

INTRODUCTION

Meeting public demand for recreational fishing opportunities in Alaska while at the same time maintaining and protecting the fishery resources has become increasingly complex. In the early years of statehood, before rapid population expansion and industrial development, good, uncrowded fishing was accessible. Large sport fisheries were few and easily monitored. Sport fishing was considered to be a minor factor in management of commercially exploited species.

Today, Alaska is experiencing increased tourism and continued forest, mineral, petroleum, and associated government development. A growing avid recreation-oriented population accompanies this growing economy. Accessible sport fisheries have become crowded, new fisheries have developed, and pressure from a large mobile population is spilling ever farther afield. Native land allotments, legislated land conveyance quotas, federal treaties, allocation of fisheries resources, and problems of access have complicated maintenance and expansion of sport fishing opportunities. Also, conflicts are now developing over how best to manage public lands to meet the needs of all recreational users. The state and private corporations have made substantial commitments to aquaculture and hatchery propagation. Moreover, recreational fishing is now a significant factor in total fisheries management in parts of Alaska, such as in Cook Inlet and Southeast, where user conflicts have developed.

The Alaska Sport Fish Harvest Survey shows that anglers fished approximately 2.3 million angler days, caught approximately 6.7 million fish (including razor clams and smelt), and harvested more than 2.7 million fish in 2006.¹ These figures demonstrate a 6.7% decrease in the number of days fished, a 12.0% decrease in fish caught, and a 16.2% decrease in fish harvested compared to 2005. Stocking serves to divert angling pressure away from fragile stocks and maintain angling opportunities. Consequently, stocking has become a vital component of the statewide sport fish program.

Funding for the recreational fish stocking projects detailed in this plan comes primarily from two sources. The first is the Sport Fish Account of the state Fish and Game fund, which includes revenues from sales of fishing licenses. The second, and larger funding component for this program, is comprised of federal funds. The Federal Aid in Sport Fisheries Restoration program, through the Dingell Johnson (D-J) Fund and the Wallop-Breaux Amendment (W-B), provides money from federal taxes on specific sporting goods, marine motor fuels, etc. Private non-profit organizations in Kodiak, Cook Inlet, Prince William Sound and Southeast Alaska also provide some support through cooperative agreements with the State of Alaska or the United States Forest Service.

Only fish stocking activities initiated for improving recreational fisheries are included in this plan. There are other fish stocking activities by private-non-profit hatcheries initiated for common property fisheries that benefit recreational anglers, but those projects are not included in this plan.

Sport Fish Division operates Fort Richardson and Elmendorf hatcheries located in Southcentral Alaska. Fort Richardson Hatchery serves as a broodstock center and central incubation facility for rainbow trout and Arctic char. Together, Fort Richardson and Elmendorf hatcheries produce over half of all fish requested in this stocking plan. An experimental hatchery is located in Fairbanks.

Fishery management objectives for releasing hatchery fish listed in this plan are outlined in the management synopses at the beginning of each section. Supporting the fishery objectives are specific stocking actions and program evaluations to assess the benefits of each project. Each release of fish in the stocking tables references a fishery plan synopsis. Anyone interested in learning more about the division's management plans and evaluation programs can contact their local Fish and Game office.

Most evaluation of Sport Fish Division stocking projects involves measuring angler effort, catch, and harvest of the stocked fish. These statistics are often estimated using the Statewide Harvest Survey for Recreational Fisheries (SWHS). The SWHS is an annual mail-out survey to licensed Alaska sport anglers. In most instances, the SWHS is an

¹ Jennings, G. B., K. Sundet, and A. E. Bingham. *In prep.* Participation, catch and harvest in Alaska sport fisheries during 2006. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.

accurate measure of Sport Fish Division stocking projects. However, angler statistics associated with some of our smaller stocking projects are periodically under-reported because the sample size of the survey is limited; often, unlicensed anglers under 16 years of age heavily utilize the stocking project.

In general, stocking sites have been selected to maximize the benefits to sport anglers. Resident species are usually stocked in landlocked lakes near population centers. Anadromous species are usually stocked in sites with accessible terminal beach, marine, and stream sport fishing. Specific stocking sites are intended to: (1) increase the numbers of fish caught by anglers beyond historic levels; or (2) establish a new fishery. All movement of fish and fish eggs in the state is controlled through regulations in Title 5 of the Alaska Administrative Code and is further governed by specific policies of the Department of Fish and Game that address fish genetics, disease concerns, lake stocking, and management of the resultant fisheries. This plan is significant because it serves as the approving document supporting all fish transport permits authorizing the transportation and release of fishes for the recreational fish-stocking program. This plan is reviewed and updated annually by many departmental staff, the public, and interested agencies. Since a major funding source for the projects in this plan is federal money administered through the U.S. Fish and Wildlife Service, they also review and approve the plan.

Locations not listed in this plan will not be stocked for recreational fishery enhancement until the public has been notified of the stocking proposal and has had an opportunity to comment. Any amendments to the plan include a public notice in local newspapers, a minimum 10-day review and comment period, and formal agency review of all comments prior to making a decision on whether to stock fish in the new location. On occasion, there are compelling reasons to discontinue a stocking project. Loss of public access, management conflicts with other pre-existing fisheries, or poor survival of stocked fish have caused the cancellation of stocking projects. In such cases, the department may discontinue or completely eliminate the stocking project. Moreover, if fishery plan objectives are not being met, the project may be terminated or modified.

It is important to recognize the dynamic nature of a complex recreational fish-stocking program. Several hatcheries located across the state in southeast and southcentral Alaska are involved. More than **7 million fish** from dozens of stocks and species will be released at many hundreds of locations statewide. The recreational stocking program is continually changing depending on the success of prior fish plants, angler preferences, acquisition of public lands, human population growth, availability of funding, hatchery limitations, and recreational trends. To the extent possible, anglers and the general public will be alerted to any significant departure from the plan. In effect, this plan is open for continual review by public and staff. Recommendations are always welcomed and considered. This plan is formally reviewed and updated annually.

Anadromous species (salmon) are released as fingerling or smolt depending on the stocking site and the intent of the program. Fingerlings are often planted in lakes underutilized by rearing natural stocks or with no natural stocks due to barriers to returning adults. Depending on the species, fingerling may rear for one or two years before becoming smolt and migrating to sea. Hatchery-reared smolt go directly to sea when released into fresh water and do not compete with natural rearing fish. Smolt may also be released directly into the marine environment or held in saltwater rearing pens for additional growth before release.

The majority of resident species (rainbow trout, Arctic char, grayling, and landlocked salmon) are stocked in landlocked lakes that initially contained no natural sport fish. Resident species are stocked in lakes as fry, fingerling, subcatchable, or catchable depending on the species, the release site, and the intent of the program. Guidelines for lake stocking are included in the Sport Fish Division Lake Stocking Policy (Appendix A).

Egg take numbers are based on average fecundity and estimates of hatchery survival from egg to fry. In many instances, long-term hatchery rearing of fish is necessary prior to release. It would therefore be unusual to have exactly the planned number of fish from every hatchery lot available for stocking. It is often necessary for departmental staff to make minor changes in fish numbers, stock, or exact release location to accommodate the variables in fish production. This is particularly true for anadromous species that have a brief, biological "window" of time during which they can successfully be released. Therefore, the actual number available for stocking may deviate by as much as 10% from the planned number in this document. Such variations are viewed as a normal and acceptable component of the stocking program.

Until September of 2005, Elmendorf Hatchery used warm-water effluent from the Elmendorf Power Plant to heat hatchery process water. The power plant closed in September 2005, and the loss of heated effluent resulted in changes to the catchable rainbow trout and anadromous Chinook salmon stocking programs.

The catchable rainbow trout program transitioned from a one-year, warm-water rearing program to a two-year, cold-water rearing program. Fish reared in cold water will average 5 to 6" at stocking. A shortfall in rainbow trout broodstock in 2006 resulted in a reduced number of fingerlings stocked in 2006 and a reduced number of catchable-sized rainbow trout available for stocking in 2008. Catchable rainbow trout will be stocked at pre-2005 stocking levels for the remaining years in this plan.

Due to lack of rearing space, Chinook salmon smolt production was reduced. ADF&G discontinued stocking Chinook salmon smolt near Whittier in 2006 and Seward Lagoon in 2007 and reduced the number of smolt stocked at four other release sites by approximately 50,000 fish each in 2007.

DNA from the parasite *Myxobolus cerebralis* was recently detected in some rainbow trout at the Elmendorf Hatchery. This parasite may cause whirling disease in salmonids; however, neither the parasite nor the disease has been observed in the hatchery fish. As a precaution, fish reared at Elmendorf Hatchery will not be released into open watersheds; they may be released into landlocked lakes only. Elmendorf Hatchery houses most of the catchable release programs for Arctic char, Chinook salmon, and rainbow trout. Catchable fish normally stocked into non-landlocked lakes have been reallocated to landlocked lakes only. In some cases, fingerling or subcatchable sized fish will be stocked into non-landlocked sites instead. Fingerling and subcatchable sized fish are reared at Fort Richardson Hatchery, and the stocking restrictions do not apply to fish reared at that facility.

Two new hatcheries, one in Fairbanks and one in Southcentral Alaska, are in the planning stages. These facilities will allow for expansion of the stocking program in the next three to four years. Because these facilities will use well water only, the stocking of catchable fish into non-landlocked lakes will resume once the new hatcheries are operating.

When reviewing the tables listing the planned releases of fish, the following terms are used.

<u>Term</u>	<u>Definition</u>
REGION:	Sport Fish Division Region I = Southeast Alaska; Region II = Southcentral Alaska; Region III = Interior Alaska.
AREA:	Division of Sport Fish Management Area.
FISHERY PLAN:	Management plan describing fishery enhancement objectives. A synopsis of each plan appears in this stocking plan to support proposed hatchery releases of fish.
HATCHERY:	Facility where fish are produced.
RELEASE SITE:	Lake, stream, or marine location to be stocked.
ANADROMOUS:	Either YES (these fish are being planted in a location where they can go to sea) or NO (these fish are being planted in a landlocked lake or are a freshwater resident species).
LIFESTAGE:	FRY = fish less than 1 gram in weight; FINGERLING = anadromous coho or any resident fish ranging from 1 to 4 grams; SMOLT = anadromous fish ranging from 1 to 20 grams, depending on species; SUBCATCHABLE = resident fish generally ranging from 15 to 70 grams; CATCHABLE = resident or landlocked fish weighing greater than 70 grams; BROODSTOCK = resident fish older than 2 years of age.
PLOIDY:	Fish proposed for stocking are 2N = diploid, having 2 sets of chromosomes which is the normal number; or 3N = triploid, having 3 sets of chromosomes rendering the fish sterile; triploid rainbow trout released are from all-female populations. If this option is not listed, all fish stocked are from diploid populations.
TARGET RELEASE SIZE:	Approximate minimum size in grams that the fish should be at release.
TARGET RELEASE DATE:	Approximate date before which the fish should be released.
2008-2012:	Numbers of fish requested, by year, species, and lifestage for the stocking location. However, these numbers must be viewed more realistically as a target range, with plus or minus 10% being acceptable.

Sport Fish 5-Year Stocking Plan

Summary of all planned stockings for recreational fishing in Alaska for 2008 through 2012.

24-Jan-08

Species	2008 Projected	2009 Projected	2010 Projected	2011 Projected	2012 Projected
Arctic Char					
Catchable	40,975	34,150	40,975	36,973	37,248
Fingerlings	0	0	2,000	0	2,000
Subcatchable	30,275	47,975	2,143	26,113	2,143
Arctic Char	71,250	82,125	45,118	63,086	41,391
Chinook Salmon					
Catchable	119,100	126,000	137,000	137,000	137,000
Smolt	4,515,000	4,600,000	4,650,000	4,650,000	4,650,000
Subcatchable	14,000	14,000	14,000	14,000	14,000
Chinook Salmon	4,648,100	4,740,000	4,801,000	4,801,000	4,801,000
Coho Salmon					
Fingerling	295,220	334,720	295,220	304,720	295,220
fingerling/smol	5,000	5,000	5,000	5,000	5,000
Smolt	1,165,000	1,165,000	1,165,000	1,165,000	1,165,000
Subcatchable					
Coho Salmon	1,465,220	1,504,720	1,465,220	1,474,720	1,465,220
Grayling					
Catchable	1,100	1,100	1,100	37,030	35,090
Fingerling	54,700	46,300	45,300	44,300	45,300
Grayling	55,800	47,400	46,400	81,330	80,390

Species	2008 Projected	2009 Projected	2010 Projected	2011 Projected	2012 Projected
Rainbow Trout					
Broodstock	1,140	1,175	1,140	1,175	1,140
Catchable	228,920	270,500	270,000	340,760	342,760
Fed Fry	120,000	120,000	0	0	0
Fingerling	1,030,050	1,001,430	1,036,850	774,150	865,850
Subcatchable	300	300	300	300	300
Rainbow Trout	1,380,410	1,393,405	1,308,290	1,116,385	1,210,050
Grand Total:	7,620,780	7,767,650	7,666,028	7,536,521	7,598,051

LAKE STOCKING POLICY FOR SPORT FISH DIVISION

INTRODUCTION

Lake stocking is an integral component of the Alaska Department of Fish and Game (ADF&G) Sport Fish Division hatchery program. Lakes throughout Alaska have been stocked with a variety of sport fish since 1952. Initial fish stocking included introduction of species and fish stocks from the Pacific Northwest, as well as moving Alaska stocks of fish into non-native areas. These types of stockings were acceptable management practices at the time, but they would not be allowed today. Currently, over 200 lakes in Southeast, Southcentral and Interior Alaska are stocked with hatchery-produced fish.

Fish stocking is stringently regulated in Alaska. Title 16 of the Alaska Statutes and Title 5 of the Alaska Administrative Code specifically addresses the transportation and possession of live fish. The statutes and regulations do not require specific use of species, life stage, and genetic type. Fishery managers need guidelines relating to attributes such as the presence of inlets/outlets and native species to determine which stocking products can be stocked into specific lakes. This policy is intended to guide Sport Fish Division lake stocking projects that benefit recreational anglers. Periodic updates of this policy will be necessary to keep it abreast of changes in management philosophy and hatchery technology.

PLANNING

Sites for stocking fish are proposed, reviewed and approved through an ADF&G planning process. Sport Fish Division Area Management Biologists or regional stocking program staff initiate all stocking requests for their area of responsibility. Public inquiries relative to lake stocking should be directed to these people. They will investigate the ability of the lake to sustain fish, public access opportunities, and lake and outlet characteristics. A recommendation to stock or not to stock the lake will be made based on the investigation results and appropriate lake stocking guidelines.

Almost all Sport Fish Division lake stocking is funded with Federal Aid in Sport Fish Restoration funds. Therefore each lake stocking project must comply with rules outlined in the "Federal Aid Manual" and other criteria specified by the Division of Federal Aid, U.S. Fish and Wildlife Service (USFWS).

The primary planning document for lake stocking is the Statewide Stocking Plan for Recreational Fisheries (SSP). This document describes a five-year plan for stocking projects for recreational anglers and is updated annually. The SSP receives state, federal and public review. Any proposed lake stocking should appear in the SSP one year or more prior to the initial stocking.

PERMITTING

Once the planning phase of a stocking project is complete, a Fish Transport Permit (FTP) must be obtained. The FTP is required as part of authorization for possession, transport, and release of live fish within the state (5 AAC 41.005). An FTP can be obtained by filling out a detailed application that contains all information pertinent to the project. Each application is reviewed by a cross-section of people within ADF&G and submitted to the Commissioner of ADF&G with a recommendation for approval or denial.

Numerous Sport Fish Division stocked lakes may be grouped together on a single FTP. The primary groupings are organized by species, genetic type and life stage. Multiple life stages can be included on a single FTP. Secondary groupings can be organized by lake category and geographic area.

All lake stocking FTPs will be issued for a fixed period. Sport Fish Division has selected a maximum period of 5 years. All FTPs for each species are scheduled to expire simultaneously. Expiration of FTPs for a species will trigger an internal review of the stocking program for that species. The expiration dates by species are as follows:

Species	Expiration Date
Arctic char	12/31/08
King salmon	12/31/09
Rainbow trout – all genetic types	12/31/10
Lake trout	12/31/10
Arctic grayling	12/31/11
Coho salmon	12/31/12

Following review, FTPs may be issued or amended to extend the effective date for another 5-year period.

LAKE CATEGORIES

Prior to stocking, a lake must be classified into one of five categories. *Category 1* lakes are landlocked or connected lakes from which fish cannot escape. These lakes have no outlet stream with direct or indirect access to an open system that eventually leads to saltwater. *Category 2* lakes have intermittent outlets. A small stream may flow out of the lake during high water periods. The incidence of high water periods is usually less than 2 weeks per year. Fish may periodically escape and interact with wild fish populations. However, the incidence of escapement is low and the impact is usually negligible. *Category 3* lakes have barred or weired outlets. A barred outlet has a waterfall or other natural structure that prevents fish passage into or out of the lake. A weired outlet has a man-made structure that prevents fish passage. Fish may periodically escape *Category 3* lakes and impact wild fish populations. However, the incidence of escapement is low and the impact is usually negligible. *Category 4* lakes are prone to floods. These are small lakes or ponds usually located in the floodplain of a stream and subject to flooding during high stream water flows. Fish can leave the system during floods. The number of fish involved is small and the impact on wild stocks of fish is assumed to be low. *Category 5* lakes have open outlets. Fish can pass freely in and out of the system. The potential impact to wild fish populations is high. The magnitude of impact depends on the species stocked and the wild stocks present.

STOCKING PRODUCTS

Rainbow trout

Rainbow trout is the primary hatchery product used in lake stocking. All rainbow trout are from a captive broodstock maintained at Fort Richardson Hatchery. The broodstock is descended from wild Swanson River rainbow trout. We stock 2 genetic types of rainbow trout: 1) mixed sex diploid fish which are normal fish capable of reproduction; and 2) all-female triploid fish which are female fish not capable of reproduction.

Numerous sizes of rainbow trout are stocked. Excess broodstock at Ft. Richardson Hatchery are periodically culled for stocking. Rainbow trout broodstock are 1 to 3 years old and usually weigh 0.2 to 1.0 kg. Catchable rainbow trout are 1 year old and weigh an average of 100g. Subcatchable rainbow trout are 6 months to 1-year-old and weigh between 15 and 60 g. Fingerling rainbow trout are usually 2 to 4 months old and weigh between 1 and 4 g. Rainbow trout fry are less than 2 months old and usually weigh less than a gram.

Arctic Grayling

Arctic grayling are stocked extensively in many Southcentral and Interior Alaska lakes. A few lakes in Southeast Alaska are also stocked. All hatchery Arctic grayling are from eggs taken from two wild stocks of fish (Tanana

River drainage and Moose Lake-Copper River drainage). No captive broodstock is maintained in the hatchery. Fingerling Arctic grayling are usually 2 to 4 months old and weigh between 1 and 4 g. Arctic grayling fry are less than 2 months old and usually weigh less than a gram. Arctic grayling sac-fry are newly hatched and weigh less than 0.1 g. The Arctic grayling catchable program was suspended after stocking in 2003.

Arctic Char

Arctic char are stocked in many Interior and a few Southcentral Alaska lakes. Hatchery Arctic char are from eggs taken from a wild stock of fish from the Bristol Bay area, and/or from a captive broodstock maintained at Fort Richardson Hatchery. Numerous sizes of Arctic char are stocked. Catchable Arctic char are 1½ years old and weigh an average of 100g. Subcatchable Arctic char are 6 months old and weigh between 15 and 60 g. Fingerling Arctic char are usually 4 to 6 months old and weigh between 5 and 10 g.

Lake Trout

The lake trout stocking program was discontinued after the 2001 stocking season. Lake trout were stocked in a few Interior and Southcentral Alaska lakes. All hatchery lake trout were from eggs taken from a wild stock of fish. The broodstock used was from Seven-mile Lake (Yukon River drainage) near Paxson. No captive broodstock was maintained in the hatchery. Due to the difficulty of conducting a wild eggtake and the longevity of this species, eggs were only taken every other year. Two sizes of lake trout were stocked. Catchable lake trout were 1½ years old and weighed an average of 100g. Fingerling lake trout were usually 4 to 6 months old and weighed between 5 and 10g.

Coho Salmon

Coho salmon are stocked in many Interior and Southcentral Alaska lakes. Sport Fish Division use of coho salmon to stock lakes in Southeast Alaska is limited. All hatchery coho salmon used for lake stocking are from eggs taken from hatchery-produced adults. Broodstock used may vary depending on availability. Two sizes of coho salmon are stocked. Fingerling coho salmon are 2 to 4 months old and weigh between 1 and 5 g. Subcatchable coho salmon are 1-year-old and weigh an average of 20 g.

Chinook Salmon

Chinook salmon are stocked in many Interior and Southcentral Alaska lakes and a few Southeast Alaska lakes. All hatchery Chinook salmon used for lake stocking are from eggs taken from hatchery-produced adults. Broodstock used may vary depending on availability. Two sizes of Chinook salmon are stocked. Catchable Chinook salmon are 1-year-old and weigh an average of 100 g. Subcatchable Chinook salmon are 6 to 8 months old and weigh an average of 20 g.

GENETIC AND DISEASE CONCERNS

Release of fish from hatcheries to lakes is governed by two complex policies. The genetic policy (Genetic Policy, Alaska Department of Fish and Game, 1985) was developed to protect the genetic integrity of wild and hatchery stocks. The disease policy (Regulation Changes, Policies and Guidelines for Alaska Fish and Shellfish Health and Disease Control, Alaska Department of Fish and Game, 2003) was developed to prevent the spread of fish diseases to wild and hatchery fish stocks.

The degree of genetic and pathology concern depends on the species of fish stocked and the category of lake. There are no genetic or disease concerns with the stocking of any species of fish in a category 1 (landlocked) lake. The fish cannot escape the lake and cause problems with wild fish populations. Also, there is no outlet to transport water borne pathogens.

There are however, both genetic and disease concerns with stocking fish in category 2 (intermittent outlet), 3 (weired or barriered outlet), and 4 (flood prone) lakes. Whenever stocked fish escape the lake of origin, genetic mixing with wild stocks of fish and the spread of pathogens could occur.

Category 5 (open outlet) lakes produce severe genetic and disease concerns. Fish can enter and leave most open outlet systems at will. Interaction with wild stocks of fish is probable. Stocking fish in lakes with open outlets is generally not acceptable from either a genetics or disease perspective. However, select circumstances exist at some lakes that ameliorate genetic and disease concerns.

MANAGEMENT CONCERNS

Management concerns associated with stocked lakes are minimal. No commercial fisheries are involved and there are no conservation concerns with stocked fish. Sport anglers are the sole harvesters of the Sport Fish Division lake stocking program. Some lake stocking projects may require a change in area sport fishing regulations. Most area regulations are conservative in order to preserve wild stocks of resident fish. Regulations on stocked lakes are generally more liberal. Sport anglers are encouraged to harvest hatchery-produced fish and preserve wild stocks of fish. Sport Fish Division will attempt to maintain liberal harvest limits on all stocked lakes.

Other management issues associated with lake stocking are public access and the sale of fish. Production of all hatchery fish is paid for with funds collected from sport anglers. Consequently, no fish should be stocked unless the public has access to catch the fish. Sport Fish Division will not stock fish in a lake unless there is legally designated public access. In addition, Sport Fish Division hatchery produced fish may not be sold to private individuals since the fish were produced with public funds.

STOCKING GUIDELINES

Category 1 lakes can be stocked with any hatchery product (Table 1). Both types of rainbow trout, Arctic grayling, landlocked salmon, Arctic char, or lake trout are acceptable for stocking. There are no genetic or disease concerns.

Category 2, 3 and 4 lakes can be stocked with all-female triploid rainbow trout. These fish are sterile and cannot interbreed with wild stocks of rainbow trout. All fish for stocking of Category 2, 3 and 4 lakes must be disease free at the time of stocking.

Category 2 and 3 lakes may only be stocked with the local broodstock of Arctic grayling and landlocked salmon if native populations of these species are present in the drainage. Escaping the lake and mixing with native fish will have minimal genetic impact. Some Category 2 and 3 lakes may be stocked with lake trout. The life history of this fish makes it highly unlikely that lake trout will escape the lake, establish a naturally reproducing population and compete with native fish.

Category 4 lakes cannot be stocked with landlocked salmon or Arctic char. However, Category 4 lakes may be stocked with grayling or lake trout if the broodstock is indigenous to the drainage.

Category 5 lakes should not be stocked except under special circumstances. All-female triploid rainbow trout may be stocked into systems that do not contain native rainbow trout. Reproduction will not occur. Any stocking in a Category 5 system should be solely for the purpose of creating a significant fishery for species not readily available in the area. All stocking products for Category 5 lakes must be disease free at the time of stocking.

Table 1: Classification of lakes and recommended stocking products for Sport Fish Division lake stocking projects.

Lake Type ¹	Lake Category ²	Rainbow Trout ³		Arctic Grayling	Landlocked Salmon	Arctic Char	Lake Trout
		Mixed-Sex	All-Female Triploid				
Landlocked	1	Yes	Yes	Yes	Yes	Yes	Yes
Connected Lakes	1	Yes	Yes	Yes	Yes	Yes	Yes
Intermittent Outlet	2	No	Yes	Maybe ⁴	Maybe ⁴	No	Maybe ⁵
Weired	3	No	Yes	Maybe ⁴	Maybe ⁴	Maybe ⁵	Maybe ⁵
Barriered Outlet	3	No	Yes	Maybe ⁴	Maybe ⁴	Maybe ⁵	Maybe ⁵
Flood Prone	4	No	Yes	Maybe ⁴	No	No	No
Open Outlet	5	No	No	No	No	No	No

^{1,2,3} See Table 2 for definition of terms.

⁴ If a wild population of a species is present in the drainage, only strains of fish indigenous to the drainage maybe stocked. If there are no wild populations of this species, it may be stocked if there is no possibility of the stocked fish creating a naturally population.

⁵ The life history of this fish makes it highly unlikely that fish will escape the lake, establish a naturally reproducing population and compete with native fishes.

Table 2. Definition of terms used for lake classification and stocking products.

Lake Type	Definition
Landlocked	There is no outlet; fish cannot escape lake.
Connected Lakes	Two or more lakes connected by streams, but no outlet for lowest lake in the drainage. Fish cannot escape lowest lake.
Intermittent Outlet	Lake is usually landlocked, but fish can escape if high water flows occur.
Weired	Outlet stream is blocked by man-made structure. Fish cannot escape unless weir fails or is compromised.
Barriered Outlet	Outlet stream is blocked by natural structure. Fish cannot usually pass through the barrier and survive.
Flood Prone	Lake is landlocked, but is subject to flooding during high water periods. Fish can escape during floods.
Open Outlet	Lake has outlet stream and fish can move into and out of lake.

Lake Category	Definition
Category 1	Lakes are truly landlocked and fish cannot exit the system. There is no interaction with any wild fish populations except those indigenous to the lake. No restrictions on fish stocking.
Category 2	Lakes with an intermittent outlet. Snowmelt during heavy snow years may fill lake basin and create a small outlet stream. Fish may periodically escape from a Category 2 lake and compete with wild fish populations. However, the incidence of stocked fish escapement is low. The danger to wild fish populations is also low. Moderate restrictions on fish stocking.
Category 3	Includes weired lakes and lakes with barriered outlets. Fish may periodically escape from a category 3 lake and compete with wild fish populations. However, the incidence of stocked fish escapement is low. The danger to wild fish populations is also low. The primary concern is the passage of pathogens from stocked fish to wild fish. Moderate restrictions on fish stocking.
Category 4	Lakes are flood prone lakes. These are small lakes or ponds usually located in the floodplain of a stream and subject to flooding during high stream water flows. Fish can leave the system during flood periods. Moderate to severe restrictions on fish stocking.
Category 5	Lakes with open outlets. Fish are free to pass in and out of the system at will. Stocking not recommended. Stocking may occur under severe restrictions.

Rainbow Trout Population	Definition
Mixed-Sex	These are normal fish that are capable of reproduction.
All-Female Triploid	These fish have been genetically altered so that all the fish are females, sterile, and cannot reproduce.
Miscellaneous Terms	
Drainage	All of the waters comprising a watershed, including tributary rivers, streams, sloughs, ponds and lakes which contribute to the supply of the watershed.

REFERENCES

Alaska Statutes Title 16 Chapter 5. Alaska Department of Law. Juneau, Alaska.

Genetic Policy. 1985. Alaska Department of Fish and Game. 333 Raspberry Road, Anchorage, Alaska.

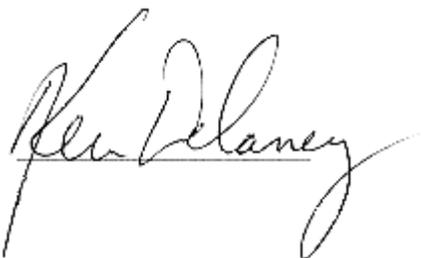
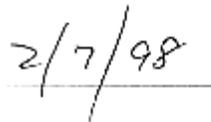
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Statewide Stocking Plan for Recreational Fisheries. 1998. Alaska Department of Fish and Game, Sport Fish Division. 333 Raspberry Road, Anchorage, Alaska.

This policy has been thoroughly reviewed by Sport Fish Division staff in all regions of the State. This policy is approved as an official policy of the Alaska Department of Fish and Game, Sport Fish Division.

Kevin Delaney
Director
Sport Fish Division

Date

A handwritten signature in cursive script that reads "Kevin Delaney". The signature is written in black ink and is positioned above a horizontal line.A handwritten date "2/7/98" in black ink, positioned above a horizontal line.

DIVISION OF SPORT FISH

LAKE STOCKING POLICY