

**2021 ANNUAL MANAGEMENT PLAN**  
**RUTH BURNETT SPORT FISH HATCHERY**

**Alaska Department of Fish and Game**

**Division of Sport Fish**

**Region III**

**May 2021**

## OVERVIEW

The Ruth Burnett Sport Fish Hatchery (RBSFH), located in Fairbanks, will meet the sport fish stocking needs for Region III by providing rainbow trout, Arctic char, lake trout, king and coho salmon for stocking into lakes. Arctic char and rainbow trout eggs originate from captive broodstock housed within the William J. Hernandez Sport Fish Hatchery (WJHSFH) in Anchorage. The other species of fish will originate from local wild brood sources. The RBSFH will use well water for all phases of production and utilize various recirculation technologies to conserve water and heat resources. On site boilers will heat water to accelerate fish growth and will allow the production of a catchable 7-10 inch fish in a single year. In addition to the catchable-sized fish, the production of fingerling and subcatchable sized fish at RBSFH will meet the current and future stocking needs for the Division of Sport Fish Management Region III. Hatchery objectives and performance measures for RBSFH are described in goal three of the *Division of Sport Fish Strategic Plan, 2015 – 2019.*

ADF&G Division of Sport Fish annually publishes a *Statewide Stocking Plan for Sport Fish*. This document contains specific release sites, sizes, and numbers of fish to be released over a 5-year period. All releases for the current year have received departmental and public review.

### New this year

There are two significant changes to this Annual Management Plan from the previous year:

- No Arctic grayling releases will occur this year due to budgetary reductions in 2020 and 2021.
- Triploid Ship Creek stock King salmon will be stocked instead of Salcha or Chena River stocks used in the past because of continued low returns.

## PRODUCTION PLAN

### Incubation Capacity

Incubation is provided by 12 Heath stacks, with 14 usable trays per stack, for a total of 168 usable trays. Two Heath stacks are grouped with a common header tank with water supplied to each half-stack (7 trays).

Current incubation capacity by species:

- Rainbow trout: 1,176,000 eggs
- Arctic grayling: 210,000 eggs
- Arctic char: 336,000 eggs
- Lake trout: 276,000 eggs
- King salmon: 52,500 eggs
- Coho salmon: 280,000 eggs

## **Rearing Capacity**

Rearing is provided by four 1.3-m<sup>3</sup> circular tanks, twenty 8-m<sup>3</sup> circular tanks, and eight 145-m<sup>3</sup> circular tanks. The 1.3-m<sup>3</sup> tanks will be operated on flow-through only, serving as the initial start-up tanks for Arctic char, lake trout and Arctic grayling. The 8-m<sup>3</sup> tanks will be operated on flow-through and reuse, up to 75%, depending on species and life stage. These tanks will serve as the start-up and early rearing tanks for rainbow trout, Arctic grayling, Arctic char, lake trout, king salmon and coho salmon as well as grow-out tanks for Arctic char. The 145-m<sup>3</sup> tanks are operated at 95% + recirculation and serve as grow-out tanks for rainbow trout, Arctic grayling and king salmon catchable production. Wells provide water to all culture systems with a total capacity of 1,200 gallons per minute (gpm). Approximately 850 gpm is needed to run the facility at maximum design production. The average monthly demand is estimated to be 450–500 gpm at maximum production. An 8-inch well and a 16-inch well will provide water to the hatchery after passing through media filtration and degassing systems to remove iron, manganese, hydrogen sulfide, carbon dioxide, and nitrogen. The amount of water reuse within each culture system will vary depending on species, life stage, tank density, and system specific equipment. Maximum rearing capacity based on the bio-programming used for hatchery design is listed below. The anticipated production for 2021 is listed in Table 1.

### **Designed Maximum Rearing Capacity - RBSFH**

- Rainbow trout
  - 336,400 fingerlings at 2 grams each
  - 178,000 catchables at 180 grams each
- Arctic char
  - 26,500 fingerlings at 4 grams each
  - 40,000 subcatchables at 20 grams each
  - 11,325 catchables at 120 grams each
- Lake trout
  - 100,000 subcatchables at 10 grams each
  - 850 catchables at 180 grams each
- Coho salmon
  - 222,000 fingerlings at 4 grams each
- King salmon
  - 29,600 catchables at 120 grams each
- Arctic grayling
  - 10,500 fingerlings at 2 grams each
  - 32,400 catchables at 120 grams each

## **PRODUCTION SYNOPSIS**

Fish produced at the RBSFH will reduce pressure on wild fish stocks, increase sport fishing opportunity, and provide diversity in sport fisheries throughout Interior Alaska. The RBSFH will provide fish for 115 lakes located in Region III. Lakes are stocked primarily by truck, but other methods include ATVs, fixed wing aircraft, helicopter, and backpack. All production is for lake stocking; no anadromous releases are scheduled. Catchable fish stocked from RBSFH in 2021 will

be king salmon, Arctic char, and rainbow trout. Fingerling Arctic char, coho salmon, and rainbow trout will be stocked from RBSFH in 2021. Sub-catchable Arctic char will be released in 2021. . The appropriate number of rainbow trout, Arctic char, lake trout, king salmon, and coho salmon will be reared during 2021 to meet the 2022 stocking requests.

## **Lake Stocking**

### ***Rainbow Trout***

**General Information:** Rainbow trout production is the largest component of the Division of Sport Fish's lake stocking program in Region III. A captive broodstock held in rearing tanks at WJHSFH supports the program. The broodstock originated from Swanson River rainbow trout wild stock on the Kenai Peninsula and has been held in captivity since 1982. To remain consistent with the *Statewide Stocking Plan for Sport Fish, 2021*, and the conditions of many fish transport permits (FTPs), the RBSFH will attempt to stock only all-female triploid rainbow trout. Triploid rainbow trout populations are usually all-female, but some mixed-sex triploid rainbow trout may be produced as well. If there is a shortage of all-female triploid eggs, mixed-sex triploid, all-female diploid, or mixed-sex diploid rainbow trout may be substituted in category one lakes. Catchable fish are stocked in early and midsummer, and fingerling fish are stocked in early summer.

**Release Information:** In June 2021, approximately 101,800 rainbow trout fingerling produced by RBSFH will be stocked in 12 lakes throughout Region III. Catchable stocking will begin in mid-May, and approximately 140,000 fish will be released into 71 Region III lakes. (Table 1). Specific release sites and numbers of fish to stock can be found in the *Statewide Stocking Plan for Sport Fish, 2021*.

**Egg take and Rearing:** In January 2021, approximately 569,940 eyed rainbow trout eggs (all-female triploid) were transported from WJHSFH in Anchorage to RBSFH (Table 2). Upon hatch, these fish will be ponded and reared in 8-m<sup>3</sup> tanks until June when 2-gram fingerlings will be released into Region III lakes. The remaining fingerlings will continue to be reared in the 8-m<sup>3</sup> tanks until they reach 4 grams and then will be graded to remove underperforming and deformed fish before being transferred into 145-m<sup>3</sup> tanks and raised for 2022 catchable stocking.

### ***Arctic Char***

**General Information:** Arctic char fingerling and sub-catchables are stocked in odd years with catchables being stocked annually. A captive Arctic char broodstock has been established at WJHSFH, eliminating the need to conduct remote egg takes to meet production goals. To remain consistent with the *Statewide Stocking Plan for Sport Fish, 2021*, and the conditions of many FTPs, the RBSFH will attempt to stock only mixed-sex triploid Arctic char. If there is a shortage of certified triploid Arctic char, noncertified, or diploid Arctic char may be substituted in category one lakes.

**Release information:** Starting in early May 2021, approximately 11,300 catchable Arctic char will be stocked into 10 Region III lakes. In early June, approximately 7,000 fingerling Arctic char will be stocked in 3 Region III lakes. In September, approximately 27,025 sub-catchable Arctic char will be stocked into 10 Region III lakes (Table 1). Specific release sites and numbers of fish to stock can be found in the *Statewide Stocking Plan for Sport Fish, 2021*.

**Egg take and Rearing:** An estimated 18,480 green eggs were transferred from WJHSFH on October 21, 2020. An additional 84,000 eggs were transferred from WJHSFH on December 8<sup>th</sup>, 2020. These fish will be ponded into two 1.3-m<sup>3</sup> tanks. In May, the Arctic char will be moved into 8-m<sup>3</sup> tanks for catchable grow out. Approximately 90,000 eyed eggs will be transferred from the WJHSFH in December 2020 to support catchable fingerling, subcatchable, and catchable production scheduled for release in 2021 and 2022 (Table 2).

### ***Arctic Grayling***

**General Information:** Wild Chena River Arctic grayling serve as the sole brood source for eggs for the RBSFH, as well as providing green eggs to the WJHSFH in support of Region II Arctic grayling programs. To remain consistent with the *Statewide Stocking Plan for Sport Fish, 2021*, and the conditions of many FTPs, the RBSFH will attempt to stock only mixed-sex triploid Arctic grayling. If there is a shortage of certified triploid Arctic grayling, noncertified, or diploid Arctic grayling may be substituted in category one lakes.

**Release information:** No Arctic grayling will be released from the RBSFH in 2021.

**Egg take and Rearing:** Due to a reduction in funding, Arctic grayling production has been suspended for 2021. No Arctic grayling egg takes for use in RBSFH production will be conducted in 2021.

### ***King Salmon***

**General Information:** Catchable mixed-sex diploid king salmon are released in thirteen landlocked lakes in Region III primarily to provide winter ice fisheries. The RBSFH will not produce any king salmon for anadromous releases. Hatchery king salmon used for lake stocking originate from eggs taken from wild stock adults returning to the Salcha or Chena River. Brood source is dependent on area management staff preferences given run strength, timing, and river conditions. In 2020, neither the Chena or Salcha Rivers met escapement goals, and area managers requested an alternate broodstock be sourced. Eggs for 2021 catchable releases were collected from Ship Creek stock and then pressure shocked to induce triploidy as a condition of FTP permits.

**Release Information:** In fall 2021 RBSFH will stock 140-gram catchable king salmon in 13 lakes within Region III. The majority of the fish, 30,000, will be stocked in September and October. An additional 10,000 will be stocked in November to support winter fishing opportunities in the Fairbanks area (Table 1). Specific release sites and numbers of fish to stock can be found in the *Statewide Stocking Plan for Sport Fish, 2021*.

**Egg take and Rearing:** In mid-July, approximately 51,000 king salmon eggs will be collected from wild stock Salcha or Chena River broodstock for 2022 catchable production (Table 2). Adult king salmon will be collected at the remote egg-take site, eggs fertilized, and transported to the RBSFH. Kidney and ovarian fluid samples will be collected from all adult king salmon spawned and tested for bacterial and viral pathogens as part of the routine brood stock screening requirements. The fertilized eggs will be family tracked for BKD; and, if any female brood tests positive for BKD, the fertilized eggs from that incubation tray will be destroyed. If the Chena and Salcha Rivers fail to achieve minimum escape goals, eggs may be sourced from Ship Creek stock at the request of area managers. In late November to early December, king salmon fry will be

ponded into 8-m<sup>3</sup> tanks. Upon reaching approximately four grams in size, they will be transferred into a single 145-m<sup>3</sup> tank for catchable production.

### ***Coho Salmon***

**General Information:** A combination of mixed-sex diploid and mixed-sex triploid coho salmon fingerlings will be stocked in four lakes in Region III during 2021. In support of a regional study, diploid and triploid coho fingerling from the Delta Clearwater River stock and triploid fingerling from the Ship Creek stock will be stocked into Quartz Lake. The study will be conducted in 2022. The other three locations will continue to be stocked with diploid coho fingerling from the Delta Clearwater stock. Coho are primarily harvested in the winter ice fishery, but some are harvested in mid to late summer. The RBSFH will not produce any coho salmon for anadromous release. Hatchery coho salmon used for lake stocking originate from eggs taken from wild stock adults returning to the Delta Clearwater River.

**Release Information:** The RBSFH will stock approximately 86,000 4-gram fingerling coho salmon into four Region III lakes in late May and early June of 2021 (Table 1). Specific lakes and stocking numbers can be found in the *Statewide Stocking Plan for Sport Fish, 2021*.

**Egg take and Rearing:** In mid-October, approximately 104,000 coho salmon eggs will be collected for 2021 fingerling production (Table 2). Kidney samples will be collected from all adult female coho salmon spawned and tested for BKD. The fertilized eggs will be family tracked, and if any female brood fish tests positive for BKD, the fertilized eggs from that incubation tray will be destroyed. Emergence will occur in January, and the fry will be transferred into 8-m<sup>3</sup> tanks until release in late May and early June of 2021.

### ***Lake Trout***

**General Information:** In 2021, mixed-sex triploid sub-catchable lake trout will be reared at RBSFH. These fish will be released in five Region III lakes and seven lakes in Region II. Lake trout are a long-lived species, with low exploitation rates by anglers, but do provide increased diversity in angling experiences. Wild brood from Sevenmile Lake are the donor stock and will provide all the eggs used for production. In order to limit the impacts on the wild population, only 50 females will be spawned every 2 years to meet statewide production requests. To remain consistent with the *Statewide Stocking Plan for Sport Fish, 2021*, and the conditions of many FTPs, the RBSFH will attempt to stock only mixed-sex triploid lake trout. If there is a shortage of certified triploid lake trout, noncertified, or diploid lake trout may be substituted in category one lakes.

**Release Information:** While Lake trout will be reared in 2021, no releases will occur.

**Egg Take and Rearing:** In mid-September, gametes will be extracted from 50 pair using live spawning techniques, resulting in an estimated 60,000 eggs (Table 2). The delayed fertilization technique will be utilized with eggs and milt being transported back to the RBSFH for fertilization. Once fertilized, the eggs will be pressure shocked to induce triploidy and then surface disinfected with iodophor. Kidney and ovarian samples will be taken to meet the requirements for routine broodstock screening. After immergence, the lake trout fry will be ponded into 1.3-m<sup>3</sup> tanks for

rearing until approximately 0.5 – 1g in size at which point they will be transferred into a single 8-m<sup>3</sup> tank for rearing until release.

## MANAGEMENT CONSIDERATIONS

### Lake Stocking

Rainbow trout, Arctic grayling, lake trout, king and coho salmon, and Arctic char are stocked in lakes on a "put-and-take" or "put-and-grow" basis; no special management considerations are required. Sport fish season and bag limits generally provide for a maximum harvest of these stocked species. A small number of Region III lakes are managed to achieve longer residency times to recruit larger fish into the fishery. Specific objectives for these programs are provided in the *Statewide Stocking Plan for Sport Fish, 2021*.

## 2021 PROJECTED HARVESTS

Table 4 summarizes projected 2021 sport fish harvest rates for projects supported through fish production at the RBSFH. The harvest rates are based on the average Division of Sport Fish Statewide Harvest Survey (SWHS) estimate for 2017-2019.

## EVALUATION

Stocked lake fisheries are evaluated in one of three ways: fish population monitoring to determine basic population information, population monitoring to determine length–age structures, and two sample mark–recaptures to determine population abundance.

Sampling to determine basic population information is conducted on lakes in which managers only wish to determine if stocked fish are present, to visually assess their condition (robust or thin) and health, and/or to make a crude estimate of their length distribution. A single sampling event is used to collect this information. The quantity of gear used and soak times correspond to lake size.

Sampling for population length–age structure is conducted on lakes in which managers wish to determine if current stocking strategies have created the desired population structures and subsequently, the desired fisheries. A single sampling event is also used to collect this information. The quantity of gear used and soak times are dependent on lake size and are more intensive than sampling for basic population information.

Sampling to determine population abundance is conducted on lakes in which managers need more information about population parameters than single sampling can achieve. Managers often need to know the abundance of age/size cohorts, or different stocking groups to determine if stocking regimes are providing the number and size of fish necessary to support a fishery, or to compare different stocking methods. Two sample mark-recapture events are used to gather this information. The quantity of gear, soak times, and gear placement is study specific.

Sport fishery catch, harvest, and effort statistics are estimated annually by the Division of Sport Fish SWHS.

### **RESEARCH**

Specific research will be conducted at the RBSFH in the future.

### **LITERATURE CITED**

Alaska Sport Fishing Survey database [Intranet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited April 1, 2015). Available from: [https://intra.sf.adfg.state.ak.us/swhs\\_est/](https://intra.sf.adfg.state.ak.us/swhs_est/)



## APPROVALS

### **Recommendation for Approval: Ruth Burnett Sport Fish Hatchery Annual Management Plan, 2021.**

Travis Hyer, Ruth Burnett Sport Fish Hatchery 7/28/2021

Jeff Milton, Hatchery Program, Division of Sport Fish 7/20/2021

John Linderman, Region III Regional Supervisor, Division of Commercial Fisheries 7/21/2021

Jeff Estensen, Region III Regional Supervisor, Division of Sport Fish 7/27/2021

Lorraine Vercessi, PNP Hatchery Program Coordinator, Division of Comm. Fisheries 7/27/2021

### **Approval: The 2021 Annual Management Plan for the Ruth Burnett Sport Fish Hatchery is hereby approved.**

Tom Taube, Deputy Director, Division of Sport Fish 7/29/2021

Peter Bangs, Assistant Director, Division of Commercial Fisheries 7/30/2021

Table 1.–Summary of Ruth Burnett Sport Fish Hatchery lake stocking releases in 2021.

| Species       | Release Location | Number  | Size <sup>1</sup> | Type <sup>2</sup> | Number of Stocking Locations <sup>3</sup> |
|---------------|------------------|---------|-------------------|-------------------|---|
| Rainbow Trout | Region III       | 101,800 | Fingerling        | 3N                | 12  |
|               |                  | 140,000 | Catchable         | 3N                | 70  |
|               | Total            | 241,800 |                   |                   | 82  |
| Arctic Char   | Region III       | 7,000   | Fingerling        | 3N                | 3   |
|               |                  | 27,025  | Subcatchable      | 3N                | 10  |
|               |                  | 11,300  | Catchable         | 3N                | 8   |
| Total         | 45,325           |         |                   | 21                |   |
| King Salmon   | Region III       | 40,000  | Catchable         | 3N                | 12  |
| Total         |                  | 40,000  |                   |                   | 12  |
| Coho Salmon   | Region III       | 36,500  | Fingerling        | 2N                | 4   |
|               |                  | 50,000  | Fingerling        | 3N                | 1   |
|               | Total            | 86,000  |                   |                   | 5   |
| Grand Total   |                  | 413,125 |                   |                   | 115                                       |

<sup>1</sup> Fingerling: 1 – 4 g, Subcatchable: 15 – 70 g, Catchable: greater than 70 g.

<sup>2</sup> 2N = Diploid; 3N = Triploid;

<sup>3</sup> Grand total reflects total number of distinct stocked lakes. Some lakes are stocked with multiple species.

Table 2.–Summary of Division of Sport Fish lake stocking egg takes in 2021.

| Species       | Brood Stock                            | Females <sup>1</sup> | Number of Eggs       |
|---------------|--|----------------------|----------------------|
| Rainbow Trout | WJHSFH (brood origin – Swanson River)  | 283                  | 564,036 <sup>2</sup> |
| Arctic Char   | WJHSFH (brood origin – Lake Aleknagik) | 6                    | 27,443 <sup>2</sup>  |
| Lake Trout    | Sevenmile Lake                         | 50                   | 50,000 <sup>3</sup>  |
| King Salmon   | Salcha River                           | 8                    | 50,898 <sup>3</sup>  |
| Coho Salmon   | Delta Clearwater River                 | 22                   | 82,604 <sup>3</sup>  |
| Total         |  | 369                  | 774,981              |

<sup>1</sup> The number listed reflects the estimated total number of females needed to produce the requested green egg allotment.

<sup>2</sup> The number listed is the estimated number of eyed eggs that will be taken into RBSFH, which are provided by WJHSFH in Anchorage.

<sup>3</sup> The number listed reflects the estimated number of green eggs that will be taken into RBSFH.

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area      | Species       | Stock/Ancestral stock | FTP      | Expiration Date | Release Site  | Lake Category | Life Stage                              |
|-----------|---------------|-----------------------|----------|-----------------|---|---------------|---|
| Delta     | Rainbow Trout | WJHSFH/<br>Swanson R. | 14A-0022 | 12/31/2023      | Backdown L., Bluff Cabin L., Bolio L., Bullwinkle L., Coal Mine #5 L, Craig L., Dick's Pond, Doc L., Donna L., Donnelly L., Forrest L., Four Mile L., Fourteen Mile L., Ghost L., Hidden L. (Tok), Jan L., Kenna L., Ken's Pond, Kenna L., Koole L., Lisa L., Little Donna L., Little Lost L., Mark L., Monte L., North Twin L., Paul's Pond, Quartz L., Rainbow L., Rich. 81 Mi., Shaw Pond, South Twin L., Weasel L.  | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Rainbow Trout | WJHSFH/<br>Swanson R. | 14A-0023 | 12/31/2023      | Chet L., Last L., Nickel L., Rapids L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Rainbow Trout | WJHSFH/<br>Swanson R. | 15A-0010 | 12/31/2023      | Big "D" Pond  | 4             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Rainbow Trout | WJHSFH/<br>Swanson R. | 14A-0025 | 12/31/2023      | Ballaine L., Bathing Beauty Pond, Bear L., Cather's L., Chena HS #25, Chena HS #30, Chena L., Dune L., Geskakmina L., Grayling L., Harding L.,Hidden L. (EAFB), Johnson Pit #2, Kid's Fishing Pond, Kimberly L., Little Harding L., Lundgren Pond, Monterey L., Moose Lake, Mosquito Creek L., Mullins Pit, N. Chena Pond, N. Pole Pond, Otto L., Parks Hwy 261, Parks Hwy 285, Polaris L., Pomeroy Pond, Pyrite Pond, Rich. 28 Mile Pit, Rich. 31 Mile Pit, Sansing L., Sirlin Dr. Pond, Steese Hwy 34.6, Stringer Rd. Pond, Triangle L., Wainwright #6, Weigh Station #1, Weigh Station #2, West Iksgiza L. | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Rainbow Trout | WJHSFH/<br>Swanson R. | 16A-0003 | 12/31/2023      | Cushman L., Horseshoe L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Rainbow       | WJHSFH/               | 14A-0026 | 12/31/2023      | Birch L., Lost L., Manchu L.  | 3             | Fingerling                              |

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|------------|---------------|-------------------------|----------|-----------------|--|---------------|---|
|            | Trout         | Swanson R.              |          |                 |  |               | Subcatchable<br>Catchable               |
| Fairbanks  | Rainbow Trout | WJHSFH/<br>Swanson R.   | 15A-0003 | 12/31/2023      | Chena HS #45.5, Chena HS #47.9, Chena HS #56, Nenana City Pond, Nordale #2, Olnes Pond, Steese Hwy 28.8, Steese Hwy 29.5, Steese Hwy 31.6, Steese Hwy 33.5, Steese Hwy 35.8, Steese Hwy 36.6, Z Pit. | 4             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Rainbow Trout | WJHSFH/<br>Swanson R.   | 14A-0027 | 12/31/2023      | Buffalo L., Junction L., North Jans L., Ryan L., South Jans L., Strelna L., Tolsona Mt. L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Rainbow Trout | WJHSFH/<br>Swanson R.   | 14A-0028 | 12/31/2023      | Gergie L., Old Road L., Peanut L., Pippin L., Round L., Silver L., Sculpin L., Tolsona L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Rainbow Trout | WJHSFH/<br>Swanson R.   | 14A-0029 | 12/31/2023      | Crater L., DJ L., Tex Smith L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Rainbow Trout | WJHSFH/<br>Swanson R.   | 15A-0004 | 12/31/2023      | Squirrel Ck. Pit   | 4             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Rainbow Trout | WJHSFH/<br>Swanson R.   | 14A-0030 | 12/31/2023      | Three Mile L., Two Mile L.   | 5             | Fingerling<br>Subcatchable<br>Catchable |
| Mat-Su     | Rainbow Trout | WJHSFH/<br>Swanson R.   | 19A-0026 | 12/31/2023      | Finger L.  | 1             | Fingerling                              |
| Yukon      | Rainbow Trout | WJHSFH/<br>Swanson R.   | 16A-0004 | 12/31/2023      | Nathanial L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Arctic Char   | WJHSFH/<br>Aleknagik L. | 13A-0009 | 12/31/2024      | Coal Mine #5   | 1             | Fingerling<br>Subcatchable<br>Catchable |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area       | Species         | Stock/Ancestral stock   | FTP      | Expiration Date | Release Site  | Lake Category | Life Stage                              |
|------------|-----------------|-------------------------|----------|-----------------|---|---------------|---|
| Delta      | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0002 | 12/31/2024      | Backdown L., Brodie L., Dick's Pond, Four Mile L., Ken's Pond, Quartz L., Rangeview L., Shaw Pond, Sheefish L.      | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0003 | 12/31/2024      | Chet L., Nickel L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0004 | 12/31/2024      | J L.  | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0005 | 12/31/2024      | Bathing Beauty Pond, Chena L., Grayling L., Harding L., Hidden L. (EAFB), Kids' Fishing Pond, Moose L., Polaris L.  | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0006 | 12/31/2024      | Birch L., Lost L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0007 | 12/31/2024      | Buffalo L., Dick L., Ryan L.  | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0008 | 12/31/2024      | Gergie L., John L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0009 | 12/31/2024      | Crater L., Tex Smith L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Arctic Char     | WJHSFH/<br>Aleknagik L. | 14A-0010 | 12/31/2024      | Two Mile L.   | 5             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Arctic Grayling | Chena R./ Chena R.      | 10A-0052 | 12/31/2021      | Bolio L., Brodie L., Jan L., Koole L., Luke L., Mark L., N Twin L., Paul's Pond, Rangeview L., Rich 81, Sheefish L. | 1             | Fingerling<br>Subcatchable<br>Catchable |

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| Area      | Species         | Stock/Ancestral stock         | FTP      | Expiration Date | Release Site   | Lake Category | Life Stage                              |
|-----------|-----------------|-------------------------------|----------|-----------------|--|---------------|---|
| Delta     | Arctic Grayling | RBSFH/ Goodpaster R.          | 10A-0067 | 12/31/2021      | Bolio L., Brodie L., Jan L., Koole, L., Luke L., Mark L., N Twin L., Paul's Pond, Rangeview L., Rich 81, Sheefish L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Arctic Grayling | Chena R./ Chena R.            | 10A-0053 | 12/31/2021      | Chet L., Nickel L.   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Arctic Grayling | RBSFH/ Goodpaster R.          | 10A-0068 | 12/31/2021      | Chet L., J L., Nickel L.   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Arctic Grayling | Chena R./ Chena R.            | 10A-0054 | 12/31/2021      | J L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Arctic Grayling | Goodpaster R./ Goodpaster R.  | 10A-0069 | 12/31/2021      | J L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Arctic Grayling | Chena R./ Chena R.            | 10A-0055 | 12/31/2021      | Big D Pond   | 4             | Catchable                               |
| Delta     | Arctic Grayling | Goodpaster R. / Goodpaster R. | 10A-0070 | 12/31/2021      | Big D Pond   | 4             | Catchable                               |
| Fairbanks | Arctic Grayling | Chena R./ Chena R.            | 10A-0058 | 12/31/2021      | Ballaine L., Bathing Beauty, Bear L., CHSR 25.0, CHSR 30.0, Chena L., Dune L., Kid's Fishing Pond, Grayling L., Hidden L. (EAFB), Johnson Pit #2, Long Pond, Monterey L., Moose L., Mullins Pit, North Chena Pond, North Pole Pond, Rich 28, Rich 31, Round Pond, Steese Hwy 34.6, Wainwright #6 | 1             | Fingerling<br>Subcatchable<br>Catchable |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area      | Species         | Stock/Ancestral stock         | FTP      | Expiration Date | Release Site   | Lake Category | Life Stage                              |
|-----------|-----------------|-------------------------------|----------|-----------------|--|---------------|---|
| Fairbanks | Arctic Grayling | Goodpaster R. / Goodpaster R. | 10A-0073 | 12/31/2021      | Ballaine L., Bathing Beauty, Bear L., CHSR 25.0, CHSR 30.0, Chena L., Derby L., Dune L., Grayling L., Hidden L. (EAFB), Johnson Pit #2, Long Pond, Monterey L., Moose L., Mullins Pit, North Chena Pond, North Pole Pond, Rich 28, Rich 31, Round Pond, Steese Hwy 34.6, Wainwright #6 | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Arctic Grayling | Chena R. / Chena R.           | 14A-0016 | 12/31/2021      | Cushman L.   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Arctic Grayling | Goodpaster R./ Goodpaster R.  | 14A-0019 | 12/31/2021      | Cushman L.   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Arctic Grayling | Chena R./ Chena R.            | 10A-0060 | 12/31/2021      | Birch L., Lost L.  | 3             | Catchable                               |
| Fairbanks | Arctic Grayling | Goodpaster R./ Goodpaster R.  | 10A-0075 | 12/31/2021      | Birch L., Lost L.  | 3             | Catchable                               |
| Fairbanks | Arctic Grayling | Chena R./ Chena R.            | 14A-0017 | 12/31/2021      | Manchu L.  | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Arctic Grayling | Goodpaster R./ Goodpaster R.  | 14A-0020 | 12/31/2021      | Manchu L.  | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks | Arctic Grayling | Chena R./ Chena R.            | 10A-0061 | 12/31/2021      | CHSR 42.8 (Red Squirrel Pit), CHSR 45.5, CHSR 47.9, Nordale #2, Olnes Pond, Steese Hwy. 29.5, Steese Hwy. 31.6, Steese Hwy. 33.5, Steese Hwy. 35.8, Steese Hwy. 36.6, Z Pit  | 4             | Catchable                               |
| Fairbanks | Arctic Grayling | Goodpaster R./ Goodpaster R.  | 10A-0076 | 12/31/2021      | CHSR 42.8 (Red Squirrel Pit), CHSR 45.5, CHSR 47.9, Nordale #2, Olnes Pond, Steese Hwy. 29.5, Steese Hwy. 31.6, Steese Hwy. 33.5,  | 4             | Catchable                               |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area       | Species         | Stock/Ancestral stock        | FTP      | Expiration Date | Release Site  | Lake Category | Life Stage                              |
|------------|-----------------|------------------------------|----------|-----------------|---|---------------|---|
|            |                 |                              |          |                 | Steese Hwy. 35.8, Steese Hwy. 36.6, Z Pit   |               |   |
| Glennallen | Arctic Grayling | Chena R./ Chena R.           | 10A-0048 | 12/31/2021      | Arizona L., Buffalo L., Connor L., Dick L., Junction L., Little Junction L., Ryan L.                              | 1             | Catchable                               |
| Glennallen | Arctic Grayling | Chena R./ Chena R.           | 19A-0001 | 12/31/2021      | Squirrel Ck. Pit  | 4             | Catchable                               |
| Glennallen | Arctic Grayling | Goodpaster R./ Goodpaster R. | 10A-0064 | 12/31/2021      | Arizona L., Buffalo L., Connor L., Dick L., Junction L., Little Junction L., Ryan L.,                             | 1             | Catchable                               |
| Glennallen | Arctic Grayling | Goodpaster R./ Goodpaster R. | 19A-0002 | 12/31/2021      | Squirrel Ck. Pit  | 4             | Catchable                               |
| Glennallen | Arctic Grayling | Chena R./ Chena R.           | 10A-0049 | 12/31/2021      | Pippin L., Round L., Tolsona L.   | 2             | Catchable                               |
| Glennallen | Arctic Grayling | Goodpaster R./ Goodpaster R. | 10A-0065 | 12/31/2021      | Pippin L., Round L., Tolsona L.   | 2             | Catchable                               |
| Glennallen | Arctic Grayling | Chena R./ Chena R.           | 14A-0018 | 12/31/2021      | Three Mile L.   | 5             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | Arctic Grayling | Goodpaster R./ Goodpaster R. | 14A-0021 | 12/31/2021      | Three Mile L.   | 5             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | King Salmon     | Salcha R./ Salcha R.         | 10A-0035 | 12/31/2029      | Brodie L., Bolio L., Coal Mine #5 L., Jan L., Quartz L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | King Salmon     | Chena R./ Chena R.           | 10A-0031 | 12/31/2029      | Brodie L., Bolio L., Coal Mine #5 L., Jan L., Quartz L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon     | Salcha R./ Salcha R.         | 10A-0036 | 12/31/2029      | Bathing Beauty Pond, Chena L., Grayling L., Monterey L., Otto L., Mullins Pit, North Chena Pond, North Pole Pond. | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon     | Chena R. / Chena R.          | 10A-0032 | 12/31/2029      | Bathing Beauty Pond, Chena L., Grayling L., Monterey L., Otto L., Mullins Pit, North Chena                        | 1             | Fingerling<br>Subcatchable              |



Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area       | Species     | Stock/Ancestral stock | FTP      | Expiration Date | Release Site  | Lake Category | Life Stage                              |
|------------|-------------|-----------------------|----------|-----------------|---|---------------|---|
|            |             |                       |          |                 | Pond, North Pole Pond.  |               | Catchable                               |
| Fairbanks  | King Salmon | Salcha R./ Salcha R.  | 15A-0002 | 12/31/2029      | Cushman L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Chena R./ Chena R.    | 15A-0001 | 12/31/2029      | Cushman L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Salcha R./ Salcha R.  | 10A-0037 | 12/31/2029      | Birch L., Lost L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Chena R./ Chena R.    | 10A-0033 | 12/31/2029      | Birch L., Lost L.   | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | King Salmon | Salcha R./ Salcha R.  | 13A-0017 | 12/31/2019      | South Jans L., Strelna L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Glennallen | King Salmon | Chena R./ Chena R.    | 13A-0013 | 12/31/2019      | South Jans L., Strelna L.   | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | King Salmon | Ship Cr./ Ship Cr.    | 20A-0004 | 12/31/2029      | Bolio L., Brodie L., Coal Mine #5, Jan L., Quartz L.                                | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Ship Cr./ Ship Cr.    | 20A-0005 | 12/31/2029      | Bathing Beauty, Chena L., Grayling L., North Chena Pond., North Pole Pond., Otto L. | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Ship Cr./ Ship Cr.    | 20A-0006 | 12/31/2029      | Cushman L.  | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | King Salmon | Ship Cr. /Ship Cr.    | 20A-0007 | 12/31/2029      | Birch L., Lost L.   | 3             | Fingerling<br>Subcatchable              |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area       | Species     | Stock/Ancestral stock                    | FTP      | Expiration Date | Release Site                         | Lake Category | Life Stage                              |
|------------|-------------|--|----------|-----------------|--------------------------------------|---------------|---|
|            |             |  |          |                 |                                      |               | Catchable                               |
| Mat-Su     | King Salmon | Ship Cr. /Ship Cr.                       | 21A-0003 | 12/31/2029      | Finger L.                            | 1             | Catchable                               |
| Delta      | Coho Salmon | Delta Clearwater R./ Delta Clearwater R. | 10A-0040 | 12/31/2027      | Koole L., Jan L., Lisa L., Quartz L. | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Coho Salmon | Delta Clearwater R./ Delta Clearwater R. | 17A-0001 | 12-31-2027      | J L.                                 | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | Coho Salmon | Delta Clearwater R./ Delta Clearwater R. | 10A-0041 | 12/31/2027      | Dune L., Geskakmina L.               | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Fairbanks  | Coho Salmon | Delta Clearwater R./ Delta Clearwater R. | 16A-0053 | 12/31/2027      | Harding L.                           | 1             | Fingerling                              |
| Glennallen | Coho Salmon | Delta Clearwater R./ Delta Clearwater R. | 10A-0042 | 12/31/2027      | South Jans L., Strelna L.            | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Coho Salmon | Ship Cr./ Little Susitna R.              | 20A-0010 | 12/31/2027      | Koole Lake, Lisa L., Quartz L.       | 1             | Fingerling                              |
| Delta      | Coho Salmon | Ship Cr./ Little Susitna R.              | 20A-0011 | 12/31/2027      | J L.                                 | 3             | Fingerling                              |
| Fairbanks  | Coho Salmon | Ship Cr./ Little Susitna R.              | 20A-0012 | 12/31/2027      | Dune L., Geskakmina L., Harding L.   | 1             | Fingerling                              |
| Glennallen | Coho Salmon | Ship Cr./ Little Susitna R.              | 20A-0013 | 12/31/2027      | South Jans L., Strelna L.            | 1             | Fingerling                              |
| Delta      | Lake Trout  | Sevenmile L./ Sevenmile L.               | 16A-0006 | 12/31/2030      | Harding L.                           | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta      | Lake Trout  | Glacier L./                              | 19A-0011 | 12/31/2030      | Harding L.                           | 1             | Fingerling                              |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area      | Species    | Stock/Ancestral stock          | FTP      | Expiration Date | Release Site                                | Lake Category | Life Stage                              |
|-----------|------------|--------------------------------|----------|-----------------|---|---------------|---|
|           |            | Glacier L.                     |          |                 |   |               | Subcatchable<br>Catchable               |
| Delta     | Lake Trout | Sevenmile L./<br>Sevenmile L.  | 19A-0012 | 12/31/2030      | Coal Mine #5 L., Craig L., North Twin L.    | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 19A-0013 | 12/31/2030      | Rapids L.                                   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Lake Trout | Glacier L./<br>Glacier L.      | 19A-0014 | 12/31/2030      | Coal Mine #5 L., Craig L., North Twin L.    | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Delta     | Lake Trout | Glacier L./<br>Glacier L.      | 19A-0015 | 12/31/2030      | Rapids L.                                   | 2             | Fingerling<br>Subcatchable<br>Catchable |
| Anchorage | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 20A-0023 | 12/30/2030      | RBSFH to WJHSFH to Clunie L.                | 1             | Fingerling<br>Subcatchable<br>Catchable |
| Anchorage | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 20A-0024 | 12/30/2030      | RBSFH to WJHSFH to Sand L.                  | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Kenai     | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 20A-0017 | 12/30/2030      | RBSFH to WJHSFH to Upper Summit L.          | 3             | Fingerling<br>Subcatchable<br>Catchable |
| Mat-Su    | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 20A-0021 | 12/30/2030      | RBSFH to WJHSFH to Long L. and Matanuska L. | 1             | Fingerling<br>Subcatchable<br>Catchable |
| PWS       | Lake Trout | Sevenmile L. /<br>Sevenmile L. | 20A-0026 | 12/30/2030      | RBSFH to WJHSFH to Blueberry L.             | 5             | Fingerling<br>Subcatchable<br>Catchable |
| Res Bay   | Lake Trout | Sevenmile L. /                 | 20A-0025 | 12/30/2030      | RBSFH to WJHSFH to Lost L.                  | 3             | Fingerling                              |

Table 3.-Fish Transport Permits (FTP's) for fish releases and egg transports for the Ruth Burnett Sport Fish Hatchery.

| Area      | Species         | Stock/Ancestral stock                     | FTP                   | Expiration Date | Release Site  | Lake Category | Life Stage                |
|-----------|-----------------|---|-----------------------|-----------------|---|---------------|---------------------------|
|           |                 | Sevenmile L.                              |                       |                 |   |               | Subcatchable<br>Catchable |
| Fairbanks | Arctic Char     | WJHSFH/<br>Aleknagik L.                   | 14A-0015              | 12/31/2024      | From WJHSFH to RBSFH  |               | Eggs/Fry/<br>Fingerling   |
| Fairbanks | Arctic Grayling | Chena R. /<br>Chena R.                    | 10A-0047              | 12/31/2021      | Egg take at Chena R. and transfer of eggs to RBSFH                              |               | Egg                       |
| Fairbanks | Arctic Grayling | Goodpaster R./<br>Goodpaster R.           | 10A-0063              | 12/31/2021      | Egg take at Goodpaster R. and transfer of eggs to RBSFH                         |               | Egg                       |
| Fairbanks | Arctic Grayling | Chena R. /<br>Chena R.                    | 19A-0016              | 12/31/2021      | Transfer adults at Chena R to Kids Fishing Pond and egg take, incubate at RBSFH |               | Adult, Egg                |
| Fairbanks | King Salmon     | Chena R. /<br>Chena R.                    | 10A-0034              | 12/31/2029      | Egg take at Chena R. and transfer of eggs to RBSFH for incubation and rearing   |               | Egg, Fry,<br>Fingerling   |
| Fairbanks | King Salmon     | Salcha R. /<br>Salcha R.                  | 10A-0038              | 12/31/2029      | Egg take at Salcha R. and transfer of eggs to RBSFH for incubation and rearing  |               | Egg, Fry,<br>Fingerling   |
| Fairbanks | King Salmon     | Ship Cr. / Ship Cr.                       | 20A-0003              | 12/31/2029      | From WJHSFH to RBSFH  |               | Egg, Fry,<br>Fingerling   |
| Fairbanks | Coho Salmon     | Delta Clearwater R. / Delta Clearwater R. | 10A-0043              | 12/31/2027      | Egg take at Delta Clearwater R. and transfer of eggs to RBSFH                   |               | Egg                       |
| Fairbanks | Coho Salmon     | Ship Cr. / L. Susitna R.                  | 20A-0009              | 12/31/2027      | WJHSFH to RBSFH   |               | Egg, Fry<br>Fingerling    |
| Fairbanks | Rainbow Trout   | WJHSFH/<br>Swanson R.                     | 13A-0007 <sup>a</sup> | 12/31/2023      | From WJHSFH to RBSFH  |               | Egg, Fry,<br>Fingerling   |
| Fairbanks | Lake Trout      | Sevenmile L. /<br>Sevenmile L.            | 16A-0005              | 12/31/2030      | Egg take at Sevenmile L., transfer of eggs to RBSFH, and rear at RBSFH          |               | Egg                       |
| Fairbanks | Lake Trout      | Glacier L. /<br>Glacier L.                | 19A-0010              | 12/31/2030      | Egg take at Glacier L. and transfer of eggs to RBSFH                            |               | Egg                       |

<sup>a</sup> Issued to WJHSFH.

Table 4. Projected 2021 harvest from Division of Sport Fish stocking projects.

| <b>Release Site</b>        | <b>Rainbow Trout</b> | <b>Arctic Char</b> | <b>Arctic Graying</b> | <b>Landlocked Salmon</b> |
|----------------------------|----------------------|--------------------|-----------------------|--------------------------|
| Lake Stocking <sup>1</sup> | 12,923               | 886                | 295                   | 2,326                    |

<sup>1</sup> Harvest estimates for Arctic char, Arctic grayling, landlocked salmon, and rainbow trout is based on the average SWHS estimates for the years 2017-2019 as these years most represent current stocking levels and expected 2021 harvest levels.