

I-1. Southern Southeast Chinook Salmon Enhancement

The primary purpose of this program is to increase Chinook salmon fishing opportunities at Blind Slough, in the local marine sport fishery around Petersburg and Wrangell, and additional marine recreational fisheries in Southeast Alaska. Blind Slough is the intertidal outlet of Crystal Creek and Crystal Lake, which is the water source for Crystal Lake Hatchery. Blind Slough is located on the Petersburg road system approximately 15 miles south of town. Sport fishing is the most popular recreational activity at Blind Slough and receives intensive Chinook salmon fishing effort by residents and visitors between late-May and July.

Sport Fish Division began a cooperative agreement with the Southern Southeast Regional Aquaculture Association (SSRAA) in July 1996, to provide releases of Chinook salmon smolt for Ketchikan area fisheries. To comply with fish transport permits, the division has implemented sampling projects at all nearby Chinook salmon spawning streams to determine if any straying occurs. Utilizing production of the Crystal Lake Hatchery (CLH) and SSRAA facilities in Ketchikan will result in the following releases of Chinook salmon:

1. *Ketchikan Area*

- a) Annual release of 700,000 Chinook salmon at SSRAA Neets Bay facilities. This release will be comprised of 250,000 smolt produced by SSRAA and 450,000 smolt produced by the division's CLH facility near Petersburg. Both releases will be from Chickamin River ancestral stock.
- b) Annual release of 750,000 Chinook salmon smolt at SSRAA Whitman Lake (Herring Cove) facility. These smolt will be produced by SSRAA Whitman Lake facility using Chickamin River ancestral stock.

2. *Petersburg Area*

- a) Annual release of 600,000 Chinook salmon smolt at Crystal Lake Hatchery on Blind Slough. These fish will be from Andrew Creek ancestral stock and will be used as broodstock for future releases at the hatchery and Anita Bay. NOTE: Funding of Chinook salmon smolt reared at Crystal Lake Hatchery for release at Anita Bay comes from SSRAA through a cooperative agreement.

Objectives

1. Generate 20,000 additional angler-days of salmon fishing in the Ketchikan area marine sport fishery resulting from releases of 700,000 Chinook salmon smolt at Neets Bay.
2. Provide for an additional harvest of up to 10,000 Chinook salmon in the Ketchikan area marine sport fishery resulting from the release of 700,000 Chinook salmon smolt at Neets Bay.
3. Generate 22,000 additional angler-days of salmon fishing in the Ketchikan area marine and shoreline sport fisheries resulting from releases of 750,000 Chinook salmon smolt by SSRAA at their Whitman Lake Hatchery.
4. Provide for an additional harvest of up to 15,000 Chinook salmon in the Ketchikan area marine and shoreline sport fisheries resulting from releases of 750,000 Chinook salmon smolt by SSRAA at their Whitman Lake Hatchery.
5. Generate 3,500 angler-days of salmon fishing effort per year at Blind Slough, and 3,000 angler-days effort in the Wrangell Narrows marine boat fishery that in part result from releases of 600,000 Chinook Salmon at Crystal Lake Hatchery. Additionally, enhance angling effort levels in the Petersburg and other non-terminal marine sport fisheries as Chinook salmon return to Crystal Lake Hatchery.
6. Provide for harvests of 2,000 Chinook salmon per year at Blind Slough and a harvest of 2,000 Chinook salmon in the Wrangell Narrows marine boat fishery that result from releases of 600,000 Chinook Salmon at Crystal Lake Hatchery. Additionally, enhance Chinook salmon harvest levels in the Petersburg and other non-terminal marine sport fisheries as Chinook salmon return to Crystal Lake Hatchery.

I-1. Southern Southeast Chinook Salmon Enhancement (continued)

Actions

1. Annually stock 600,000 Chinook salmon smolt in Crystal Creek of which at least 60,000 fish will be adipose fin-clipped and tagged with coded wire.
2. Annually stock approximately 450,000 Chinook salmon smolt in Neets Bay near Ketchikan, of which at least 45,000 fish will be adipose fin-clipped and tagged with coded wire. These fish will be added to 250,000 fry produced by SSRAA for a total annual release of 700,000.
3. Annually stock up to 750,000 Chinook salmon smolt at SSRAA's Whitman Lake Hatchery in Ketchikan, of which at least 75,000 fish will be adipose fin-clipped and tagged with coded wire. These releases are incorporated in the Cooperative Agreement between ADF&G, Sport Fish Division and SSRAA to benefit all user groups including sport fishermen in the Ketchikan area.

Evaluations

1. Sport fishing effort and Chinook salmon harvest at Blind Slough and Wrangell Narrows terminal area will be estimated through the Statewide Harvest Survey.
2. Hatchery Chinook salmon harvest in the Petersburg marine boat fishery will be monitored through a coded wire sampling program conducted at the docking facilities in Petersburg.
3. Sport fishing effort and Chinook salmon harvest in the marine boat fishery outside of the terminal area will be monitored through the statewide harvest survey project and a creel survey program conducted at the docking facilities in Petersburg, Wrangell, Ketchikan, Prince of Wales Island, Sitka, and Juneau.
4. Sport fishing effort and Chinook salmon harvest in the marine charter boat fishery will be monitored via the mandatory statewide logbook program.

For Chinook Salmon stocking refer to Table I-KS1.

I-2. Juneau Chinook Salmon Enhancement

The primary purpose of this program is to: 1) increase Chinook salmon fishing opportunities in the Juneau marine-boat sport fishery, 2) provide saltwater shoreline Chinook salmon sport fishing opportunities in Gastineau Channel and Auke Bay, and 3) provide freshwater Chinook salmon fishing opportunities at Fish Creek. The enhancement program is supported through the ongoing production of Chinook salmon smolt that are imprinted and released at three locations in the Juneau area. This enhancement program is carried out by the Douglas Island Pink and Chum Corporation, Inc. through a cooperative agreement with the Alaska Department of Fish and Game, Division of Sport Fish.

In the spring, Chinook salmon smolt are held for imprinting and released from net pens in Fish Creek Pond, Auke Bay near the mouth of Auke Creek, and in Gastineau Channel at Macaulay Salmon Hatchery. Returning adults support a popular sport fishery in a terminal area and provide additional Chinook salmon to common property fisheries in the region. Harvests of hatchery Chinook salmon are especially beneficial at times when abundance of wild Chinook salmon stocks are at lower levels and more restrictive fishing measures must be implemented. Liberalized sport fishing regulations can be implemented in terminal harvest areas where Alaska hatchery Chinook salmon will return. This has provided significant benefits to both resident and non-resident sport anglers.

To date, it appears there is very little straying of hatchery Chinook salmon to local streams¹. A few hatchery Chinook salmon have been seen in nearby streams where there are no wild Chinook populations; and only one has been recovered in the nearby Taku River drainage where a wild population currently exists.

Objectives

1. Provide an additional annual harvest of 2,000 Chinook salmon in the Juneau marine boat sport fishery.
2. Generate 4,500 angler-days of fishing effort per year for Chinook salmon within the Juneau terminal harvest area.
3. Provide an additional harvest of 1,200 Chinook salmon per year at saltwater shoreline areas in the Juneau terminal harvest area and in the freshwaters of Fish Creek.

Actions

1. Annually stock up to 280,000 Chinook salmon smolt in Fish Creek.
2. Annually stock up to 200,000 Chinook salmon into Gastineau Channel at Macaulay Salmon Hatchery.
3. Annually stock up to 90,000 Chinook salmon in Auke Bay near the mouth of Auke Creek.
4. Tagging: Up to 30,000 smolt or 10%, whichever is greater, of the combined Auke Bay and Fish Creek releases will be adipose fin clipped and tagged with coded wire. Up to 30,000 smolt or 10%, whichever is greater, of the Macaulay Hatchery releases will be adipose fin clipped and tagged with coded wire. Three unique tag codes will be used to identify the fish released from each of the four release sites.

¹ Pryor, F., S. McGee, C. Blair, R. Freitag, K. Pahlke, F. Thrower, and S. Kelley. 2005. 2004 Annex: Chinook Salmon Plan for Southeast Alaska. Alaska Department of Fish and Game, Fishery Management Report No. 05-35, Juneau.

I.2. Juneau Chinook Salmon Enhancement (continued)

Evaluations

1. Sport fishing effort and hatchery Chinook salmon harvests from saltwater shoreline areas in the Juneau terminal harvest area, and at Fish Creek will be estimated through the Statewide Harvest Survey.
2. Sport fishing effort and Chinook salmon harvest in the marine boat fishery will be monitored through a creel survey program conducted at launch ramp and docking facilities in Juneau.

For Chinook Salmon stocking refer to Table I-KS1.

I-3. Skagway Area Sport Fishing Enhancement

The purpose of this program is to develop a source of Tahini River Chinook salmon brood for releases in the Juneau, Haines, and Skagway areas and to increase Chinook salmon fishing opportunities in the local marine sport fisheries around Skagway and Haines, as well as provide for in-stream Chinook salmon sport fishing in Pullen Creek. This project is funded by ADF&G through a cooperative agreement with Douglas Island Pink and Chum, Inc. (DIPAC) Hatchery. Funding for this project (\$150,000 for 10 years) is from the sport fishing license surcharge that went into effect in 2006. Taiya Inlet is located approximately 4 miles north of Haines and includes the Skagway boat harbor. Chinook salmon smolt will be imprinted in net pens located in Pullen Creek and migrate into Taiya Inlet after release. Returning adults will be available to anglers fishing near Haines and in Taiya Inlet, a popular terminal area. The shoreline adjacent to Pullen Creek is easily accessible from Skagway.

Objectives

1. Generate 4,000 angler-days of fishing effort per year at the terminal release area in Taiya Inlet.
2. Provide for an additional annual harvest of 2,000 Chinook salmon in the Skagway and Haines marine boat sport fisheries.

Actions

1. Annually stock up to 250,000 Chinook salmon smolt in Taiya Inlet.
2. Tagging: Up to 30,000 smolt or 10%, whichever is greater, of the Taiya Inlet releases will be adipose fin clipped and tagged with coded wire.

Evaluations

1. Sport fishing effort and Chinook salmon harvest at Pullen Creek, Taiya Inlet, Chilkoot Inlet, Lutak Inlet, and other shoreline sites will be estimated through the Statewide Harvest Survey.
2. Hatchery Chinook salmon harvest in the Skagway marine boat fishery will be monitored through a coded wire sampling program conducted at the docking facilities in Skagway. In addition, hatchery Chinook salmon will be sampled in the spring through a creel program at Haines harbors.

For Chinook Salmon stocking refer to Table I-KS1.

I-4. Haines Area Sport Fishing Enhancement

In 2005 the Alaska legislature approved a sport fishing license surcharge to improve fishing opportunity via hatchery production. Department staff identified the Haines area as a location where supplemental production of Chinook salmon could benefit the local fishery. Douglas Island Pink and Chum, Inc. (DIPAC) Hatchery has agreed to conduct this project in 2011-2015. Chinook salmon smolt will be held in saltwater net pens in Lutak Inlet prior to release. Net pens will be located near the outflow of a nearby stream to imprint the smolt to that location. Returning adults will be available to anglers fishing in Lutak Inlet, a popular terminal area near Haines. The shoreline adjacent to Lutak Inlet is easily accessible by road from Haines.

Objectives

1. Generate 4,000 angler-days of fishing effort per year at the terminal release area in Lutak Inlet.
2. Provide for an additional annual harvest of 2,000 Chinook salmon in the Haines marine boat and shoreline sport fisheries.

Actions

1. Annually stock up to 250,000 Chinook salmon smolt in Lutak Inlet.
2. Tagging: Up to 50,000 smolt or 20%, whichever is greater, of the Lutak Inlet releases will be adipose fin clipped and tagged with coded wire.

Evaluations

1. Sport fishing effort and Chinook salmon harvest at Lutak Inlet, Chilkoot Inlet, and other shoreline sites will be estimated through the Statewide Harvest Survey.
2. Hatchery Chinook salmon harvest in the spring Haines marine boat fishery will be monitored through a coded wire sampling program conducted at the docking facilities in Haines. In addition, hatchery Chinook salmon will be sampled through a creel program at the Skagway boat harbor

For Chinook Salmon stocking refer to Table I-KS1.

I-5. Blind Slough Coho Salmon Enhancement

The primary purpose of this program is to mitigate losses of Crystal Creek spawning habitat associated with operation of the Blind Slough Hydroelectric Project, by enhancing coho salmon fishing opportunities at Blind Slough below Crystal Lake Hatchery and in the local marine sport fishery around Petersburg.

Blind Slough is the intertidal outlet of Crystal Creek and Crystal Lake, which is the water source for Crystal Lake Hatchery and Blind Slough Hydroelectric Project owned and operated by Petersburg Municipal Power & Light. Blind Slough is located on the Petersburg road system approximately 15 miles south of town. Sport fishing is the most popular recreational activity at Blind Slough and receives coho salmon fishing effort by residents and visitors during August and September.

Objectives

1. Provide for a harvest of 1,500 coho salmon per year at Blind Slough and in the Wrangell Narrows marine boat sport fishery.
2. Generate 3,500 angler-days of salmon fishing effort per year in Blind Slough and 3,000 angler days effort in the Wrangell Narrows marine boat fishery that in part result from releases of 150,000 coho salmon at Crystal Lake Hatchery.

Action

1. Annually stock up to 150,000 coho salmon smolt in Crystal Creek of which at least 20,000 fish will be adipose fin-clipped and tagged with coded wire.

Evaluation

1. Sport fishing effort and coho salmon harvest at Blind Slough and Wrangell Narrows terminal area will be estimated through the Statewide Harvest Survey.

For Coho Salmon stocking refer to Table I-SSI.

I-6. Swan Lake Rainbow Trout Enhancement

The primary purpose of this program is to increase the availability of rainbow trout in Swan Lake located in downtown Sitka to improve angler success. Swan Lake is the site of an annual Junior Trout Derby for young anglers and receives a considerable amount of fishing pressure during the open water season. Fish resident to the system include cutthroat and rainbow trout and Dolly Varden. Regulations adopted by the Board of Fisheries closed the inlet stream to fishing to protect the spawning and rearing trout populations. This stocking project will not necessarily increase the amount of fishing effort per year, but it will provide a higher degree of success for derby anglers and general public who fish Swan Lake.

Objectives

1. Generate 200 angler-days of fishing effort per year for young anglers fishing Swan Lake.
2. Provide for a harvest of 150 rainbow trout per year at Swan Lake.

Action

1. Annually supplement the existing rainbow trout population in Swan Lake with approximately 300 subcatchable rainbow trout from nearby Sukoi Lake.

Evaluation

1. A portion of transferred fish will be given a mark prior to release at Swan Lake, and derby catch and harvest will be monitored and sampled to estimate annual transfer contributions. When possible, on site sampling will be conducted at Sukoi Lake to assess stock status.

For Rainbow Trout stocking refer to Table I-RT1.

I-7. Juneau Road System Non-Anadromous Enhancement Program

The primary purpose of this program is to provide sport fishing opportunities in fresh water by stocking catchable and subcatchable salmon annually. The two primary sites that are stocked consist of freshwater lakes easily accessible from the Juneau road system. Twin Lakes is an artificial landlocked lake covering an area of approximately 85 acres and it is located within Juneau's largest city park. Glacier, Moraine and Crystal lakes are located in the Mendenhall Glacier Recreation Area and together they are approximately 15 acres in size. Chinook salmon are the primary stocking products for these lakes; however coho salmon may be used at Twin Lakes if a sufficient number of Chinook salmon are not available.

Because no wild Chinook stocks are present in the immediate area, the use of Chinook salmon for stocking fresh waters in the Juneau area minimizes possible impacts on the genetic integrity of wild fish populations. In addition, the lakes selected for stocking in the Juneau area are Category 2 and 3 lakes and therefore reduces the incidence of escaping stocked fish. Furthermore, these fish are from the same stock raised at nearby Macaulay Hatchery and used in Juneau area salt water releases. The incidence of these fish straying into Southeast Alaska drainages that contain wild Chinook salmon has been very low. The coho salmon stock that would be used for stocking in Twin Lakes is also released into salt water at nearby Macaulay Hatchery. The possibility for negative impacts associated with the release of coho salmon into Twin Lakes would be minimal as no wild coho salmon are present in Twin Lakes. The incidence of stocked fish leaving Twin Lakes and straying to nearby streams is low.

The fish stockings in Twin Lakes have supported a popular annual event known as Family Fishing Day, summer-long fishing, and winter ice fishing when conditions allow. Glacier, Moraine and Crystal lakes are located in a more natural setting yet they are close to and easily accessible from the large residential portion of the Mendenhall Valley. Fish produced for these stockings come from the Macaulay Salmon Hatchery, operated by Douglas Island Pink and Chum, Inc. (DIPAC), and funding for the project is provided by ADF&G.

On occasion, other fish suitable for stocking become available for release into Twin Lakes, which further enhances sport fishing opportunities. Given the hydrological separation of Twin Lakes, the lack of wild stocks present, and the long history of stocking at the lakes, the lakes are an ideal destination for surplus fish resulting from other aquaculture projects. On rare occasions, wild-stock fish might be transported and released into Twin Lakes. Species might include rainbow and steelhead trout, cutthroat trout, Dolly Varden, as well as Chinook and coho salmon.

Objectives

1. Generate 3,000 angler-days of fishing effort per year for landlocked salmon at Twin Lakes; and Glacier, Moraine, and Crystal lakes.
2. Provide for a harvest of 5,000 landlocked salmon per year at Twin Lakes; and Glacier, Moraine, and Crystal lakes.

Actions

1. Annually stock up to 7,500 catchable Chinook and/or coho salmon into Twin Lakes just prior to Family Fishing Day.
2. Annually stock up to 1,500 catchable Chinook into Glacier, Moraine and Crystal lakes in the spring.
3. If fish and hatchery space are available, annually stock up to **2,100** subcatchable Chinook or coho salmon into Twin Lakes and 1,500 subcatchable Chinook salmon into Glacier, Moraine, and Crystal lakes in late summer or early fall to provide additional fish for the winter ice fishery.
4. Whenever other suitable hatchery fish (and on rare occasions wild-stock fish) become available, use such fish to further enhance sport fishing at Twin Lakes.

Evaluation

1. Sport fishing effort and salmon harvest at Twin Lakes; and Glacier, Moraine, and Crystal lakes will be estimated through the Statewide Harvest Survey and anecdotal assessments during Family Fishing Day and other peak fishing times and events.

Table I-7a. Stocking actions for Juneau road system non-anadromous enhancement program.

Lake	Lake Size (Acres)	Lake Category	Species	Stocking Schedule
Twin Lakes	85	3	Chinook	Biannually (spring and fall)
Glacier	6	3	Chinook	Biannually (spring and fall)
Moraine	4	3	Chinook	Biannually (spring and fall)
Crystal	5	2	Chinook	Biannually (spring and fall)

For Chinook Salmon stocking refer to Table I-KS1; Coho Salmon in Table I-SS1.

REGION I: CHINOOK SALMON

Sport Fish 5-Year Stocking Plan

18-Nov-10

Table I-KS1. Planned releases of Chinook salmon in Region I listed by area and release site. (Page 1 of 2)

Fishery Plan	Area	Hatchery	Release Site	Lifestage	Anadromous	2011 Projected	2012 Projected	2013 Projected	2014 Projected	2015 Projected
I-4	Haines	Macaulay	Lutak Inlet	Smolt	Yes	250,000	250,000	250,000	250,000	250,000 (a)
Total:						250,000	250,000	250,000	250,000	250,000
I-7	Juneau	Macaulay	Mendenhall Ponds	Catchable	No	1,500	1,500	1,500	1,500	1,500 (b)
I-7	Juneau	Macaulay	Twin Lakes	Catchable	No	7,500	7,500	7,500	7,500	7,500 (b, c)
Total:						9,000	9,000	9,000	9,000	9,000
I-2	Juneau	Macaulay	Auke Ck	Smolt	Yes	90,000	90,000	90,000	90,000	90,000 (b)
I-2	Juneau	Macaulay	Fish Ck	Smolt	Yes	280,000	280,000	280,000	280,000	280,000 (b)
I-2	Juneau	Macaulay	Macaulay	Smolt	Yes	200,000	200,000	200,000	200,000	200,000 (b)
Total:						570,000	570,000	570,000	570,000	570,000
I-7	Juneau	Macaulay	Mendenhall Ponds	Subcatchable	No	1,500	1,500	1,500	1,500	1,500 (b)
I-7	Juneau	Macaulay	Twin Lakes	Subcatchable	No	2,100	2,100	2,100	2,100	2,100 (b, c)
Total:						3,600	3,600	3,600	3,600	3,600
I-1	Ketchikan	Crystal L	Neets Bay	Smolt	Yes	450,000	450,000	450,000	450,000	450,000 (d)
I-1	Ketchikan	Whitman L	Neets Bay	Smolt	Yes	250,000	250,000	250,000	250,000	250,000 (d)
I-1	Ketchikan	Whitman L	Whitman L	Smolt	Yes	750,000	750,000	750,000	750,000	750,000 (d)
Total:						1,450,000	1,450,000	1,450,000	1,450,000	1,450,000
I-1	Petersburg	Crystal L	Blind Slough	Smolt	Yes	600,000	600,000	600,000	600,000	600,000 (d)
Total:						600,000	600,000	600,000	600,000	600,000

REGION I: CHINOOK SALMON

Sport Fish 5-Year Stocking Plan

18-Nov-10

Table I-KS1. Planned releases of Chinook salmon in Region I listed by area and release site. (Page 2 of 2)

Fishery Plan	Area	Hatchery	Release Site	Lifestage	Anadromous	2011 Projected	2012 Projected	2013 Projected	2014 Projected	2015 Projected
I-3	Skagway	Macaulay	Taiya Inlet	Smolt	Yes	250,000	250,000	250,000	250,000	250,000 (b)
				Total:		250,000	250,000	250,000	250,000	250,000
Total Chinook Salmon						3,132,600	3,132,600	3,132,600	3,132,600	3,132,600

Notes:

- (a) Cooperative effort between ADFG and DIPAC is pending.
- (b) Cooperative effort between ADFG and DIPAC.
- (c) Coho salmon may be used for this project if there is a shortage of Chinook salmon.
- (d) Cooperative effort between ADFG and SSRAA

REGION I: COHO SALMON

Sport Fish 5-Year Stocking Plan

18-Nov-10

Table I-SS1. Planned releases of coho salmon in Region I listed by area and release site. (Page 1 of 1)

Fishery Plan	Area	Hatchery	Release Site	Lifestage	Anadromous	2011 Projected	2012 Projected	2013 Projected	2014 Projected	2015 Projected
I-7	Juneau	Macaulay	Twin Lakes	Subcatchable	No					(a,b)
Total:										
I-5	Petersburg	Crystal L	Blind Slough	Smolt	Yes	150,000	150,000	150,000	150,000	150,000 (c)
Total:						150,000	150,000	150,000	150,000	150,000
Total Coho Salmon						150,000	150,000	150,000	150,000	150,000

Notes:

- (a) Up to 14,000 coho salmon may be used for this project if there is a shortage of Chinook salmon. See Region I Chinook salmon table for stocking information.
- (b) Cooperative effort between ADFG and DIPAC
- (c) Cooperative effort between ADFG and SSRAA

REGION I: RAINBOW TROUT

Sport Fish 5-Year Stocking Plan

18-Nov-10

Table I-RT1. Planned releases of rainbow trout in Region I listed by area and release site. (Page 1 of 1)

Fishery Plan	Area	Hatchery	Release Site	Lifestage	Sex	Ploidy	2011 Projected	2012 Projected	2013 Projected	2014 Projected	2015 Projected
I-6	Sitka	-	Swan L	Subcatchable	MX	2N	300	300	300	300	300 (a)
				Total:			300	300	300	300	300
Total Rainbow Trout							300	300	300	300	300

Notes:

(a) Wild fish transferred from Sukoi Lake.