Elementary	Fly tying – 4 egg patterns – 3 volunteers
03/05/99	Weller Elem. (FBKS)	25	Elementary	LC, incubation project
03/08/99	Girdwood School	125	Elementary	LC, stamps, web page
03/09/99	King Career Center	45	High School	ADF&G organization/careers (2 classes)
03/10/99	East High School	15	High School	Salmon dissection
03/11/99	Bear Valley Elementary	100	Elementary	Salmon dissections/CWT (4 classes)
03/22/99	Fairview Elementary	80	Elementary	Salmon dissections/CWT (4 classes)
03/22/99	Orion Elementary	18	Elementary	Salmon dissections/CWT
03/23/99	Denali Elementary	25	Elementary	Salmon dissections/CWT
03/23/99	Taku Elementary	21	Elementary	Salmon dissections/CWT
03/24/99	Ravenwood Elementary	20	Elementary	LC, stamps
03/25/99	KCC/AK Railroad	21	High School	Watersheds, salmon ID, railroad crossings
03/29/99	King Career Center	35	High School	Fly tying – 4 egg patterns – 2 volunteers
03/30/99	King Career Center	35	High School	GASS training–watershed, LC, habitat (2 classes)
03/31/99	King Career Center	35	High School	GASS training–dissection, CWT, scales (2 class.)
04/01/99	King Career Center	35	High School	GASS training–show briefing, sign-up (2 classes)
04/19/99	Sears Elementary (KP)	23	Elementary	LC, stamps
04/20/99	Tustumena Elem. (KP)	80	Elementary	LC, stamps (4 classes)
04/20/99	Nikiski Elem. (KP)	200	Elementary	LC, stamps (7 classes)
04/21/99	Northern Lights ABC	23	Elementary	LC, habitat. stamps
04/22/99	Oceanview Elementary	27	Elementary	Salmon dissections/CWT
04/22/99	ADF&G staff kids	30	Elem/Jr. High	Fly tying – wooly buggers, egg sucking leach
04/26/99	Ravenwood Elementary	70	Elementary	Watersheds, LC, habitat (3 classes)
04/28/99	Susitna Valley HS ^a	60	High School	Career day presentations
05/11/99	Denali Elementary	25	Elementary	Salmon dissections/CWT
05/24/99	Kodiak High School	21	High School	Kodiak Coho Carnival training
06/12/99	Girl Scouts of America	80	Elementary	Fly tying – wooly buggers, egg sucking leach
06/22/99	AK Public Lands IC	21	Adult	LC, habitat, fishing opportunities - visitors
Total		3,424		

^a Presentations made by STREAM Program Technician – Palmer office.

Table 4.-Field educational experiences conducted by the ADF&G STREAM Program, 1999.

Date	School/Organization	# Students	Age Group	Location	Subject
07/15/98	Trailside Discovery	20	Elementary	Campbell Cr.	Stream ecology/sampling
07/22/98	BLM /Mid-summer series	9	All	Campbell Cr.	Stream ecology/sampling
09/12/98	Boy Scouts of America ^a	12	Elem./Jr.	Fish Lake	Lake ecology, fish, scales
09/30/98	Palmer Middle School	60	Jr. High	Little Su R.	Watershed walk/sampling
10/08/98	Rogers Park Elementary	90	Elementary	Chester Creek	AAS sampling/monitoring
		(4 classes)			
10/09/98	AK Pacific University	20	College	Campbell Cr.	Stream ecology/sampling
04/13/99	Mirror Lake Middle	4	Jr. High	Ft. Rich Hatch	Hatchery tour
04/13/99	Colony Middle School	50	Jr. High	Ft. Rich Hatch	Hatchery tour
04/13/99	King Career Center (KCC)	2	High School	Ft. Rich Hatch	Hatchery tour guide training
04/14/99	King Career Center	2	High School	Elm. Hatchery	Hatchery tour guide training
04/16/99	KCC/AK Railroad	30	High School	ANC/SEW	Interpretive stream crossings
04/17/99	KCC/AK Railroad	30	High School	ANC/TAL	Interpretive stream crossings
05/03/99	Fairview Elementary	80	Elementary	Sitka St. Park	Chester Cr. activities
		(4 classes)			
05/04/99	CES Watershed Stewards	5	Adult	Campbell Cr.	Stream ecology/sampling
05/04/99	Walden Pond Charter	22	High School	Campbell Cr.	Stream ecology/sampling
06/02/99	Sherrod Elementary ^a	28	Elementary	Sherrod Pond	Macroinvertebrate ID
06/07/99	Kenai Peninsula YRC	13	High School	Quartz Creek	Watershed walk/sampling
Total	17	477			

^a Presentations made by STREAM Program Technician – Palmer office.

considered formal or informal. Informal training sessions are not required by a school district where in-services are formal training sessions required by a district. Other sessions may involve the training of volunteers to assist at a STREAM Program event.

During 1999, 17 training sessions were held and attended by 214 people (Table 5). Workshops included incubation project training, adopt-a-stream workshops, and watershed education. College credit courses were offered for the first time in FY99 to school instructors on the Kenai Peninsula and the Matanuska-Susitna Valley. The STREAM program also expanded the program to Kodiak Island by offering a classroom salmon egg incubation workshop in Kodiak.

Adopt-A-Stream Program

Adopt-A-Stream (AAS) programs are becoming increasingly popular across the country. These programs enable the general public to care for or monitor a favorite section of stream. In Southcentral Alaska these AAS projects are also used as an educational tool. The STREAM Program works primarily with schools and non-profit groups to establish AAS projects. The program has grown from a single project in 1996 to 12 projects in 1999 (Table 6) with approximately 630 stream watchers. Participating adult groups are most interested in cleaning up

sections of stream. Six of these groups are currently working in the Kenai River drainage and Ship Creek, and in the past year have collected several thousand pounds of debris from these two systems.

Schools may participate in AAS projects for educational purposes. Too many similar monitoring projects have promised teachers that their data would be stored in databases or used to fix potential problems in their streams, and historically these promises have never been kept. Many educators lost faith in these programs as a result and the STREAM Program is now attempting to restore some of that lost faith in the name of education.

Teachers are informed up front that the purpose of the program is educational and not scientific in nature. It is suggested that schools participate at whatever level they feel comfortable with and that they are collecting water quality data to maintain their own database. This database can then be used to “communicate” findings with other schools in the same watershed or even different areas.

Water quality sampling equipment has been made available to teachers in Anchorage, the Matanuska Valley and the Kenai Peninsula. Instructors who have completed a training course may check the kits out for use at their AAS site. These kits are currently available for check out at the King Career Center (KCC) in Anchorage, the ADF&G area office in Palmer and the Kenai River Center in Soldotna.

Table 5.-Teacher workshops and in-services conducted by the ADF&G STREAM Program, 1999.

Date	District	Teachers	Location	Subject
09/02/98	Mat-Su	30	Palmer/Wasilla	Little Susitna River watershed tour/sampling
09/17/98	Statewide	30	Fairbanks	CES incubation program tech. support/training
09/26/98	Anchorage	6	Anchorage	Chester Creek AAS sampling/monitoring
10/03/98	Kenai Pen.	9	Soldotna	Slikok Creek AAS sampling/monitoring
11/09/98	Mat-Su	15	Palmer	Credit Course part 1 – incubation projects
12/07/98	Mat-Su	15	Palmer	Credit Course part 2 – aquatic ed. activities ^a
01/11/99	Kodiak	10	Kodiak	Incubation Program/support materials
03/05/99	Fairbanks	9	Fairbanks	Curriculum review/training
03/23/99	Anchorage	11	Fairview Elementary	Water quality/bug sampling equipment training
04/19/99	Kenai Pen.	12	Sears Elementary	Credit Course part 1 – incubation projects
04/27/99	Anchorage	12	ARLISS Library	STREAM Program resources – C3WP teachers
05/01/99	Anchorage	12	Chester Creek	Chester Cr. watershed tour/sampling – C3WP
05/07/99	Kenai Pen.	11	Soldotna Elementary	Credit Course part 2 – watershed presentation
05/08/99	Kenai Pen.	11	Quartz Creek	Credit Course part 3 – watershed tour/sampling
05/10/99	Kenai Pen.	11	Soldotna MS	Credit Course part 4 – aquatic web page
05/15/99	Mat-Su	7	Little Susitna River	Credit Course part 3 – watershed tour/sampling
06/09/99	Mat-Su	3	Campbell Creek	Credit Course part 3 – makeup course
Total		214		

^a Presentation made by STREAM Program Technician – Palmer office.

Table 6.-Adopt-A-Stream programs sponsored by the ADF&G STREAM Program, 1999.

Date	Stream	School/Organization	Number Participants	Activity	Sign
10/13/98	Kenai River	Alaska Fly Fishers	90	cleanup	yes
1999	Chester Cr.	Rogers Park Elementary	30	clean/monitor	no
1999	Chester Cr.	Fairview Elementary	30	clean/monitor	no
1999	Meadow Cr.	Eagle River Elementary	30	clean/monitor	no
1999	Soldotna Cr.	Soldotna Elementary	100	clean/monitor	no
1999	Swanson R.	Nikiski Elementary	30	clean/monitor	no
1999	Moose River	Sterling Elementary	50	clean/monitor	yes
1999	Slikok Cr.	Kalifornsky Beach Elementary	50	clean/monitor	no
1999	Crooked Cr.	Tustumena Elementary	50	clean/monitor	no
1999	Campbell Cr.	Gladys-Wood Elementary	30	clean/monitor	no
05/09/99	Ship Creek	Aerospace 3 rd EMS Ground Equip. and Flight	100	cleanup	yes
05/14/99	Ship Creek	3WG Maintenance Operations Center	40	cleanup	yes
Total		12	630		

Schools may participate at varying levels in activities which may include: stream cleanup (litter), stream and habitat surveys, macroinvertebrate (aquatic insect) surveys, water quality testing using chemical test kits, or involvement in an actual small-scale stream restoration project if they determine one may be necessary.

STREAM Program staff continue to work with state Department of Transportation (DOT) personnel to implement an AAS sign recognition program at highway road crossings. Two military groups, the Alaska Fly Fishers and Sterling Elementary School are the only groups recognized by signage at this time. The U.S. Air Force allowed signs to be posted on base through their own channels, while the Fly Fishers and Sterling Elementary were granted permission from the Soldotna DOT. No other signs have been posted at this time pending final approval from the Anchorage DOT office. Budget constraints may also become a variable as to whether this project will proceed.

Educational Material Development

As the STREAM Program's educational effort continues to expand so does the need for new materials to meet the demands of the growing program. The STREAM Program continues to design new effective hands-on ways to increase the public's awareness of Alaska's salmon resources.

Demand for curriculum from teachers continues to grow. Gaps in the STREAM Program's educational programs have included learning materials in the areas of genetics and fish hatcheries in Alaska. Cooperative arrangements with ODF&W have resulted in receiving permission to "Alaskanize" an existing Oregon curriculum entitled *The Fish Hatchery Next Door*. This curriculum is ideal for educators who are not involved in other STREAM Program activities and whose only fisheries studies of the year may be to visit a local hatchery. This curriculum addresses all the basic salmon information currently available in the *Salmonids in the Classroom* packages but adds the hatchery connection. All too often the general public believes that hatcheries are the solution to all of our fisheries problems. Once completed, the Alaskan version will focus on the Fort Richardson and Elmendorf hatcheries in Anchorage and will discuss the enhancement role of these hatcheries. These two hatcheries currently conduct facility tours attended by several thousand school children. The teachers and students typically have little or no background information regarding the hatchery and its goals. This curriculum will eventually supply all the information necessary to increase visitors' awareness of the role of hatcheries in Southcentral Alaska. It was not possible to make much progress in "Alaskanizing" this curriculum during FY99 due to time constraints and other priorities of ADF&G staff.

The STREAM Program had also been invited to comment and add Alaskan perspective information to a curriculum currently being developed by ODF&W called *Why Wild*. This curriculum focuses on genetics and the importance of maintaining wild stocks. Initial comments on the curriculum have been passed on to ODF&W, and the ADF&G Genetics program also reviewed these materials to insure that an Alaskan perspective is indeed addressed correctly. This curriculum, which will target middle school and older aged students, will make an excellent addition to the classroom salmon egg incubation program in that it will address issues that commonly come up in regard to department policies on stocking school-reared fry. In FY99 the Oregon Department of Fish and Wildlife put this project on hold due to budget constraints. It is hoped that the project will continue during the upcoming year.

The STREAM Program continues to work on modifications to the intermediate version of the Canadian *Salmonids in the Classroom*. The primary version has been completed and is currently in use in conjunction with most incubation projects across the state. The intermediate version will allow extension of the elementary level information to upper elementary grades.

Other STREAM Program educational developments from 1999 (Table 7) include:

1. Streamkeepers Field Guide manuals continue to be widely used by teachers and ADF&G staff as a valuable stream reference tool. Eighteen copies were distributed in FY99.
2. Water quality testing kits were supplied to the Matanuska-Susitna and Kodiak school districts.
3. Classroom sets of Pacific Salmon, Alaska's Story were distributed to schools participating in salmon egg incubation projects. A total of 2,482 copies were distributed.
4. "First Catch" cards were again printed, laminated and distributed to children catching their first fish during STREAM Program ice fishing events and the Great Alaska Sportsman's Show. A total of 212 cards were distributed.

5. Salmon life cycle posters (190) and egg development vial displays (5) continue to be distributed to instructors.
6. Educational web pages continue to be created and updated for use by instructors.
7. Four portable fly tying tables were constructed by high school students for field tying.
8. Three informational kiosks were constructed by high school students and are scheduled to be installed in FY00.

Table 7.-Educational materials developed by the ADF&G STREAM Program, 1999.

Educational Aid	Comments
Salmon dissection program	820 salmon distributed and utilized by 2,974 school children
Adopt-A-Stream Streamkeepers manual	18 copies to participating AAS schools and agency people
Hach water quality kits and kick nets	5 kit sets to the Mat-Su and Kodiak school district programs
Pacific Salmon Alaska's Story	2,482 copies distributed to participating schools
Salmon life cycle poster	190 copies distributed FY99
Salmon Odyssey interactive CD	5 copies distributed FY99
Kenai River Watershed interactive CD	129 copies distributed FY99
Salmon egg/vial displays	5 distributed FY99
CES incubator set-up video	3 distributed FY99
First Catch Card program	212 cards distributed to kids catching their first fish
Macroinvertebrate ID sheets	Revised for school stream studies
Color juvenile salmonid ID sheets	Revised for teacher and school streamside workshops
"Fish Hatchery Next Door" curriculum	Continued work to modify hatchery curriculum
Radio tag demonstration	Research/management tool demo for salmon "carnivals"
Elmendorf Hatchery HS student tour program	Two KCC students led tours at Ft. Rich and Elm. Hatcheries
Alaska Fly Fishers fly fishing mentorship program	Teaching kids to fly fish through AFF/4H mentorship
Rotary Club spin casting program	Rotary members teach kids how to spin cast
Portable fly tying tables	Constructed by high school students for tying events
Campbell Creek Informational kiosk funding	Received completed AFF kiosks from King Career Center
Canada/DFO Community Involvement Directory	Listing of Alaska schools in BC/Yukon directory
Ice fishing events home page developed	Web page with information and dates of events
Ken-a-Vision scopes	Purchased 2 for fly tying and macroinvertebrate monitor display

OUTREACH

Stream Restoration/Habitat Activities

Integration of small-scale stream restoration projects with education has been an effective tool in increasing the public's awareness of salmon and especially the protection of their habitat. These projects are often very time consuming to plan, coordinate and implement, so unfortunately, the STREAM Program decreased its efforts in this area, but will make opportunities available to the public should they become available at a reasonable time and cost.

During 1999 two projects had been planned for installation. The first was a tree revetment bank stabilization project along Ship Creek below Reeve Boulevard in Anchorage; and the second was the installation of informational kiosks along Campbell Creek in Anchorage. It was not possible to complete these projects during FY99 due to problems with permitting in the Municipality of Anchorage system. These projects will be completed in FY00.

During FY99 a small picket weir was again erected in Chester Creek to count returning adult coho salmon in the system (Table 8). The weir was installed and manned by staff from Alaska Greenhouse. Although the counts were low (6 fish) the project continues to rekindle interest in reviving this once productive salmon stream.

Table 8.-Stream restoration/habitat activities (outreach) conducted by the ADF&G STREAM Program, 1999.

Date	Location	No. Volunteers	Man Hours	Coop Agency/Org	Project
07/25/98	Chester Creek	2	15	Alaska Greenhouse	adult coho weir – 6 fish counted
Total		2	15		

Shows and Special Events

Large events or shows (Table 9) are an excellent way to reach out to segments of the population that may not have access to or a specific interest in fish or fishing. The activities at events in which the STREAM Program participates are always very hands-on oriented and easy to understand by the general public.

The STREAM ice fishing program continues to be a popular pre-Christmas break, hands-on activity for instructors with an interest in expanding on their classroom salmon projects. This project serves as an introduction to winter fishing opportunities around Southcentral Alaska with ice fishing events held in Anchorage (Jewel Lake) and the Matanuska-Susitna Valley (Finger Lake). In Anchorage 1,091 students caught 1,043 fish, almost exclusively catchable chinook *O. tshawytscha* salmon. Of the Anchorage student anglers, 131 (12%) caught their first fish ever. In the Matanuska-Susitna Valley 582 student anglers caught approximately 200 fish and 14 (2%) of these caught their first fish. These students caught catchable chinook, rainbow trout *O. mykiss*, Arctic char and Arctic grayling *Thymallus arcticus* from Finger Lake.

Table 9.-Shows and special events attended or sponsored by the ADF&G STREAM Program, 1999.

Date	Event	Location	Attendance	# Volunteers	Purpose	Comments
08/04/98	Klondike Scout Jamboree	Whitehorse, Yukon	150	12 scouts	Salmonid awareness	hands-on salmonid activities to increase awareness
12/10/98	Mat-Su Borough School District (MSBSD) ice fishing	Finger Lake – Palmer	288	4 (+parents)	winter fishing opps.	Approx. 200 fish, 14 first catch cards – both days
12/11/98	MSBSD ice fishing	Finger Lake – Palmer	294	4 (+parents)	winter fishing opps.	
12/14/98	Anchorage School District (ASD) ice fishing	Jewell Lake	177	8 (+parents)	winter fishing opps	159 fish caught, 27 first catch cards
12/15/98	ASD ice fishing	Jewell Lake	285	8 (+parents)	winter fishing opps	325 fish caught, 25 first catch cards
12/16/98	ASD ice fishing	Jewell Lake	303	8 (+parents)	winter fishing opps	289 fish caught, 49 first catch cards
12/17/98	ASD ice fishing	Jewell Lake	326	8 (+parents)	winter fishing opps	270 fish caught, 30 first catch cards
02/13/99	Fur Rendezvous Parade	Anchorage	2,000	90	salmonid and fishing awareness	90 children, parents and teachers construct float–1 st place.
02/18/99	Sport Fish Regulations Art Contest	4 areas	C. Inlet–360 P. Wm. Sound - 48 Kodiak–177 BBay–39	0	student artwork for regulation covers	Jessica Summer (CI), Kyla Becker (PWS), Beau Jackson (KOD), Rick Wysocki (BB)
03/10/99	Kasuun Science Night	Kasuun Elementary	300	3	Salmonid awareness	hands-on salmonid activities to increase awareness
04/08/99	Great Alaska Sportsman Show	Anchorage	2,500	30 (375 man hours)	ASA Kids Fishing Pond	KCC Volunteers–booths, pond, stocking, fish cleaning, 67 1 st catch card
04/24/99	KidsDay 99	Anchorage	750	8 (47 man hours)	Salmonid awareness	hands-on activities
04/28/99	ASA pond Scholarship presentation	King Career Center	150	0	Scholarship awards	Travis Taylor and Kim Stout –\$500.00 each

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Table 9.-Page 2 of 2.

05/06/99	ASA pond Scholarship presentation	Service High School	50	0	Scholarship award	Kim Stout – home school \$500.00 award presentation
05/25/99	Kodiak Coho Carnival	Kodiak	1,200	28 (200 man hours)	salmonid/ fishing awareness	Fry release and hands-on activity booths
05/28/99	Anchorage smolt release/Coho Carnival	Campbell Cr	1,600	41 (200 man hours)	salmonid/ fishing awareness	Fry release and hands-on activity booths
06/12/99	Ft. Richardson Kids Fishing Derby/Rotary Club event	Otter Lake	75	0	kid’s spin casting event	stocked 1,000 rainbow trout in confinement net
Total	17		11,072	252 (822 man hours)		

Otter Lake was selected as this year's site for the Rotary Club fishing event which is designed to encourage children to take advantage of the Rotary's "loaner pole" program. The site was also used by Fort Richardson Army Base to hold their annual kids' fishing day. STREAM Program staff set a 500 ft X 12 ft X 7/16 in mesh net to confine fish in a small area of the lake. Approximately 1,000 catchable rainbow trout were then stocked in the confined area for young anglers to practice fishing, and for new young anglers to learn how to fish. Catch rates were much improved over the previous year's event. Several hundred children attended the two events.

1999 saw the expansion of the “Coho Carnival” program. The event that was held in Anchorage this year had an attendance of 1,600 students. School children received coho salmon smolt to release as part of ADF&G’s urban stocking project. After releasing their fish, classes then visited hands-on booths where they learned more about various salmon, stream and fishing topics. The booths included salmon life cycle rubber stamps, macroinvertebrate touch tank, live fish display, salmon button making, salmon habitat “wheel of misfortune,” coded wire tag fish display and detector, radio tagging, salmon anatomy puzzles, handouts (including fishing regulations), fly tying and fly casting stations, and spin casting station. The grand finale of the event was the release of the remaining 70,000 coho smolt into Campbell Creek by the Fort Richardson Hatchery. After hearing about the success of the Anchorage project, Kodiak, educators teamed up to have a local carnival. The event differed slightly in that the fish to be released were coho fry from both the school projects and the Pillar Creek Hatchery as part of their coho stocking project in Potato Patch Lake. The hands-on booths were the same as for the Anchorage event, and Safeway donated 1,100 hotdogs, as well as buns, cans of pop and bags of potato chips to feed the attendees. A total of 1,200 students and parents attended this inaugural event, which was over 10% of the population of Kodiak. The hands-on booths were also added to this year’s Anchorage classroom incubation fry release and were very well received.

Other major events this past year included the kid's fishing pond with activity booths at the Great Alaska Sportsman's Show (GASS) (2,500 children), KidsDay '99 (750 children) and the Fur Rendezvous Parade, where a local elementary school built a salmon-related float for this annual parade. The parade was attended by approximately 2,000 people and the 90 students from Chinook Elementary won first prize in the non-commercial youth division.

This year's regulation cover art contest was held in four regions: Cook Inlet, Prince William Sound/Copper River, Kodiak/Westward and Bristol Bay. A total 624 entries were received from all areas and fishing poles and other small prizes were awarded to the first place winners.

Many volunteers make these large events possible. In 1999, 252 volunteers spent at least 822 man hours ensuring that events were a success. Just over 11,000 people attended this year's events.

Media Coverage

The media (Table 10) continues to play an important role in getting the STREAM Program word out to the public. Anchorage area media are very interested in the various projects that the STREAM Program conducts and although most stories are considered general interest, it still assists the department in getting the word out. The positive nature of these stories can only help a department whose media image, unfortunately, is oftentimes negative. The STREAM Program also continues to work with a local television network to produce several child-oriented segments relating to salmon. Media in other areas of the state and even the country are becoming interested in STREAM Program activities as it expands into new areas of the Southcentral region. In 1999 STREAM Program events or topics were covered 31 times. The STREAM Program will continue to take advantage of the media when there is interest in helping the department get more information out to the public. Examples of news articles that appeared in 1999 are presented in Appendix A.

Requests for Information or Materials

Table 11 documents requests for information or materials during 1999. In 1999, the STREAM Program responded to 452 requests. These requests range from phone information to loans of scientific or educational materials.

INFORMATION SERVICES

In 1997, the region identified the need to dedicate personnel and resources to responding to the increasing demands of the public for information about sport fishing and Alaska's fish resources. Prior to this, meeting the informational needs of the public, both in person and through the mail and phone inquiries, was delegated as more or less an "other duties as assigned" function of the administrative and management staff. In the fall of 1997 Southcentral Region of Sport Fish Division embarked on the mission of developing an Information and Education Program designed to complement the existing aquatic education (STREAM) program and address the need for staff dedicated to responding to the public need for information about the region's sport fisheries.

The first step to implementing the Information and Education program was hiring staff whose specific duties were to respond to public inquiries about sport fishing and to develop informational materials to address these needs. In February of 1998 an Information Officer was hired to take on this task. During her first season, all of the regional informational brochures and

Table 10.-Media coverage of the ADF&G STREAM Program, 1999.

Date	Media Organization	Event	Coverage Type
07/20/98	KSKA radio	Campbell Creek fishery	radio
07/23/98	FOX 4 KTBY	Ship Creek coho fishing	children's TV program
08/31/98	PBS/Hawaii	Russian River footage	children's science show
09/24/98	KTUU Channel 2	Campbell Creek egg take	television news
09/24/98	FOX 4 KTBY	Campbell Creek egg take	children's TV program
09/24/98	KTVA Channel 11	Campbell Creek egg take	television news
09/24/98	KIMO Channel 13	Campbell Creek egg take	television news
09/24/98	Anchorage Daily News	Campbell Creek egg take	newspaper article
10/07/98	Valley Frontiersman	Spring Creek egg take	newspaper article
10/22/98	FOX 4 KTBY	Williwaw incubator/eggs	children's TV program
12/03/98	PBS/Hawaii	Oceanquest/Kids Science live guest	children's science show
12/08/98	KFQD radio	ASD ice fishing	radio
12/11/98	KTUU Channel 2	Mat-Su ice fishing	Assignment Alaska-news
12/14/98	KTVA Channel 11	ASD ice fishing	television news
12/19/98	Anchorage Daily News	KCC/ASD ice fishing	newspaper article
01/01/99	KTVA Channel 11	Christmas tree recycling	television news
01/04/99	Anchorage Daily News	Mt. View "thank you" editorial	editorial
01/06/99	KTUU Channel 2	Christmas tree hauling w/KCC	television news
02/05/99	KTUU Channel 2	Bear Valley fly tying	Assignment Alaska-news
03/02/99	Hunting & Fishing News	ASA jamboree and pond info.	newspaper article
05/13/99	KFQD radio	Classroom fry release	radio
05/14/99	KTUU Channel 2	Classroom fry release	television news
05/14/99	KTVA Channel 11	Classroom fry release	television news
05/20/99	FOX 4 KTBY	Classroom fry release	children's TV program
05/21/99	Anchorage Daily News	Anchorage Coho Carnival	news release
05/26/99	Kodiak Daily Mirror	Kodiak Coho Carnival	newspaper article
05/26/99	Kodiak Daily Mirror	Kodiak art contest winners	newspaper article
05/28/99	AK Public Radio APRN	Anchorage Coho Carnival	radio interview
06/03/99	Anchorage Daily News	Chester Creek AAS	newspaper article
06/04/99	FOX 4 KTBY	Anchorage Coho Carnival	children's TV program
06/28/99	Anchorage School Dist.	Business Partnership	booklet article
Total	31		

Table 11.-Requests for information, materials and equipment from the ADF&G STREAM Program, 1999.

Requests for materials or information	413
Educational material loans	26
Scientific or field equipment loans	13
Total	452

publications were updated and reformatted into a consistent format. In addition, a formal procedure was established for handling and tracking the public contacts and inquiries. In April of 1999 a fulltime Administrative Clerk III was hired to prepare for the sale of fishing licenses at the Anchorage office, and to assist with responding to public inquiries. Finally, in June of 1999, a seasonal Fisheries Technician was hired to work with the public contacts during the peak of the fishing season.

In addition to dedicating staff to the program, the region committed to constructing a fishery information center that was more accessible and conducive to distributing information and services to the public. The existing facility consisted of a “window” cut into the wall of our administrative staff office where the public would stand in the hall waiting for available staff. In June 1999, the Division of Sport Fish moved its front-line public information staff from a small window in a second floor office to a newly remodeled 1,440-square foot Fisheries Information Center located on the ground floor of the Raspberry Road building. It is located across the lobby from the Wildlife Information Center, thus consolidating the “public” area of the regional office to the lobby and the immediate vicinity. The new facility, shared with Commercial Fisheries Division front office staff, features greatly expanded counter space to better serve more visitors; an open, inviting fisheries-themed design; wiring for network access; and four offices for Sport and Commercial Fisheries information staff. New equipment to support visitor inquiries includes a 50-sheet-per-minute photocopier; a 600 dpi color laser printer; and a scanning station set up with a slide scanner, a flatbed scanner, and a Polaroid slide maker.

Sport Fish Information Center

In FY99 the Sport Fish Information Center staff served over 7,000 in-person visitors in 250 working days (Table 12). In addition to providing requested fishery information, the services rendered during these visits consisted of issuing 3,202 Upper Cook Inlet Personal Use Dip Net Permits; 263 Cook Inlet-Resurrection Bay Shellfish Permits; 250 Proxy Information Forms; Guide Registration forms; 127 Salt Water Charter Vessel Logbooks; Permanent Identification Card applications; and Disabled Veteran's Identification Card applications. The highest number of visitors occurred in the week of July 6, which saw 1,282 in-person visits, and the slowest weeks were in mid-December. In addition to the walk-in visits, information center staff responded to approximately 6,800 phone inquiries, 240 mail inquiries and 120 email inquiries. These inquiries resulted in over 1,000 mailings to nearly all 50 states and 23 foreign countries. Nearly 1,500 regulation books and 1,000 handouts were distributed in these mailings alone.

Informational Publications

Nearly 40 handouts are produced in the Region II I&E program with input from biologists throughout the region. The handouts (Table 13) are made available at the Anchorage Sport Fish Information Center, as well as all area offices in the region. Several thousand of these brochures are distributed at the annual Great Alaska Sportsman Show, several hundred are distributed through the mail, and they are all available online on our web site. Two new informational handouts were developed in FY99: Tidepooling Etiquette (Kachemak Bay) and Sport Fishing in Talarik Creek (Bristol Bay).

Table 12.-Walk-in public contacts at the Anchorage Sport Fish Information Center, by week, during FY99.

1998			1999		
Week	Days	Visitors	Week	Days	Visitors
6-Jul	5	1,282	4-Jan	5	23
13-Jul	5	571	11-Jan	5	41
20-Jul	5	451	18-Jan	4	23
27-Jul	5	222	25-Jan	5	59
3-Aug	5	128	1-Feb	5	35
10-Aug	5	122	8-Feb	5	53
17-Aug	5	137	15-Feb	4	45
24-Aug	5	85	22-Feb	5	33
31-Aug	5	88	1-Mar	5	43
7-Sep	4	52	8-Mar	5	49
14-Sep	5	44	15-Mar	5	55
21-Sep	5	63	22-Mar	5	59
28-Sep	5	65	29-Mar	4	45
5-Oct	5	28	5-Apr	5	107
12-Oct	5	25	12-Apr	5	119
19-Oct	4	19	19-Apr	5	145
26-Oct	5	29	26-Apr	5	130
2-Nov	5	20	3-May	5	187
9-Nov	4	21	10-May	5	251
16-Nov	5	17	17-May	5	272
23-Nov	4	23	24-May	5	359
30-Nov	5	15	31-May	4	197
7-Dec	5	13	7-Jun	5	306
14-Dec	5	5	14-Jun	5	404
21-Dec	4	6	21-Jun	5	364
28-Dec	4	28	28-Jun	5	378
Subtotal	124	3,559	Subtotal	126	3,782
Total for FY99		250 days			
		7,341 visitors			

Table 13.-Sport fishing informational handouts available from the Anchorage Sport Fish information center.

DOCUMENT TITLE	FY97	FY98	FY99
REGION II			
Great Alaska Sport Fishing Spots for the Disabled	Updated	Updated	Updated
Pacific Halibut	Updated	Updated	Updated
Upper Cook Inlet Personal Use Salmon Regulations	Updated	Updated	Updated
Alaska Board of Fisheries	New	Updated	Updated
Ice Fishing in Southcentral Alaska		New	Updated
Find Us on the Internet		New	Updated
UCI Personal Use Salmon Regulations	Updated	Updated	Updated
ANCHORAGE			
Sport Fishing in the Anchorage Area	Updated	Updated	Updated
Anchorage Area Fish Run Timing	New	Updated	Updated
BRISTOL BAY AREA			
Southwest Alaska Rainbow Management Policies	Updated	Updated	Updated
Fishing Lodges and Charter Services for Bristol Bay	Updated	Updated	Updated
Sport Fishing in the Naknek River	New	Updated	Updated
Sport Fishing in the Togiak, Goodnews, and Kanektok Rivers	New	Updated	Updated
Sport Fishing in the Newhalen River	New	Updated	Updated
Sport Fishing in Talarik Creek			New
Sport Fishing in Southwestern Alaska			New
HOMER AREA			
Sport Fishing in Kachemak Bay	Updated	Updated	Updated
Tidepooling Etiquette			New
Sport Fishing on the Lower Kenai Peninsula	Updated	Updated	Updated
KENAI PENINSULA			
Kenai Peninsula Stocked Lakes	Updated	Updated	Updated
Recreational Fishing in the Kenai River	Updated	Updated	Updated
Kenai Peninsula Razor Clams	Updated	Updated	Updated
Russian River Sockeye Salmon	Updated	Updated	Updated
Kenai Peninsula Run Timing	Updated	Updated	Updated
Kenai Peninsula Dolly Varden	Updated	Updated	Updated
MATANUSKA-SUSITNA VALLEY			
Matanuska-Susitna Valley Lakes Fishing Forecast	Updated	Updated	Updated
Northern Cook Inlet King Salmon Sport Fishing	Updated	Updated	Updated
Matanuska, Susitna and Anchorage Northern Pike	Updated	Updated	Updated
Fishing for Coho Salmon in the Mat-Su Valley	Updated	Updated	Updated
Major Northern Cook Inlet Sport Fisheries, Availability Timing	Updated	Updated	Updated
Terminal Tackle in Southcentral Alaska	Updated	Updated	Updated
PRINCE WILLIAM SOUND			
Cordova Road System Recreational Fishing	Updated	Updated	Updated
Valdez Arm Recreational Fishing	Updated	Updated	Updated
Rockfish in Prince William Sound	New	Updated	Updated
Prince William Sound Run Timing	New	Updated	Updated
Fishing for Salmon in Prince William Sound		New	Updated
RESURRECTION BAY/SEWARD			
Sport Fishing on the Eastern Kenai Peninsula, Seward and Res. Bay	Updated	Updated	Updated

Stocked Lake Maps Series

Another component of information services that was brought into the Information and Education Program in 1997 was the continuation of the “Stocked Lake Maps” series. In 1995 the staff in the Palmer area office initiated the publication of a series of maps for the lakes stocked in the Matanuska-Susitna Valley area. This publication included information on each lake including a bathymetric (underwater contour) map if available, description of public access to the lake, average depth, maximum depth, volume, map location, stocking history, surface area, Statewide Harvest Survey information and stocking plan. In 1996, this series was expanded to include an Anchorage Lake Map series. In 1997, as part of the I&E program, lake series maps were completed for the Upper Copper and Upper Susitna management area. All of these were also made available online on the regional web pages.

During FY99 lake series maps were completed for Kenai Peninsula Stocked Lakes (28 lakes), and information was compiled into a similar format for Southcentral Unstocked (Wild) Lakes (29 lakes). In addition the Matanuska-Susitna Valley Stocked Lakes book of 88 lakes and the Anchorage Area Stocked Lakes Book of 29 lakes were both updated with current stocking, test net sampling and statewide harvest information. Corrections to maps were also made to both books, and both books were made available online.

Great Alaska Sportsman’s Show

The Great Alaska Sportsman’s Show (GASS), a fishing, hunting, and outdoor recreation trade show held every spring in Anchorage, Alaska, is an event that Sport Fish Division has actively participated in since the mid 1980s. Over the years, the show has attracted nearly 25,000 adult and child visitors over a 4-day period. According to Aurora Productions, producers of the show, over 80% of show visitors are residents of Alaska.

The division’s participation and contribution to the show has always been in three arenas: the Kid's Fishing Pond in the Ben Boeke Arena; the set-up, staffing, and tear-down of a large booth in the Sullivan Arena; and the coordination for show management of expert speakers from the divisions of Sport Fish, Habitat, and Wildlife Conservation. Coordination of the booth area includes set-up for Division of Sport Fish, Division of Wildlife Conservation, and the Division of Habitat & Restoration; as well as set-up for the USF&WS Federal Aid Program and the Bird Treatment and Learning Center.

Because the date coincides with the time people are gearing up for the fishing season, the GASS has also been used as a target date for the distribution of both the current year's sport fishing regulation summary books and the current year's informational brochures describing fishing opportunities in both Region II and Region III. The primary objective of the division’s participation in the booth and coordinating seminar topics is to take advantage of the opportunity to provide a large number of current and potential anglers with accurate and timely information and resources about sport fishing.

The Fishing Pond has been under the wing of the STREAM Program since its inception and was discussed earlier in this report. The responsibility for the booth in the Sullivan Arena has historically been with the Region II area management staff. In the fall of 1997, with the inception of the Information and Education program, the responsibility for organizing and implementing both the booth and the Department speakers at the GASS was placed under the I&E program.

In the spring of 1998, the major emphasis of the I&E staff in preparation for the GASS was the updating and reformatting of the informational brochures for distribution. During that event the gate count for the show was a new high at over 21,000. Twenty-five Region II informational handouts were revised and updated for 1998, and 16,587 individual brochures were distributed, including three new handouts: (1) Sport Fishing in the Naknek River; (2) Sport Fishing in the Newhalen River; and (3) Sport Fishing in the Togiak, Goodnews, and Kanektok Rivers. Two publications from Region III Division of Sport Fish were also distributed. Twenty-five Sport Fish Region II staff members participated in staffing the booth. Thirteen presentations were given by seven Sport Fish Region II staff members on topics ranging from the sonar program to lake stocking. Two Division of Wildlife Conservation staff members also gave presentations.

In April 1999, 29 Region II informational handouts were revised and updated, including five new: (1) Tidepooling Etiquette, (2) What's New in Sport Fishing for Homer Area and Lower Cook Inlet, (3) What's New in Sport Fishing for Anchorage Area and Resurrection Bay, (3) What's New in Sport Fishing for Matanuska-Susitna Valleys, (4) What's New in Sport Fishing for the Kenai River and Drainages, and (5) ADF&G Internet addresses. A total 24,700 brochures were distributed to a gate count of over 22,000, another record high. Two publications from Region III Division of Sport Fish were also distributed. Nine Sport Fish Region II staff members gave 14 presentations, and 2 Wildlife Conservation staff members also gave 3 presentations. Seventeen Sport Fish Region II staff members manned the booth.

Web Pages

The Region II staff began an active role in the development and maintenance of the Region II web pages in the fall of 1997. At that time the division had a statewide webmaster who developed the initial pages and templates for use throughout the division. She continued to maintain the pages of statewide nature and the Interior Region pages while assisting in training regional webmasters for the Southeast and Southcentral regions. The first task of the regional webmasters was to update the format of the regional pages. The Region II web site was also expanded to include pages for each management area. These “area home pages” provide a forum for the area biologists to describe the management area, outline management strategies, provide information about the various research projects in the area, and include links to related web sites. Several other pages were developed during this first year of regional work on the web. These include:

- ◆ How to Contact Us – A page identifying our regional and area staff with links to send emails
- ◆ Sport Fishing Brochures – This page lists all the sport fishing informational publications available from Region II and links to PDF files of each publication that can be printed or downloaded by users
- ◆ Stocked Lakes Maps – This page provides a list of all the lakes stocked in the Anchorage, Kenai, Glennallen, and Mat-Su Valley areas and provides links to PDF versions of bathymetric maps, directions on how to find the lakes and stocking histories.
- ◆ Board of Fisheries Process – This page was developed to outline the procedure a member of the public should use to participate in the Board of Fisheries process.
- ◆ Regulations – Developed by the statewide webmaster, this page provides access to PDF versions of the Sport Fish regulation summaries for each area.

During FY 1999 regional staff continued to maintain the established pages and develop new resources on the Region II web site. In April of 1999, the statewide webmaster position was vacated and not refilled. The statewide responsibilities are now shared among the regional webmasters. Also during FY99, an additional programmer was added to the staff in our statewide Research and Technical Services (RTS) unit, to take the lead in Intranet development and assist with technical and programming functions with the Internet pages. With the addition of this staff member we were able to develop interactive applications to query databases. This required the establishment of a local server with additional application server capabilities to provide the ability to search a database that were not available on the Department of Information Services (DIS) server. Pages that were developed which required the new server were posted locally, all other pages continued to be posted in Juneau. New pages that were developed during FY99 include:

- ◆ Inseason weekly fishing updates – For years area and Region II offices have provided inseason weekly updates of sport fishing activities in the region through reports from the area biologists that were recorded to our phone messaging system and posted in hard copy format at our regional and area offices. This page was developed so that the information would be available on a wider distribution and to reduce the phone traffic in the area offices regionwide, as well as the Sport Fish Information Center.
- ◆ Inseason escapement database query – One of the frequently asked questions in our regional and area offices relates to the escapement counts at various weirs and sonars operated by the division. This page utilized the database query capabilities of the local server to provide the web user with up-to-date counts of the weirs and sonars operating in the region. The program includes an input screen accessible only by staff who can enter the data remotely as new counts are tallied. This page also helped to reduce the phone traffic to the regional Sport Fish Information Center and area offices.
- ◆ Fish Stocking database query – This program also utilizes the database query function, and allows the user to find out the stocking histories of all the locations stocked by the state-operated hatcheries. Hatchery staff update the stocking database weekly.
- ◆ Statewide Stocking Plan – The stocking of fish by the state hatchery system is determined by a public process as outlined in an annual Five Year Statewide Stocking Plan. The stocking plan is initially prepared by hatchery supervisors, with input by area sport fish managers, who prepared a draft plan based on hatchery production and management objectives. This draft plan is then distributed for public comment and input. This web page provides one means of distribution for public comment. After the review period the final stocking plan is posted.
- ◆ Divisional Reports – Linked to the database of divisional reports on the “Intranet,” this page provides access to all reports published by the department since 1987.
- ◆ Classroom Resources – As a supplement to the STREAM program, many of the resources and materials developed for classroom use are made available through this page, as well as information on how to participate in the department’s educational programs.
- ◆ Guide Requirements – Updated annually, this page provides information about the requirements needed to become a sport fishing guide.

- ◆ Sonar Program - This page describes the Sonar Project on the Kenai River.
- ◆ Regional Directory - This page is linked to the “How to Contact Us” page and provides a listing of all the employees in Region II (Southcentral) Sport Fish, and provides phone numbers and email links.
- ◆ Stocked Lakes Maps – This site was expanded in FY99 to include lakes on the Kenai Peninsula, the Upper Copper/Upper Susitna Area and selected “wild” lakes in Southcentral Alaska.

FUTURE GOALS

Education and Outreach

Future program goals for education and outreach are:

1. Expand the classroom salmon egg incubation program where requested in all areas but especially in the Kodiak and Fairbanks areas. Establish classroom egg-take sites in Kodiak and Fairbanks, and if possible Soldotna.
2. Expand the Coho Carnival to include the Matanuska-Susitna and Kenai Peninsula school districts.
3. Continue efforts to develop relationships with Division of Wildlife Conservation education programs staff.
4. Increase the participation level in the fly tying in the classroom program.
5. Investigate and take advantage of community funding sources or support to meet the demands of the expanding STREAM Program.
6. Expand duties of seasonal technician in the Matanuska-Susitna Valley and seek STREAM Program assistance from other area offices.

Information Services

Future program goals for information services are:

1. Develop new informational brochures as needs are identified and revise and update existing informational handouts, to include photographs and more information about remote fisheries.
2. Continue to develop displays for the information center to inform visitors about Alaska’s fish resources, sport-fishing opportunities, regulations and management strategies.
3. License sales: During FY99 a directive from the Commissioner’s office mandated that hunting and sport fishing licenses will be sold at the Anchorage and Fairbanks Fish and Game offices. One goal for next fiscal year is to finalize the planning and training so implementation of license sales can begin.
4. Existing Lake Series maps will be updated and a new series will be developed for the Kodiak area.
5. Great Alaskan Sportsmen’s Show: Plans for next year’s participation in the GASS include selling licenses at the booth; increasing staff participation at the booth and in the seminars; revising, updating, and standardizing presentations so that more presenters are available; and improving signage.

6. Web pages: One of the primary goals for the web pages for next fiscal year is to move the hosting of the Sport Fish division pages from the DIS server in the Department of Administration in Juneau to a dedicated server in Anchorage maintained by Sport Fish Division, Research and Technical Services (RTS) programming staff. There are several advantages to switching servers which include: (1) the administration of the server and network applications will be “in house,” thus more accessible and responsive to Sport Fish Division needs; (2) a local server will enable us to use additional state-of-the art application servers, such as Cold Fusion and video servers, which are not supported on the DIS server; and (3) log files will be accessible to determine use statistics for each of our pages.

ACKNOWLEDGMENTS

The staff of the Information and Education Program would like to thank all the ADF&G regional staff who made the new Information Center possible and to Becky DeArmoun and Eric Burg for their tireless efforts in ensuring that the Information Center ran smoothly during this transition year.

The STREAM Program would like to acknowledge the efforts of all the volunteers and staff who helped at the many events held this year, but especially to ADF&G Technician Craig Baer for assisting the STREAM Program in the Matanuska–Susitna Valley area. Thanks to the staff at the Fort Richardson Hatchery for supplying staff time, trucks and fish for many of the STREAM Program’s events. A special thanks to the dedicated classroom fly tying crew – Bennie Leonard, Frank Willis, Mark Mahoric, Vance Whepley, and Pudge Kleinkauf who helped make this pilot year a success. Thanks to Mike Woods and his Natural Resources class at the King Career Center for making the Great Alaska Sportsman’s Show Kids Fishing Pond and activity booths a success and for the many hours the students helped during fish releases and carnivals. Thanks to Jane Eismann and her Kodiak High School Fisheries class, the St. Innocent youth and Josh and Vicki Lewis for making the first Coho Carnival in Kodiak a now annual event. To the Anchorage Waterways Council, the Cooperative Extension Service and the many other agencies and organizations that have helped this year. Finally, to all the teachers and school district staff throughout Southcentral Alaska who make my job enjoyable and rewarding – thanks for helping me make students more aware of our salmon resources. Without the support of volunteers, teachers and community many of the STREAM Program’s events would not be possible.

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APPENDIX A. NEWS ARTICLES

A MIDSUMMER NIGHT'S SCIENCE SERIES

Come discover the natural wonders of Campbell Tract, Anchorage's wild backyard. Join professional naturalists in the field and learn how to monitor the health of local ecosystems. These family-friendly "workshops" are free and open to the public.

Time: 7:00 p.m. to 9:00 p.m.

Location: Campbell Creek Science Center
6851 Abbott Loop Road

DATES AND SUBJECTS (SUMMER 1998):

JUNE 10 BEAUTY AND THE BUGS

Join Anchorage bug guru and enthusiast, Lois Bettini, for a family-friendly slideshow on Alaska's creepy crawlies. The talk will be followed by a trek outdoors to collect bugs for the Science Center's reference collection. Who knows, maybe you'll discover a previously unknown critter!

JUNE 17 BUTTERFLY HUNT

Local butterfly expert Carol Lloyd of the Eagle River Nature Center discusses these elegant and beautiful insects. Learn field techniques for identifying butterflies and consider joining Carol in her effort to prepare for a national butterfly count.

JULY 15 THE DARK WORLD OF WEEDS

Join local wildflower expert Verna Pratt of the Alaska Native Plant Society for a slideshow on weeds. Learn what makes these plants so tough -- and problematic. Then trek out to Campbell Tract to collect and press specimens, and help monitor weed infestation on public land.

JULY 22 A QUESTION OF WATER QUALITY

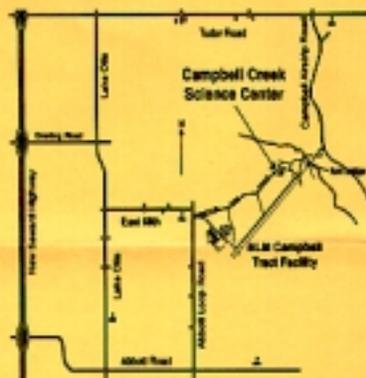
Take a walk along the south fork of Campbell Creek with biologist Fritz Kraus of the Alaska Department of Fish and Game. Search for salmon and salmon habitat. Try your hand at sampling for aquatic insects and other indicators of water quality.

AUGUST 5 CREEK CRITTERS

Biologist Elaine Major of the University of Alaska--Anchorage demonstrates how the living inhabitants of Campbell Creek can help to determine stream health. Assist her in the organization of an annual aquatic bioassay of Campbell Creek.

AUGUST 26 BIRD BANDING

Join biologist Bruce Seppi of the Bureau of Land Management for a slideshow of Alaska's beautiful songbirds. Train your ear to distinguish the recorded songs of a Ruby-crowned Kinglet, Swainson's Thrush, and other birds. Observe the art and science of bird-banding in the field.



*Sponsored by the Bureau of Land Management.
For more information, please call 267-1247.*



Reprinted From *Anchorage Daily News*
May 16, 1998



Photos by MICHAEL DINNEEN / Anchorage Daily News



Fry, fry away

Susitna Elementary School students Brittney Mitchell, 8, foreground, and Kristin Armstrong, 9, release salmon fry into Taku Lake on Friday morning. The fry were grown from eggs in classrooms throughout the Anchorage area and were being released into the lake by several hundred elementary students. At left, salmon fry from Taku Elementary School's library aquarium await release into the lake.

Reprinted From **Currents**
Sport Fish Division Newsletter
Winter 1998

**SALMON LIFE CYCLE LESSONS
TAUGHT THROUGH FLY TYING**

Students in Anchorage and Juneau learned a useful application for their salmon science lessons this fall: they tied the flies that mimic the first four life stages of salmon. Two different programs were used to pilot this fly tying effort, both of which appear to be very successful.

During the months of September and October, in Juneau, six classes from three schools tied salmon life-cycle fly patterns. These egg, sperm and egg, eyed egg and alevin patterns were the same ones used by fly fishers, with one exception: they were tied without the hooks.

Egg guns, donated by Alaska Troutfitters, were mounted in bases and filled with strands of McFlyfoam. Students then learned to tie each of the patterns after reviewing previous lessons in salmon life cycle. (The lesson also worked as a recruiting tool for the local 4-H outdoor skills and fly

fishing club.) Sets of these egg guns are available to teachers from Division of Sport Fish regional offices.

On Friday, November 13, 25 sixth-graders in Ed Brewer's Inlet View Elementary class tied four flies representing the four early life stages of salmon: egg, eyed egg, alevin, and fry.

This session was led by expert fly-tier Benny Leonard, a member of the Alaska Flyfishers who generously donated his time and talent, and by other Alaska Flyfisher volunteers. As part of an ongoing flyfishing mentorship partnership with Federation of Fly Fishing clubs state-wide, Fritz Kraus from the ADF&G Sport Fish Aquatic Education program supplied materials and equipment, as well as

additional volunteers from staff.

By tying these four specific flies under such close expert supervision, students "forecast" the development of the salmon eggs incubating in their STREAM program classroom incubation tank. And at the end of this pilot session, students had four new flies to try the next time they go sport fishing.

Tying salmon egg flies in either configuration (with or without hooks) re-enforces life cycle lessons from in-class incubator, Adopt-A-Stream or Streamwalk education programs. Teachers interested in participating in either effort should call Fritz Kraus in Anchorage (267-2265) or Jon Lyman in Juneau (465-6186) or contact your local FFF chapter.

Reprinted From *Anchorage Daily News*
September 29, 1998



ERIK HILL / Anchorage Daily News

Fisheries biologist Paul Cyr of the Alaska Department of Fish and Game flings a silver salmon toward a holding pen last week as Inlet View Elementary sixth-graders help net fish for egg takes in Campbell Creek. Biologists Fritz Kraus, Doug Molyneaux, Bob McFadden and Cyr collected eggs and milt from salmon, and Kraus added water to bring the sperm to life and fertilize the eggs. Students take the eggs back to school, watch the salmon grow, and release them in spring.

Reprinted From Anchorage Daily News
December 19, 1998



BOB HALLINEN / Anchorage Daily News

Greta Lewanski, Brittannie McVey, Mike Tye and Matt Clark find locations on state maps this week as part of their work in Mike Woods' class at the King Career Center. His course in natural resources management places a lot of importance on field experience.

Fishing for life after school

By ROSEMARY SHINOHARA
Daily News reporter

At the King Career Center half the students in Mike Woods' class pored over big colored maps of Alaska early this week, finding towns to match dots on their smaller, individual maps.

The rest were out on the ice at Jewel Lake in the middle of a

snowstorm. They scooped ice chunks out of fishing holes and baited hooks with cold-reddened fingers, helping state Department of Fish and Game biologist Fritz Kraus run an ice jamboree for about 1,100 elementary school children.

Who would have thought you could go to high school and spend

half the day fishing? And freezing your fingers?

Woods is an unusual teacher. He keeps a foot in two worlds.

Summers, he dispatches people and equipment to wildfires in Alaska and Outside for federal and state agencies. Winters, he works with those same government agencies, but on behalf of the kids in his

classes, cajoling the agencies to offer internships and summer jobs and to organize volunteer projects.

Like the ice-fishing jamboree at Jewel Lake this week.

Andrew Ballesteros, 16, thought his day helping Fish and Game at the lake was great, never mind the cold and blowing snow. He

WOODS: Teacher puts students in field



Student Tom Allen and Woods look over a web page that Allen is creating for the Alaska Watershed Stewardship Program.

just put on his Carhartts, loaded up a bag of shrimp, and shuffled from hole to hole, baiting lines for hundreds of younger kids. With 5,000 small kings stocked in the lake, the payoff was big for both the fishers and the helpers. “It gives me a break from school,” Andrew said.

If they weren’t ice fishing, Woods’ students might be cutting brush in a park, repairing trails or counting fish, depending on the season. It’s all in the name of field experience, a major goal for his class in natural resources management at King Career Center, Anchorage’s vocational high school.

Someone else will teach these students algebra and U.S. history and French at their regular high schools. For the halfday they’re at the Career Center with Woods every day, he focuses on life after high school.

That approach helped former student Jennifer Henderson figure out what to do with her life. “He’s trying to give you guidance, prepare you for the real world,” said Henderson, 25. “He got us out there. When you’re a senior, his whole plan was to get you out there working for an agency.” She graduated last spring from the University of Alaska Fairbanks with a degree in natural resources management and seven summers’ worth of experience with resource agencies to her credit.

Her mom was one of the people who nominated Woods for an award he received last year as one of 21 Teachers of Excellence recognized through a program sponsored by BP Exploration (Alaska) Inc. He earned a \$500 savings bond and a trip to the North Slope.

Woods, a tall, husky guy with a commanding voice, said he wasn’t very interested in school

He’s trying to give you guidance, prepare you for the real world. He got us out there. When you’re a senior, his whole plan was to get you out there working for an agency.”

— Jennifer Henderson,
former student

when he was a teenager. “I never saw a connection between school and how life was going to be.”

He found the connection his senior year at East High, after a teacher sent him to the King Career Center. In the same classroom where he now teaches, Woods studied firefighting. It set him up for years of fun working in Alaska and all over the West, building fences on federal cattle ranges in Montana, Wyoming and Colorado, observing at lookout stations deep in forests, and working on fire crews.

Everywhere he went, he had mentors, starting with the firefighting teacher at the Career Center, Dennis Nielsen, a big, bearlike man known to everyone as Yogi. Yogi pointed him to his first job out of high school.

“He was a good kid,” said Nielsen, now retired in Sterling.

WOODS: Teacher puts students in field

“He showed a lot of hustle and a lot of promise. He had that desire to make something out of himself.”

By the time Nielsen retired, Woods was 30, and substitute teaching in Boise. Nielsen recruited Woods to take his place at the King Career Center.

Nielsen described the handoff. “Mike said, ‘Yogi, will you be there in case I need some help?’” Nielsen said. “He didn’t call me once. He didn’t need any help.”

Now Woods is 38, in his ninth year at the Career Center. Since Nielsen’s time Woods has broadened the class from wildfire fighting to natural resource management, and he has strengthened ties to the businesses and agencies that employ the people he teaches.

The students still get to use chain saws every year -this fall, they hacked out dead wood from beetle-kill at Hilltop Ski Area and cleaned up a park in Muldoon - but they also build

web pages and collect data with electronic water probe devices.

Woods runs his classroom so efficiently that it appears he doesn’t even need to be there. Students come in collect their work where they left it, check out directions written on the blackboard, and move on.

The kids pick up on the respect Woods gives them. “He treats me like a brother. He listens to me,” said Tom Allen, 16, who attends Benny Benson Secondary School and the Career Center. Allen is designing a web page for the Anchorage Waterways Council to tell teachers and students how to keep water healthy.

Woods shares his sense of fun. “He likes being a kid, is what I think,” said Mike Tye, 17, a Service High junior. “He likes having fun instead of just being, like, boring all the time.”

His enthusiasm for the outdoors spills over into the classroom. “He always finds some way to keep you interested,” said Matt Clark, 17,

a West High junior. Those ways include working in groups with other students, for example, or inviting a guest speaker. Clark is about to begin an internship inspecting agricultural products for the U.S. Department of Agriculture at Anchorage International Airport.

Woods said it took him awhile to learn that a good teacher doesn’t have to talk all the time. It’s more important to guide by example than to lecture, he said. “For kids, having the solid role model is important to the max.”

That means being someone they can count on to hold them accountable, he said. “I let them know if they fail, they’re failing themselves. I have kids who fail. I don’t do curves. It’s just straight up.

“I try to keep life real. We’re helping them out in the long run.”

Reprinted From Anchorage Daily News
January 4, 1999

Students had fun ice fishing

Mountain View Elementary students from Mr. Sage and Ms. Hill's classes would like to thank Fritz Kraus and the Department of Fish and Game for an exciting ice fishing adventure! It was a great learning experience, plus the students returned to school with 27 fish. They were a little nervous about the ice being thick enough, and they weren't quite sure there were really fish underneath it. Now, they're ready to head out for some weekend fishing with their families.

Reprinted From Anchorage Daily News
January 11, 1999

Kids enjoyed fishing adventure

Mountain View Elementary students from Mr. Sage and Ms. Hill's classes write to thank Fritz Kraus and the Department of Fish and Game for "an exciting ice fishing adventure!"

"It was a great learning experience, plus we came back to school with 27 fish.

"They were a little nervous about the ice being thick enough and they weren't quite sure there were really fish underneath it. Now, they're ready to head out for some weekend fishing with their families."

ALASKA RAILROAD CORPORATION



Corporate Address: P.O. Box 107500, Anchorage, Alaska 99510
327 W. Ship Creek Avenue, Anchorage, Alaska 99501

June 21, 1999

Fritz Kraus
Department of Fish & Game
333 Raspberry RD
Anchorage, AK 99518

Dear Mr. Kraus:

I have enclosed several copies of the School Business Partnership's *Best Practices* booklet in which Department of Fish & Game is one of the featured partnerships. We've subtitled the booklet, *A Blueprint for Success*, because we've highlighted 12 partnerships we feel exemplify some of the best programs.

This booklet not only describes the programs, but also gives practical advice on how schools, businesses, and government agencies can become involved to develop or improve an existing partnership. We've described lessons learned along the way so that others can benefit from the experience.

Display the booklets proudly and share them with your colleagues and coworkers. The participants comments reflect how your employees are making a difference in children's lives. Under your leadership, Department of Fish & Game has chosen to be actively involved, and that has made all the difference. Thank you.

If you need more copies of *Best Practices*, please don't hesitate to call the School Business Partnership office at 742-3715, we'd be glad to send you more.

Sincerely,

James B. Blasingame
Chairman of the Board, School Business Partnerships
Vice President, Corporate Affairs

Reprinted From **Best Practices:
A Blueprint for Success**

Anchorage School District School Business Partnerships 1999

Anchorage School District and Alaska Department of Fish and Game

This Partnership has been in operation since 1991. It involves students K-12 with the collection, maintenance and incubation of coho salmon eggs.

Anchorage School District Superintendent: Bob Christal

Contact: Jim Utter, ASD School Business Partnerships

Phone: 742-3715

Alaska Department of Fish and Game

Coordinator: Fritz Kraus, Educational Biologist, Aquatic Management
Phone: 267-2265

Schoolchildren rear young salmon at their home school.

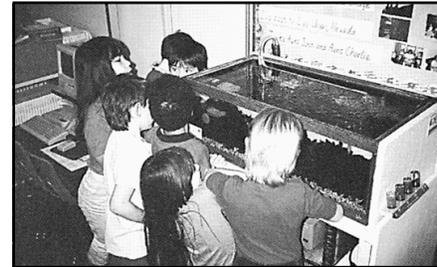
Salmon fry are released into Campbell Creek

The students study the life cycle of the salmon as they are in class at their home schools. They become familiar with watching and recording the development of the salmon eggs, to fry, and finally releasing the salmon into a local lake in the spring. The process is started all over again in the fall with the collection of eggs from adult salmon from a local stream, fertilizing, and bringing the eggs back to their school for incubation. Over 40 schools throughout the Anchorage School District are involved. The program has special highlights - in the fall the collection of eggs and fertilization; December is ice fishing on Jewel Lake; February is the Fur Rendezvous Parade and float building with students; and spring, the releasing of the fry that have been incubating at the schools.

Jim Utter, School Business Partnerships, Anchorage School District:

This is truly hands-on experience for students K-12: the life cycle of the coho salmon, from taking the eggs and milt, fertilization, incubation, observation and study, and release of the fry. Along with the biological aspects of the study comes the environmental impact that we all have on this natural resource. It is important for students to recognize that unless the resource is protected and utilized correctly, Alaska will end up like many Lower 48 states whose resources are either in a great deal of trouble, or non-existent.

It is through programs like this that we are able to educate our youth to the wise use of our natural resources so that it will be around when their children are their age. We commend the Alaska Department Fish and Game for sponsoring this educational program and hope that it will continue and grow.

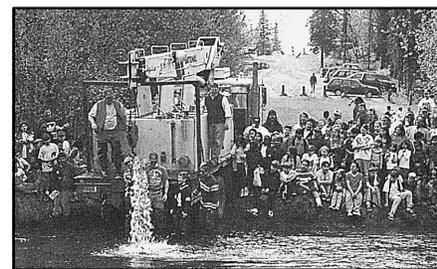


Fritz Kraus, Biologist and Aquatic Manager, Alaska Department of Fish and Game:

This is an exciting program to work with. The teachers and the students all identify with this natural salmon resource that we not only have in our back yard, but across the state of Alaska.

The involved teachers are a dedicated group, the cream of the crop. It is so rewarding to see them assisting and participating with this whole program. Often I am in different parts of Anchorage and I run into students who have been involved in the program, who always remember me and the experience that they had with the life cycle of the salmon.

It is really rewarding for me to be part of this education of students, to help make them aware of the salmon resource, the importance of its protection, and its wholesome use.



Reprinted From

Kodiak Daily Mirror

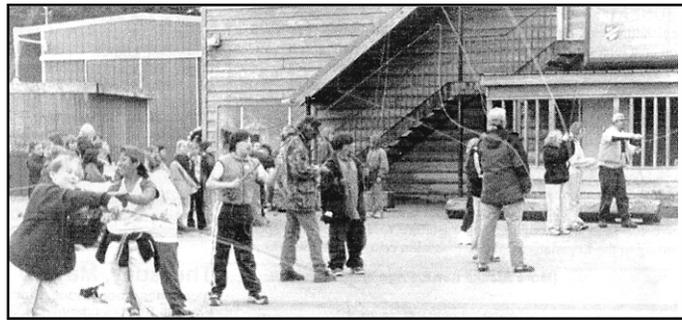
May 26, 1999

Front Page

Kodiak's Coho Carnival



IT'S ALL IN THE WRIST — Amber Gray practices casting in hopes of someday catching the big one. (Melissa Dover photo)



YOUNG ANGLERS — Local students practice their fly fishing techniques at the Kodiak Coho Carnival on Tuesday.

(Mike Rostad photo)

Great learning experience for children

By **MIKE ROSTAD**
Special to the Mirror

The Salvation Army parking lot took on the features of the Crab Festival Tuesday.

A throng of children and grownups milled around the lot, stopping at booths, eating hot dogs, and watching demonstrations. Everybody had a good time. The event, christened the Kodiak Coho Carnival, focused on the release of coho (silver) salmon fry into Potato Patch Lake. The fry were hatched and raised in incubators in area schools.

Assisted by teachers and chaperons, students let the fish into the water. The young salmon will grow to smolt size in the lake and remain there about two years; then they will move out to salt water and spend about 18 months at sea before returning to spawn.

For years students in local elementary schools have been releasing salmon fry into Potato Patch Lake. The young fish are provided by the Pillar Creek Hatchery, which takes the eggs from coho returning to the Buskin River.

However, this year, for the first time, all the students released the fry on the same day, and teachers and others used the event as an opportunity to illustrate festively that salmon are an integral part of Kodiak's economy and

lifestyle.

"When you think about the salmon resource and what it means to this island, it seemed like a good idea to expand that opportunity," said Josh Lewis, North Star teacher and one of the coordinators of the Coho Carnival.

Kids learned all sorts of things about salmon: habitat, survival, migration and predators.

The salmon incubation program was brought to Alaska by Fritz Kraus, a fisheries biologist with Fish and Game's sports fish division in Anchorage who coordinates aquatic education for South Central Alaska.

Kraus, who was in Kodiak for the Coho Carnival, credits Canadians for introducing him to the concept, which he learned while attending Malaspina College in Nanaimo, a city on Vancouver Island in British Columbia.

"Since [Canada was] having a lot of problems with salmon runs, they were using classroom salmon incubation projects to teach kids about salmon ... and having kids enhance the systems," Kraus said.

Kraus adapted the Canadian program to Alaska, which "has a very healthy salmon resource of wild runs," he said.

Coho release a learning tool for students

Alaska's program does not focus on enhancement, Kraus said.

"It's more of a pro-active education program where we teach kids how to protect what we have. [It includes] a study of the biology, life cycle, habitat requirement of salmon and how to protect habitat requirement, so that they can maintain this run.

"We want kids to understand that what we have are natural wild runs that need to be taken care of."

The concept of the salmon incubation project was brought to Kodiak by Chris Clevenger, manager of the Pillar Creek hatchery. Clevenger worked with Kraus at Big Lake.

Lewis says plans are underway to have students participate in egg takes at the Buskin River in the fall.

"Then they will have a full salmon circle, rather than a piece of it," Lewis said.

According to Lewis, 1,100 to 1,200 people from area schools showed up for the carnival.

"I felt like it was successful beyond our wildest dreams. We were getting a little nervous, looking at the sky. But you've got to expect a little rain if you're out doing a fishing thing," he laughed.

"We want to give a huge thank-you to the community," for making the first annual Coho Carnival a splash, Lewis added.

"Parents poured out in droves."

Carnival helpers included Hank Pennington, Gary Carver, Dave Jones. Pat Holmes, local teachers and aides, students from the Kodiak Middle School, Saint Innocent's Academy, Jane Eisemann's fisheries class at Kodiak High School and Brian Cleary's multi-media class.

The Kiwanis and Safeway donated food that was served by Marcia Oswalt, Gretchen Saupe, Shirley Heglin and Judi Acarregui, former teachers and other staff members of the Kodiak School District.

Captains Dave and Lola Davis of the Salvation Army "were wonderful, letting LIS take over their parking lot and the inside of the building," Lewis said.

A camera positioned in an upper story window of St. Innocent's Academy and hooked up to the Internet, recorded activities all day.

"Every 15 seconds, a new picture was broadcast on the Internet," Lewis said.

Other organizers of the Coho Carnival included Katherine Allen from Main School, Ron Gibbs of Peterson Elementary and Anne McQuethy, East Elementary.

Reprinted From Kodiak Daily Mirror
May 26, 1999

Page 18



BEAU F. JACKSON
...first place



ROSA MEJIA-CRUZ
...second place



JARON CARLSON
...third place

Sport-fish cover design winners named

Prizes were awarded this week to the winners of the Kodiak Island Sport Fish Regulations Cover Design Contest.

“One hundred and seventy five entries were received from Kodiak area schools, and the judging was difficult,” said Len Schwarz of the Alaska Department of Fish and Game.

The top three entries were chosen by Anchorage area fish and game officials.

First place winner was Beau F. Jackson, a fifth-grade student at Peterson Elementary School.

Second place winner was Rosa Mejia-Cruz, a fourth-grader at East Elementary School.

Third place winner was Jaron Carlson, a sixth-grader at Larsen Bay School.

Regulation books with the winning cover are available now at the Kodiak Fish and Game office and most license vendors.

FISHING REPORT

Kings are still in ocean

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tremely low, so we thought we'd have a hard time finding anything at all."

After Couch landed the fish, the other guide offered to help him release it because once you catch a king in most waters around the state, you're done fishing for the day.

"I told him that might be the only bite we have all day, and we weren't letting it go," Couch said.

SEEKINS TAKES CHECKERED FLAG: Homer's Dale Seekins earned \$2,575 last week by winning the inaugural Halibut 100 — a one-day tournament on the waters of Kachemak Bay.

Seekins' winning halibut weighed in at 89 pounds, 6 ounces. The object of the tournament was to haul in the flatfish closest to 100 pounds. A total of 103 anglers took part.

Anchor Point's John Phillips finished second with an 88.3-pound halibut, Homer's Tony Demichele was third with a 86.6-pound catch and Girdwood's Joseph Malone tied Anchorage's Gary Levin for fourth.

Anchorage's Robert Shire earned fifth place and the largest halibut consolation prize with his catch of a 122 pounder. Shire won \$1,206.

THAT'S A LOT OF BLOOD AND GUTS: Get rich quick with Saltwater Safari Co. this summer. The Blood and Guts Halibut Tournament will award \$25,000

to the angler catching the largest halibut over 300 pounds with any of the company's four boats. The tournament ends at 6 p.m. July 31. There is no entry fee required. For information, call 800-382-1564.

COHO CARNIVAL: More than 1,500 Anchorage School District students are expected to release thousands of silver salmon during the Department of Fish and Game's Coho Smolt Release and Coho Carnival a week from today at Campbell Creek Park.

The festivities will begin at 10 a.m and run until there are no more silvers. The eighth-annual event is geared toward giving the general public and school children a hands-on opportunity to release salmon and watch as the hatchery stocking truck releases silver smolt into the creek. The released smolt should return to the creek as adults in approximately 18 months.

For more information, call Fritz Kraus at 267-2265.

The fish tales are just beginning and we want to hear about them. Call Matt Nevala at the Daily News sports department at 257-4335, e-mail mnevala@pop.adn.com, or fax your name, phone number and general information to 257-4342. The fishing report runs Fridays through summer. Information is compiled on Wednesday and early Thursday each week.

Reprinted From *Frontiersman*
October 7, 1999



MELANIE BRUBAKER MAZUR/Frontiersman

HAVING FUN WITH FISH

Katlyn Griese assists Alaska Department of Fish and Game biologist Fritz Kraus in removing eggs from a silver salmon during a field trip Friday to Spring Creek. Students from Palmer Junior Middle School and Snowshoe Elementary, along with other Mat-Su Schools, identified the sex of the fish, learned how they spawn and took fertilized eggs back to their classroom to keep in tanks over the winter. Next spring, they will release the fry in Matanuska Lake.