

Washington State Department Of Fish and Wildlife

Lyons Ferry Complex Annual Operations Report

October 1, 2009 thru September 30, 2010

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INTRODUCTION

Lyons Ferry Complex (LFC; See Figure 1) includes Lyons Ferry Hatchery (LFH), Tucannon Fish Hatchery (TFH), Cottonwood Acclimation Facility (Cottonwood AF), Dayton Acclimation Facility (Dayton AF), and Curl Lake Acclimation Pond (Curl Lake AP).

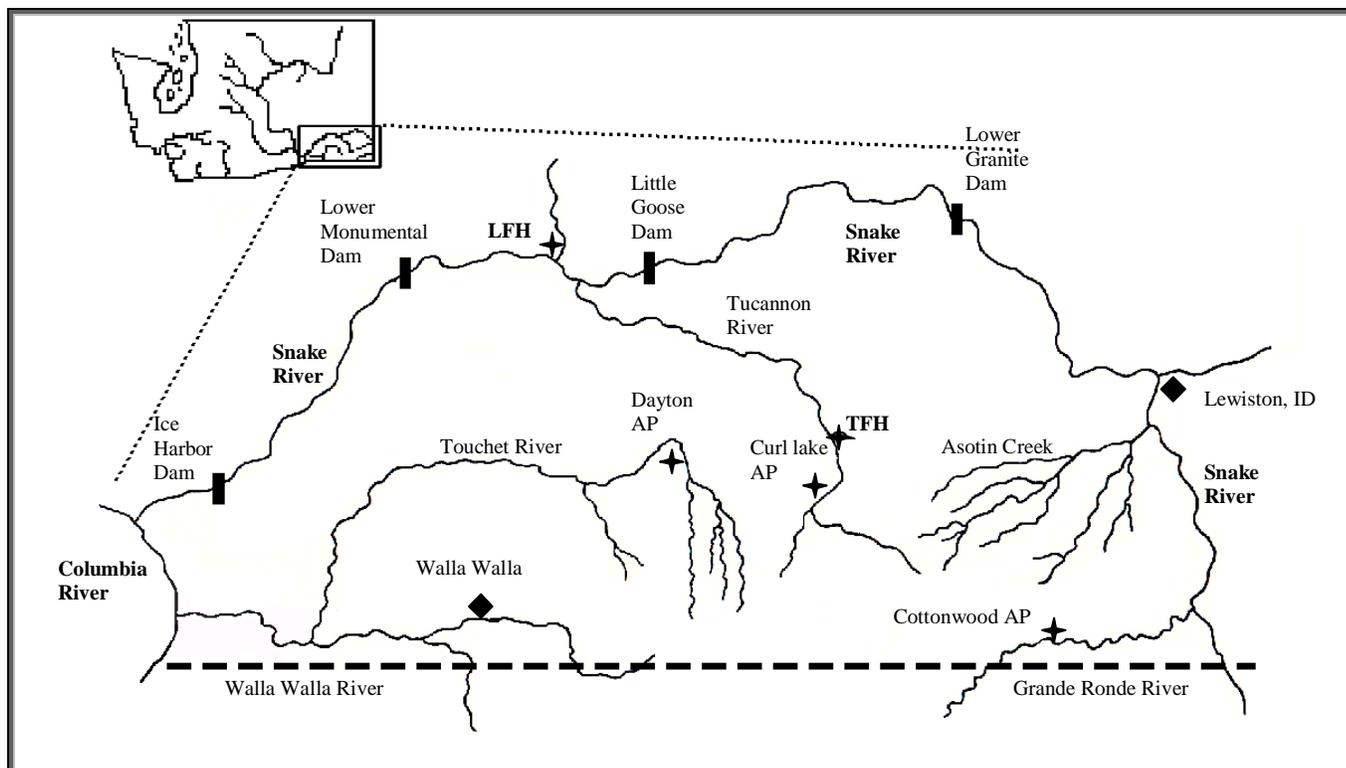


Figure I. Map of the Lower Snake River Compensation Plan (LSRCP) LFC Facilities, and major rivers and streams in Southeast Washington.

LSRCP funded fish production at all Washington facilities has been directed toward meeting established program goals of returning 18,300 adult fall Chinook, 1,152 adult spring Chinook, 4,656 adult summer steelhead, and providing 67,500 angler days of fishing opportunity from 86,000 pounds of rainbow trout production, currently planted at 3 fish per pound (fpp). In addition to these LSRCP production goals, the Tri State Steelheaders club funds a jumbo-sized (1.5 pounds each) rainbow trout program at TFH.

Lyons Ferry Hatchery

The Lyons Ferry Hatchery includes two incubation buildings with office space and feed storage, plus adult fish trapping, holding and spawning structures, 47 raceways, 8 fiberglass circular ponds, and 6 small fiberglass tanks. A visitor center provides interpretive information for guests of the hatchery. There are eight residences for staff on site to fulfill security and emergency response needs.

Water is supplied to LFH from the Marmes pump station, which has emergency power backup generation. The Marmes pump (wells) facility has three 300 horsepower (hp) pumps, four 200 hp

pumps and one 75 hp pump. The well water right for LFH is 53,200 gallons per minute (gpm), or 118.5 cubic feet per second (cfs) of flow, and water temperature is a constant 52° F.

Tucannon Hatchery

The Tucannon Hatchery is located along the Tucannon River, between the towns of Dayton and Pomeroy Washington, at RM 36 in Columbia County. The LSRCP has funded operations since completion of the facility remodel project in 1986.

The TFH includes a combined incubation and office building, back-up power generation building, feed storage shed, forty concrete shallow troughs, six concrete round ponds, two concrete raceways, one concrete adult raceway, one earthen rearing pond, a shop, domestic water building, two well houses and a spring water collection building. There is also a river intake and trapping facility located upstream of Rainbow Lake, along the Tucannon River. There are two residences for staff on site to fulfill security and emergency response needs.

The TFH is supplied with three different water sources. River water is fed from the Tucannon River, and ranges in temperature from 33 to 60 ° F, during use by the hatchery. The intake is located one half mile upstream of the hatchery. This water travels down an open channel into Rainbow Lake. From the outlet of Rainbow Lake the water travels through an 18" above ground pipeline to the hatchery. This pipeline was completely replaced in 2005. Rainbow Lake functions as a reservoir to provide the hatchery with cooler water in the summer months and warmer water in the winter months. It also provides a pool of water to draw from when encountering adverse intake conditions, resulting in temporary loss of water flows. The water right for this source is 16 cfs. Well water is pumped from two separate sources to an aeration tower, and then gravity fed to the rearing units and the domestic pump building. The combined well water right is 2 cfs, with well #2 running around 54 - 57° F and well #3 running a constant 61° F. Spring water is pumped from an underground collection site to the same aeration tower and gravity fed to rearing units. The water right for this source is 5.3 cfs, and has a stable temperature of 51 or 52° F.

Cottonwood Acclimation Facility

Cottonwood AF is located along the Grande Ronde River at RM 28.7, directly above the confluence with Cottonwood Creek in Asotin County, Washington. Construction was completed in February 1985.

This facility includes an adult trapping facility on Cottonwood Creek, a small storage building, and a single trailer unit used as housing during operations. Cottonwood AF has a concrete bottom with earthen walls. It has a water right of 2,694 gpm (6 cfs) for the period January 1st through July 1st. It is supplied with water from Cottonwood Creek through a gravity water supply system, with the intake integrated into the adult trapping facility located ~ 0.10 miles above the pond. Water temperatures range from 34 to 52° F during operation of the facility. It also has a small trailer for use by staff required to be on-site at all times while the pond is in operation. It is presently used for acclimation and release of Wallowa stock summer steelhead into the Grande Ronde River.

Dayton Acclimation Facility

Dayton AF is located along the Touchet River at RM 53 in Columbia County, Washington. There is an adult trapping facility on the Touchet River just upstream of the acclimation pond at RM 53.3.

Construction of the Dayton AF was completed in October 1986. The water right to the asphalt lined pond is 2,694 gpm (6 cfs) for the period of Jan 1st – May 15th of each year. It is supplied with water from the Touchet River through a gravity water supply system, with the intake located at the newly constructed adult trapping and juvenile bypass facility just upstream of the pond. It also has a small trailer for use by staff required to be on-site at all times while the pond is in operation. It is presently used for acclimation and release of LFH stock summer steelhead into the Touchet River.

Curl Lake Acclimation Pond

Curl Lake AP is located along the Tucannon River at RM 41 in Columbia County, Washington.

The construction of Curl Lake AP was completed in February 1985. Curl Lake AP is an earthen holding pond. It has a water right of 2,694 gpm (6 cfs). It is supplied with water from the Tucannon River through a gravity water supply system. It is currently utilized for acclimation of spring Chinook yearlings for release into the Tucannon River. Water temperatures at this time of year range from 34 to 48 °F. Chinook acclimation in Curl Lake AP started in 1997. After the spring Chinook are released, the pond is stocked with resident trout for fishing. It is emptied after fishing season ends October 31st each year, and recharged by hatchery staff prior to spring Chinook acclimation the following January.

Fall Chinook Acclimation Facilities

In addition to WDFW acclimation sites, LFH provides up to 465,000 yearling and 1,740,000 sub-yearling fall Chinook to three acclimation facilities operated by the Nez Perce Tribe (NPT): Pittsburg Landing and Captain John's Rapids on the Snake River between Asotin and Hells Canyon Dam, and Big Canyon on the Clearwater River. Size at transfer to the NPT AF's is 12 fpp for yearlings and 60 - 75 fpp for sub-yearlings. Size at release goal for acclimated fall Chinook yearlings is 10.0 fpp, and 50 fpp for sub-yearlings.

SPRING CHINOOK

The current egg take goal is 272,000 green eggs. It has been established that 85 female adults and 85 male adults are needed to make the egg take goal. Adults are collected at the Rainbow Lake intake and fish ladder, above TFH, and hauled to LFH for holding. All adults are treated with formalin every-other-day during this period. There is generally no adult mortality during the holding cycle prior egg collection. In the event extra females are needed, late returning adults may be collected at the trap to supplement broodstock needs.

2008 Brood Year

The BY 2008 Tucannon spring Chinook smolts were planted in April 2010. There were 172,897 smolts released from the Curl Lake acclimation site. See [Table 1](#).

2009 Brood Year

A total return of 410 hatchery origin (HOR) and 327 natural origin (NOR) spring Chinook adults in 2009 provided 92 females and 80 males for broodstock, fulfilling program goals for this reporting period. There were more females collected than males as a result of inaccurate enumeration as “males” due to bright, early returning adults. All females were spawned. In August and September 2009, there were 323,341 green eggs taken. Ponding and feeding of the Tucannon spring Chinook fry began in December 2009. A surplus of 52,253 juveniles were planted on April 23, 2010 into Russell Springs, a small rearing channel adjacent to the Tucannon River (RM 32). These fish received a four-day TM-200 feed treatment to provide a vertebrate mark. The excess juveniles were a result of additional females spawned following collection, higher than expected fecundity and lower than expected egg loss.

Supplementation yearlings were reared in raceways at LFH and were CWT/VIE marked beginning in late September 2010. The supplementation yearlings were transferred from LFH to TFH in October 2010. See [Tables 2 & 3](#). These fish will be transferred to Curl Lake AF in February 2011 and released in April 2011.

2010 Brood Year

The BY 2010 Tucannon spring Chinook adults arrived at the Rainbow Lake trap between May and September of 2010. A total of 726 HOR and 752 NOR spring Chinook adults in 2010 provided 85 females and 85 males for broodstock, fulfilling egg take goals for the second consecutive year. There were 83 total females spawned during this reporting period, producing 264,800 green eggs. See [Tables 4 & 5](#) for adult collection and spawning.

FALL CHINOOK

Broodstock management is guided by the Snake River Lab Monitoring and Evaluation staff. The current egg take goal is 4.75 million. It has been established that 1,500 female adults and 1,500 male adults are needed to make the egg take goal. Adult mortality and egg loss is factored into the adult collection needs. Snake River origin fall Chinook captured at LGD are transported to LFH for spawning in accordance with an agreement under the Columbia River Fish Management Plan. Annual adjustments to the agreement are expected, pending run composition. A formal letter to the U.S. Army Corps of Engineers is submitted annually in July requesting permission to collect broodstock from Lower Granite Dam. Annual marking and tagging events are coordinated via Bio Mark and WDFW operators. Tag orders are submitted twice to the LSRCP during the year: late Fall for the sub-yearling tagging in spring; and early spring for the late summer marking event for the yearling programs.

2008 Brood Year

In April 2010, there were a total of 943,727 BY 2008 Snake River fall Chinook yearlings planted in the Basin, exceeding release goals by 43, 727. Coordination with the co-managers established an increase of 10,000 yearlings for each FCAP release and over 10,000 extra for the LFH on-station release. The surplus was due to higher than expected fecundity and survival during the 2008 spawning season. See [Table 6](#).

2009 Brood Year

Snake River fall Chinook trapping began at LGD in August 2009. See adult collection and spawning [Tables 8 & 9](#) for totals. There were 646 LGR origin female (839 total adults, 353 jacks) and 647 LFH origin female (772 total adults, 161 jacks) adults utilized for broodstock in 2009. The total number of adults collected were 1,687 females, 524 males, and 2,461 jacks. There were 4,574,182 green eggs taken in October and November 2009. The BY 2009 program consisted of five egg takes. However, following enumeration of eyed eggs, the total egg take was below the program allotment. This was due to a higher than normal number of 3-age females and below average fecundity. There were also a high percentage of large (>70 cm) 1-salt males that were utilized in the broodstock. The previous length identifier for jacks was <65. CWT recoveries were analyzed to determine the age class.

The Nez Perce Tribal Hatchery provided 150,000 eyed eggs to the Irrigon Hatchery to supplement a shortage of 300,000 eggs from LFH for the Hells Canyon release group (Priority 17). See [Appendix A](#) regarding the US v. Oregon production priority table. Also see [Table 25](#) for total egg take results and shipping information. There were 210,000 eyed eggs shipped to Oxbow and 1,296,000 eyed eggs shipped to Irrigon and Umatilla in December. See [Table 27](#). Ponding and feeding of the fall Chinook fry at LFH began in January 2010. The NPT hatchery and acclimation facilities received 1,448,105 sub-yearlings in May. In June 203,162 sub-yearlings were directly planted into Couse Creek, and 202,328 sub-yearlings were directly released at LFH in June. Availability of WDFW's marking trailers and its operators provided an earlier start date for marking all yearlings in 2010, which was completed in August, rather than October. The on-station yearlings were PIT tagged by the SRL in late August, rather than January. These fish were moved to Lake #2 two weeks following the PIT tag activity. The NPT fish will be kept in raceways until they are transferred to their acclimation facilities in February and March 2011. The yearlings at

LFH were marked into Lake #2 and will be directly released in spring 2011. See Brood Year 2009 plants and transfers [Table 7](#).

2010 Brood Year

Snake River fall Chinook trapping started at LGD in August 2010. There were 1,414 hatchery origin and 777 unmarked adults collected during this reporting period. Only a small number of adults (336) were trapped at LFH in early October 2010 to supplement a shortage of males and females for Brood Year 2010 broodstock needs.

SUMMER STEELHEAD

The Lyons Ferry Complex currently uses three stocks of steelhead in the Snake River Basin (LFH, Tucannon, and Wallowa), and two stocks in the Walla Walla Basin (Touchet and LFH). All of these stocks are collected from a variety of traps located throughout SE Washington.

The LFH stock is trapped on-station at LFH in September through mid-November. The trapping of Wallowa stock steelhead occurs on Cottonwood Creek (a small tributary to the Grande Ronde River) in March and April. Cottonwood Creek supplies water to the Cottonwood AF, and large numbers of hatchery adults return every year to the creek. A small concrete trapping structure, is used to capture returning adults for broodstock. However, in years when stream flows are too low to attract adults to the weir (see BY 2010) , broodstock may be supplemented in coordination with ODFW at the Big Canyon Facility or the Wallowa Hatchery.

Trapping of the Tucannon River Endemic Stock begins in September. Installation of vinyl panels suspended over the weir at the Tucannon Fish Hatchery trap in 2009 has improved broodstock collection . The temporary weir/trap that was utilized in previous years in the lower Tucannon River (river mile 25.7) was not installed in 2009-10, primarily due to high stream flows in 2009 disabling the trap and the improved success of adult collection at the hatchery weir.

Touchet stock steelhead are trapped at the new Dayton trap facility on the Touchet River, from January (if possible) through May each year.

Lyons Ferry Stock

The current egg take goal for Lyons Ferry stock is 480,000 green eggs. It has been established that 105 female adults and 105 male adults are needed to make the green egg take goal. Adult mortality, egg loss and occasional positive results from virology sampling is factored into the egg take goal. Spawning occurs in January and February. Egg incubation, hatching and initial rearing of alevins occurs between March and July. Fish are introduced feed in March in shallow troughs and ponded outdoors in mid-April. As juveniles all fish are adipose fin clipped and transferred to Lake #1 at LFH in August.

The 2010 release goals for each release location: 85,000 from the Dayton AF into the Touchet River; 100,000 direct release into the Tucannon River; 100,000 direct release into the Walla Walla River; and 60,000 on-site release at LFH. In previous years during late December, about 85,000 were transferred from Lake #1 to 4 raceways and marked for each release group for ongoing evaluation. However, to minimize fish handling and stress, these mark groups were tagged in September 2010 into 4 available raceways and will be held until transfer/release.

In February of each year Lyons Ferry summer steelhead are transported to Dayton AF by LFC staff. These fish are acclimated on Touchet River water. The discharge outlet screens are removed on April 1st and the fish are volitional released by the 3rd week of April.

2009 Brood Year

There were 364,896 Lyons Ferry summer steelhead yearlings released at various locations in April 2010. See [Table 10](#).

2010 Brood Year

There were 520,127 BY 2010 Lyons Ferry summer steelhead eggs taken in the months of January and February 2010. See adult collection and spawning [table 11](#) and egg take and disposition summary [table 25](#) for this reporting period. The BY 2010 juveniles were reared into August in the raceways and were then adipose clipped and transferred to rearing Lake #1. The CWT/left-vent tagging was conducted in September 2010, 4 months earlier than previous years. This strategy was implemented to reduce fish stress and additional handling as a result of lowering Lake #1 and transporting 20,000 fish for each tag group to raceways at LFH in late December.

Following co-manager agreement in March and response to the HSRG recommendations, the Tucannon River release group was discontinued, effective spring 2011. These smolts will be temporarily included in the on-station release group at LFH, for a total release goal of 160,000.

2011 Brood Year

Collection of BY 2011 Lyons Ferry summer steelhead began in September 2010. Adult fish were collected weekly from the trap at Lyons Ferry Hatchery. See [Table 12](#) for adult collection numbers during this reporting period.

Wallowa Stock

The current egg take goal is 240,000 green eggs. It has been established that approximately 55 female adults and 55 male adults are needed to make the egg take goal. Broodstock collection and spawning simultaneously occurs in March and April. Incubation, hatching and initial rearing of alevins occurs in shallow troughs between April and June, when fish are ponded into outdoor raceways. As juveniles, all fish are adipose fin clipped, tagged (CWT) and transferred into rearing Lake #3 in August and September. During the first week in February, the juveniles are transferred

to Cottonwood AF. Transfer dates may vary due to weather and road conditions. The discharge outlet screens are removed on April 1st at Cottonwood AF and the fish are volitionally released through the third week of April.

2009 Brood Year

There were 163,197 yearling Wallowa summer steelhead released into the Grande Ronde River in April 2010. Approximately 32,000 of these fish were supplemented by the Wallowa Hatchery due to high evidence of IHN (58.4%) in virology results from broodstock collected at Cottonwood Creek in 2009. See [Table 13](#).

2010 Brood Year

Following co-manager agreement in March 2010, the smolt release goals were increased from 165,000 to 200,000 beginning with releases in 2011. It was determined that the adult return goals to the Snake River basin were not fulfilling the mitigation goals to the Columbia River Basin.

Due to lower than normal stream flows in March and early April 2010, broodstock was not collected at the Cottonwood Creek trap site. All broodstock were collected and spawned at ODFW's Big Canyon facility, with green eggs transferred to LFH for incubation. See [Table 14](#). There were 244,487 green eggs taken from adult broodstock at Big Canyon on April 6. These fish were reared in raceways until the marking and tagging events, which occurred in August and September, and subsequently moved into rearing Lake #3. See [Table 25](#).

Following release of the BY2009 yearlings in late April, Cottonwood Creek flows increased as a result of reduced water demands for the acclimation pond. Due to the increased flows, adult steelhead began entering the trap. However, because it was late in the season these fish were not used for broodstock. These fish were enumerated, CWT's recovered and all adults hauled and buried at LFH as surplus.

These BY 2010 juveniles were reared in raceways until the marking and tagging events, which occurred in August and September, and moved into rearing Lake #3. Following release in April 2010, reduced water flow demands to the pond permitted adults to access the creek trap site. All adults collected with a CWT were sampled and all marked fish were surplussed to prevent straying along with the spread of IHN in Cottonwood Creek.

Tucannon Stock

The current egg take goal is 90,000 green eggs. It has been established that 18 female adults and 18 male adults, of which up to 10% are of hatchery origin only, are needed to make the egg take goal. Adults are hauled to LFH for holding and spawning beginning mid-March. Incubation, hatching and initial rearing occurs in indoor shallow troughs and intermediate tanks between April and July. As juveniles, the fish are moved to raceways. Beginning in 2010, these fish are CWT tagged in September rather than January. In mid-February the fish are transferred to TFH and placed into the large acclimation raceway (formerly used for spring Chinook holding and acclimation). They are then released into the Tucannon River near Curl Lake during the month of April. 8,000 to 10,000 of

the fish are PIT tagged prior to release to monitor out-migration, for comparison of within-year variation of migration performance among release groups, and for estimated smolt-to-adult survival rates of endemic stock fish. .

2009 Brood Year

There were 57,562 yearling Tucannon endemic summer steelhead released into the Tucannon River above Curl Lake between April 5 and May 12, 2010. See [Table 15](#) for additional release information.

2010 Brood Year

Following co-manager agreement in March 2010, the Tucannon endemic stock steelhead program was increased from 50,000 to 75,000 smolts, This increase is a component of the long-term goal of expanding the use of the endemic stock for both conservation and mitigation purposes. The Tucannon natural steelhead adults were captured at the Rainbow Lake intake trap (river 36.7). Spawning generally occurs during March and April each year. For 2010, 89,791 green eggs were taken. See [Table 16](#). Also, see [Table 17](#) for adult collection and spawning information. There are currently 78,150 fish that will be transported to the Tucannon Hatchery for acclimation in February 2011 and directly released above the Curl Lake intake in April 2011.

Touchet Stock

The current egg take goal is 65,000 green eggs. It has been established that 16 female adults and 20 male adults, of which all are wild origin, are needed to make the egg take goal. Broodstock collection occurs during the months of January and February at the newly constructed adult trap and juvenile bypass facility. Adults are hauled to LFH for holding and spawning beginning mid-March. Egg incubation, hatching and initial rearing occurs between April and July. Fish are introduced to feed in April in indoor shallow troughs and intermediate tanks and ponded in raceways in late July. Beginning in 2010, the fish are CWT tagged in September rather than January. 10,000 PIT tags are inserted prior to release to monitor out-migration, for comparison of within-year variation of migration performance between release groups, and for estimated smolt-to-adult survival rates of endemic stock fish. They are transported by LFC staff and direct stream released in late April/early May into the upper basin above the WDFW trap on the Touchet River.

2009 (2008 2-year smolts) Brood Years

Between April 12 and May 13, 2010, there were 5,599 **BY 2008** (2-year smolts) and 56,078 BY 2009 yearlings released into the Touchet River at river mile 57.2. See [Table 18](#) and [Table 19](#) for more information on these releases. A small group of 6,443 BY 2009 smolts were retained for a second year of a pilot study, performed by Joe Bumgarner with the Snake River Lab Monitoring and Evaluation staff, on 2-year smolt survival. This study is driven by little or no productivity from the smaller smolts in the yearling population. These fish will be released with a separate tag code along with the BY 2010 yearling group in April 2011.

2010 Brood Year

There were 75,000 eggs taken from BY 2010 Touchet summer steelhead adults. See [Table 21](#) and [Table 25](#) for spawning and egg information, respectively.

COHO

Incidental catch of coho occurs during the trapping season for fall Chinook and steelhead at LFH. Trapped Coho were not retained in 2009-2010 as a result of limited trapping activity at LFH for fall Chinook. Subsequently, no Coho adults were transferred to NPT. See [Table 22](#) for adult coho collection.

BULL TROUT

Bull trout captured at the Tucannon trap are enumerated and passed upstream. See [Table 23](#).

WHITE FISH

White fish captured at the Tucannon trap are enumerated and passed upstream. See [Table 24](#).

RESIDENT FISH

Rainbow trout are reared to fulfill the resident fishing opportunity mitigation under LSRCP. Eggs are obtained from WDFW's Spokane Hatchery (Spokane stock). Eggs that were formerly received from Idaho Fish and Game's (IDFG) Hayspur Hatchery (Kamloops stock) were discontinued in early 2009. A cooperative resident program consisting of 1,650 jumbo trout for NPT and 4,950 catchable sized trout for IDFG was implemented in fall 2009. The IDFG trout are triploids from the Spokane Hatchery. These production changes did not alter the total pounds of production, replacing the 50,000 fall fry plants of Kamloops rainbow in the reservoir as a result of ineffective returns to the creel.

The Lyons Ferry Complex production goal is 235,500 yearlings and 160,000 sub-yearling Spokane rainbows. This requires 515,000 eyed Spokane rainbow trout eggs for the SE Washington program, of which 10,000 eyed triploid eggs are utilized for the IDFG resident catchable program to meet part of the LSRCP mitigation requirement within Idaho. See [Table 26](#) and [Table 27](#) for rainbow eggs received at TFH and LFH, respectively.

The Tri State Steelheaders club provides funding for a jumbo program at TFH, utilizing Spokane stock rainbow that are reared to 1½ lbs each. These fish contribute to unique fishing opportunities in local SE Washington lakes. Resident brood year 2008 and 2009 Spokane rainbow plants and transfers are listed in tables [28](#), [29](#), [30](#), and [31](#) for TFH, and tables [32](#), [33](#), [34](#), and [35](#) for LFH.

FISH HEALTH SECTION

Steven Roberts

Introduction

The following section is a summary of fish health activities for the Lyons Ferry Hatchery Complex for October 1, 2009 to September 30, 2010. Adult sampling for viral and bacterial pathogens and fish health inspections are included.

The only major fish health problem at Lyons Ferry and Tucannon hatcheries was bacterial coldwater disease (BCWD) in rainbow trout and steelhead. Bacterial coldwater disease was diagnosed in Spokane rainbow trout and the Lyons Ferry stock summer steelhead.

Preventative fish health management was employed with bacterial gill disease (BGD), bacterial kidney disease (BKD) and infectious hematopoietic necrosis (IHN). With BGD in sub-yearling fall chinook, low rearing densities were followed. BKD preventive measures for chinook included erythromycin injection of female broodfish, screening and segregation of progeny, low rearing densities, along with feeding of erythromycin medicated rations. With IHN in steelhead, female broodfish were screened and segregation and/or destruction of progeny of IHN positive females were employed.

Lyons Ferry Hatchery

Lyons Ferry Fall Chinook

Adults - 2009 Spawning

At spawning, samples are collected for viral and BKD-ELISA testing. Female fall chinook from the second through sixth spawning week were sampled for BKD-ELISA. A total of 893 females were tested.

BKD prevalence was low with 99.4% Below-Low females ([Appendix B - Table II](#)). Progeny of below-low BKD females were selected for the yearling programs. Progeny of below-low and low BKD females were selected for shipment to IDFG and ODFW. Progeny of all other females were utilized in the sub-yearling programs. No viral pathogens were detected ([Appendix B – Table I](#)).

2008 Broodyear

The 2008 broodyear Lyons Ferry fall chinook were healthy throughout the reporting period and upon release.

2009 Broodyear

The 2009 broodyear Lyons Ferry fall chinook were healthy throughout the rearing cycle at Lyons Ferry Hatchery. No bacterial gill disease was observed in sub-yearling fall Chinook this year.

As a BKD preventative strategy, the yearling fish were treated with erythromycin medicated feed in May 2010.

Tucannon Spring Chinook

Adults - 2010 Spawning

At spawning, samples are collected for viral testing and BKD-ELISA testing. No viral pathogens were detected ([Appendix B – Table I](#)).

The BKD-ELISA testing has not been completed for the samples collected from the 2010 spawning season.

The BKD-ELISA results from the 2009 spawning season are shown in [Appendix B – Table II](#). BKD prevalence was 42.7% below-low and 56.3% low females.

2008 Broodyear

The 2008 broodyear Tucannon spring chinook were healthy throughout the rearing cycle at Lyons Ferry Hatchery. The fish were transferred to Tucannon Hatchery in October, 2009.

2009 Broodyear

The 2009 broodyear Tucannon spring chinook were healthy throughout the rearing cycle at Lyons Ferry Hatchery.

As a BKD preventative strategy, the fish were treated with erythromycin medicated feed in May 2010.

Lyons Ferry Summer Steelhead

Adults - 2010 Spawning

All female steelhead adults were sampled for viral pathogens at spawning. No viral pathogens were detected ([Appendix B – Table I](#)).

2009 Broodyear

The 2009 broodyear Lyons Ferry summer steelhead were healthy throughout the reporting period and upon release.

2010 Broodyear

Dropout syndrome was noted in hatchery troughs of Lyons Ferry stock summer steelhead in April. The mortality was minor and no treatments were administered.

Bacterial coldwater disease was observed in the 2010 broodyear Lyons Ferry summer steelhead in April and May 2010. The fish were successfully treated with Aquaflor medicated feed. After recovery from the BCWD outbreak, the fish were healthy throughout the reporting period.

Wallowa Summer Steelhead

Adults - 2010 spawning at Cottonwood Pond

No spawning was done at Cottonwood Pond in 2010.

Wallowa stock steelhead were spawned at Big Canyon Acclimation Pond, Oregon. All female steelhead adults were sampled for viral pathogens at spawning. No viral pathogens were detected ([Appendix B – Table I](#)).

2009 Broodyear

The 2009 broodyear Wallowa summer steelhead were healthy throughout the reporting period and upon transfer to Cottonwood Pond.

2010 Broodyear

The 2010 broodyear Wallowa River summer steelhead fish were healthy throughout the reporting period.

Tucannon River Summer Steelhead

Adults - 2010 Spawning

All female steelhead adults were sampled for viral pathogens at spawning. All female steelhead adults were sampled for viral pathogens at spawning. No viral pathogens were detected ([Appendix B](#)).

2009 Broodyear

The 2009 broodyear Tucannon River summer steelhead fish were healthy throughout the reporting period and upon release.

2010 Broodyear

The 2010 broodyear Tucannon River summer steelhead fish were healthy throughout the reporting period.

Touchet River Summer Steelhead

Adults - 2010 Spawning

All female steelhead adults were sampled for viral pathogens at spawning. No viral pathogens were detected ([Appendix B – Table I](#)).

2009 Broodyear

The 2009 broodyear Touchet River summer steelhead fish were healthy throughout the reporting period and upon release.

2010 Broodyear

The 2010 broodyear Touchet River summer steelhead fish were healthy throughout the reporting period.

Spokane Rainbow Trout

Spokane rainbow trout are received as eyed eggs from the Spokane Hatchery. The Spokane rainbow broodstock is annually sampled for viral agents and is certified free of viral pathogens.

2008 Broodyear

The fish were healthy throughout the reporting period and upon release.

2009 Broodyear

Bacterial coldwater disease was observed in the Spokane rainbow in March through May 2010. The fish were successfully treated with Aquaflor medicated feed. The fish recovered and were healthy throughout the remaining reporting period.

Tucannon Hatchery

Tucannon Spring Chinook

2008 Broodyear

The 2008 broodyear Tucannon spring chinook were healthy throughout the reporting period and upon release.

Spokane Rainbow Trout

2008 Broodyear

The 2008 broodyear Spokane rainbow trout were healthy throughout the reporting period and upon release.

2009 Broodyear

Bacterial coldwater disease was observed in the Spokane rainbow in May 2010. The fish were successfully treated with Aquaflor medicated feed. The fish recovered and were healthy throughout the remaining reporting period.

LYONS FERRY COMPLEX ADMINISTRATION

The complex administration staff is responsible for implementation of WDFW and USFWS policies and procedures, oversight of the facilities, fish production, equipment purchases and maintenance, employee development and recruitment and developing and managing the budget.

The FFY-10 contract was due to close out at 99.6% spent on December 13, 2010.

During this reporting cycle, three new Hatchery Specialists were hired, one promoted to another WDFW facility, and one resigned. Per WDFW policy, employees were all re-trained in: sexual harassment, first aid, fire extinguisher usage, informational technology ethics, hot works procedures (i.e. welding), respirator fit and re-testing for certified staff and pesticide applicators license for two employees. Seven staff with CDL class B licenses also renewed their certifications via a physicians fitness determination report. Several CDL staff were also randomly selected by the Department of Licensing for standard drug and alcohol testing procedures.

Coordination with Snake River Lab staff regarding infrastructure improvements relative to HGMP submittals occurred from January thru September. Modifications to fish production in Wallowa steelhead, Lyons Ferry Steelhead, and Tucannon endemic steelhead were approved thru formal co-management agreements and the PAC process (*US v. Oregon* agreement). The Regional Fish Program Manager and Hatchery Division Manager participated in these co-manager discussions and proposals. The Nez Perce Tribe, IDFG and WDFW coordinated and developed a catchable trout program, replacing the Kamloops rainbow fall juvenile release in the reservoir. It was determined that along with the Kamloops not returning to creel, the Spokane rainbow would benefit a put-and-take fishery for Idaho's resident programs.

A private co-op with the Tri State Steelheaders club in Walla Walla was initiated in fall 2009. The agreement with TSS to cover feed costs for rearing 4,000 jumbo trout at TFH was approved and implemented for brood year 2009 rainbow. The jumbo trout program was formerly funded by WDFW. However, state budget reductions in 2009 prompted this cooperative agreement with TSS.

In coordination with the Snake River Lab staff, the yearling marking and tagging events for Chinook and steelhead were modified to begin 6 weeks earlier than previous years. This allowed for PIT tagging of fall Chinook to occur in August, rather than February, and be consolidated with all on-station yearlings in Lake #2 five months sooner. Also, all steelhead tagging was completed in August and September, rather than January and February, eliminating extra handling of fish from Lake #1.

The Scientific Technician 3 routinely performed monthly water quality analysis and timely reports on NPDES permit requirements. The Biologist 4 is funded for one-quarter month to administer and facilitated NPDES permit application renewals, reports and invoices, and development of the sampling, solid waste management and pollution prevention plans.

2009-2010 PERSONNEL / PURCHASES / MAINTENANCE

LYONS FERRY HATCHERY

PERSONNEL:

Scott Ostrander was hired as a Fish Hatchery Specialist 1 in November 2009.

Richard French promoted to a Fish Hatchery Specialist 3 at WDFW's Ringold Springs Hatchery in January 2010.

Chris Foster was hired as a Fish Hatchery Specialist 1 in March 2010.

Scott Ostrander, Fish Hatchery Specialist 1, resigned in August 2010.

SIGNIFICANT PURCHASES:

Pump 5 repair/rebuild

Adult pond stoplogs

Vacuum hose reels

New feed scales

New gator tires

New fire maintenance pump

All of Marmes work from outage damage

Portable PIT tag reader

New alarm antennae

LSRCP purchased a GSA 2010 Ford F-150 4x4, and two Ford Ranger pick-ups to replace similar vehicles with higher mileage.

PROJECTS:

Marmes Pump #7 and motor was rebuilt. Pump #4 and #8 motors were rebuilt following a major electrical issue in September. Two 1,200 amp breakers and two transformers were also damaged. These items were soon replaced at the start of the FFY-11 cycle.

HOUSING MAINTENANCE:

Fencing around the back yards for Residence #3 and Residence #4 was installed. Heat pump failure in Residence #8 required a completely new unit to be installed.

SIGNIFICANT EVENTS:

Power surge-failure event in September resulted in equipment damage to pump station. No fish mortality occurred, due to diligence of staff modifying water flows and fish culture practices while pumps were inoperable.

TUCANNON FISH HATCHERY

PERSONNEL:

Shawn Magee was hired as a full time Fish Hatchery Specialist 1 (FHS 1) in training at the Tucannon Hatchery in January 2010. After Mike Manky was promoted from a FHS 2 to a FHS 3, we were without a staff member for over a year. It is welcome to be at full staffing.

SIGNIFICANT PURCHASES:

LSRCP purchased a GSA 2010 Ford F-150 4x4 to replace a similar vehicle with higher mileage.

LSRCP also purchased a replacement 400 gallon stainless steel fish transport tank to replace a cracked fiberglass tank. Some minor modifications to the new tank will be completed prior to using the tank.

A John Deere 110 4x4 loader / backhoe was purchased to replace the 1985 International tractor.

PROJECTS:

Hazard (dead) trees were removed from threatening areas of the facility. Three additional trees were removed to allow space for a new fish transport building near the existing shop area. We had the trees fallen professionally, and the hatchery crew cleaned up all of the debris.

We purchased a variable speed drive system for the facilities domestic water supply. In addition, we also replaced our seven year old steel domestic system pressure tank with two 80 gallon fiberglass tanks.

Hatchery staff replaced the worn rubber seal on the rearing pond rotating screen.

The domestic building experienced some power issues during the spring. The 460 volt / 80 amp breaker that fed the domestic building was randomly kicking off. S&S electric had discovered that there were several insulation failures in the existing wiring running from the generator building to the domestic building. The resolution was to pull the old wire and feed in a new higher gauge wire to fulfill the power needs. Everything went well except for one section of old conduit had some tree root damage that had to be re-routed.

Hatchery staff repaired and re-painted another bank (8 troughs) of hatchery shallow troughs.

Minor updates to the hatchery alarm system enunciator panel (replace touch pad).

All of the facility asphalt cracks were filled professionally with asphalt crack sealer.

Hatchery staff completed a lengthy round pond framing system to net six individual ponds from predators. All staff did a great job completing this project on time without affecting their regular duties.

Continued problems with the rotating drum screen located at the outlet of Rainbow Lake. We are experiencing instances when the drive system shear pins break without any indication to what had caused it.

Spring collection pump #4 was starting to make a bearing noise. The Lacey shop came over and pulled the pump for repair. We took the 10hp electric motor in to have the bearings replaced and checked out.

HOUSING MAINTENANCE:

Minor upkeep projects were performed on both residences. Staff applied a coating of waterproofing to residence #1 deck. There was some minor cleanup of moss on residence two roofing. Both residences and hatchery septic tanks were pumped. Minor repairs were made to the residence #1 tank drain field discharge.

SIGNIFICANT EVENTS:

No significant hatchery or weather related events occurred during this period. Fairly mild winter followed by an average summer.

DAYTON ACCLIMATION FACILITY

Professional and hatchery staff sealed the cracks in the asphalt. Hatchery staff rented a high output air compressor to blow out the cracks inside the pond where the professionals could not reach with their crack filler system.

Snake River Construction enclosed two open bays with roll-up garage doors and installed a man entrance door on the north side.

Cut to fit and install bar grating over adult holding area of trap. This will address staff safety concern as well as preventing adults from jumping out of the holding area.

COTTONWOOD ACCLIMATION FACILITY

Tucannon staff transported their tractor / backhoe to Cottonwood to dig out drainage ditch next to acclimation pond. This will have to be dug out on a regular basis due to some upstream bank erosion that causes the sediment to occur. After the ditch was cleaned out, we had gravel delivered and spread mainly on the west side of the pond.

The storage building floor was paved and the building enclosed with two garage doors and an exterior access door for protecting equipment and supplies. The project was awarded to Absolute Concrete, a Clarkston, WA based contractor.

APPENDIX A: *U.S. v. Oregon* Fall Chinook Production Priority Table

Production table listing Snake River fall Chinook salmon production priorities for LFH per the *UsvOR* Management Agreement, Table *B4B*, for Brood Years 2008-2017.

Priority	Production Program				
	Rearing Facility	Number	Age	Release Location(s)	Marking
1	Lyons Ferry	450,000	1+	On station	225K AdCWT 225K CWT
2	Lyons Ferry	150,000	1+	Pittsburg Landing	70K AdCWT 80K CWT only
3	Lyons Ferry	150,000	1+	Big Canyon	70K AdCWT 80K CWT only
4	Lyons Ferry	150,000	1+	Captain John Rapids	70K AdCWT 80K CWT only
5	Lyons Ferry	200,000	0+	On station	200K AdCWT
6	Lyons Ferry	500,000	0+	Captain John Rapids	100K AdCWT 100K CWT only 300K Unmarked
7	Lyons Ferry	500,000	0+	Big Canyon	100K AdCWT 100K CWT only 300K Unmarked
8	Lyons Ferry	200,000	0+	Pittsburg Landing	100K AdCWT 100K CWT only
9	Oxbow	200,000	0+	Hells Canyon Dam	200K AdCWT
10	Lyons Ferry	200,000	0+	Pittsburg Landing	200K Unmarked
11	Lyons Ferry	200,000	0+	Direct stream evaluation Near Captain John Rapids	200K AdCWT
12	DNFH/Umatilla	250,000	0+	Transportation Study ^a	250K PIT Tag only
13	Irrigon ^b	200,000	0+	Grande Ronde River	200K AdCWT
14	DNFH/Umatilla	78,000	0+	Transportation Study ^a	78K PIT tag only
15	Irrigon ^c	200,000	0+	Hells Canyon Dam ^d	200K AdCWT
16	Irrigon ^b	200,000	0+	Grande Ronde River	200K Unmarked
17	Irrigon ^c	600,000	0+	Hells Canyon Dam ^d	600K Ad only
TOTAL	Yearlings	900,000			
	Subyearlings	3,528,000 (of which 328,000 are for Transportation Study)			

^a USACOE Transportation Study wild surrogate groups direct stream released into the Clearwater and mainstream Snake River

^b for logistical purposes, fish are reared at Irrigon in lieu of Lyons Ferry. (LSRCP);

^c for logistical purposes, beginning in 2010, fish are reared at Irrigon in lieu of Umatilla

^d Pending production priority requests to PAC

APPENDIX B: 2009-2010 Fish Health Testing Results

Table I. Broodstock viral testing, 2009 - 2010.

Location	Date	Species-Stock	No. OF	No. KS	Results
Lyons Ferry	11-09	CHF-Snake River	60	60	Negative
Lyons Ferry	01-10	SS-Lyons Ferry	105	60	Negative
Cottonwood Pond	04-10	SS-Wallowa	48	60	Negative
Lyons Ferry	04-10	SS-Touchet River	15	15	Negative
Lyons Ferry	04-10	SS-Tucannon River	14	14	Negative
Lyons Ferry	09-10	CHS-Tucannon River	60	60	Negative

OF = ovarian fluid
 KS = kidney/spleen

Table II. BKD-ELISA testing of female Chinook broodstocks at LFH in 2009.

Species-Stock	No. Tested	Below Low		Low		Mod		High	
		No	%	No	%	No	%	No	%
CHF Snake R.	893	888	99.4%	1	0.3%	0	0%	4	0.4%
CHS Tucannon R.	96	41	42.7%	54	56.3%	1	1.0%	0	0%

Below-Low = < 0.10
 Low = 0.11 - 0.199
 Mod = 0.2 - 0.45
 High = > 0.45

Table 1. Brood Year 2008 Tucannon spring Chinook - Mixed hatchery - Plants and Transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
9/28/2009	88,276	3,098					28.5		36.0	CWT+VIE right purple
10/5/2009	86,495	3,932					22.0		36.0	CWT+VIE right blue
4/12/2010					86,694	7,539	11.5	Tucannon River	40.7	CWT+VIE right purple
4/12/2010					86,203	12,493	6.9	Tucannon River	40.7	CWT+VIE right blue
Total	174,771	7,030			172,897	20,032				

NOTE: All fish were CWT marked.

Table 2. Brood Year 2009 Tucannon spring Chinook – Mixed Hatchery – Plants & Transfers (Lyons Ferry).

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
10/14/10			113,549	4,811			23.6	Tucannon Hatchery	36.0	CWT+VIE right blue
10/15/10			118,632	4,063			29.2	Tucannon Hatchery	36.0	CWT+VIE right purple
4/23/10					52,253	757	69	Russell Springs Tucannon River	32.0	AD only
Total			232,181	8,874						

NOTE: All

Table 3. Brood Year 2009 Tucannon spring Chinook – Mixed Hatchery - Plants and Transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
10/14/10	113,549	4,811					23.6	Tucannon Hatchery	36.0	CWT+VIE right blue
10/15/10	118,632	4,063					29.2	Tucannon Hatchery	36.0	CWT+VIE right purple
Total	232,181	8,874								

NOTE: All fish were CWT marked.

Table 4. Brood Year 2010 Tucannon River spring Chinook - Hatchery - collection and spawning.

ADULT COLLECTION AND SPAWNING

TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAP/RECEIVE		RETURNED TO RIVER			SHIPPED TO LFH			MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	JACKS	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	NVF	J x	MALE	FEMALE	J x
	MAXI	MINI																
May -10	190	2	61	78	2	20	31											
Jun - 10	404	52	110	257	47	20	12	2	4	1	3							
Jul - 10	48	5	14	34	5													
Aug - 10	22	2	6	15	1	1					1							
Sep - 10	67	4	21	45	4	1						80	83	0	2			
SEASON TOTAL	731	65	212	429	59	42	43	2	4	1	4	80	83	0	2	0	0	0

NOTE: Fish in the mortality column represent Ad clip strays that were taken out of the system and given to Snake River Lab for analysis.

Table 5. Brood Year 2010 Tucannon River spring Chinook - Wild - collection and spawning.

ADULT COLLECTION AND SPAWNING

TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAP/RECEIVE		RETURNED TO RIVER			SHIPPED TO LFH			MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	JACKS	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	NVF	J x	MALE	FEMALE	Jx
	MAXI	MINI																
May - 10	309	1	133	115	1	31	30											
Jun - 10	337	19	176	139	18	11	11	1										
Jul - 10	11	1	7	4	1													
Aug - 10	27		19	6		2												
Sep - 10	68	1	41	27	1													
SEASON TOTAL	752	22	376	291	21	44	41	1	0	0	0	0	0	0	0	0	0	0

Note: Adjustments are fish that were identified at trapping as wild but were found to be hatchery by scale analysis.

Table 6. Brood Year 2008 Snake River fall Chinook - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/1/10			72,387	6,083			11.9	Capt. John's Rapids AP-NPT	SR-164	Ad+CWT
2/1/10			82,663	6,946			11.9	Capt. John's Rapids AP-NPT	SR-164	CWT Only
3/1/10			72,503	5,847			12.4	Pittsburg Landing AP-NPT	SR-215	Ad+CWT
3/1/10			82,475	6,651			12.4	Pittsburg Landing AP-NPT	SR-215	CWT Only
3/6/10			72,555	5,804			12.5	Big Canyon AP-NPT	LCR-35	Ad+CWT
3/6/10			82,292	6,583			12.5	Big Canyon AP-NPT	LCR-35	CWT Only
4/12/10					254,203	25,939	9.8	On-site release	SR-59	Ad+CWT
4/12/10					224,649	22,923	9.8	On-site release	SR-59	CWT Only
Total			464,875	37,914	478,852	48,862				

Table 7. Brood Year 2009 Snake River fall Chinook - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
5/4/10			101,400	1,268			80	Pittsburg Landing AP-NPT	SR-215	AdCWT
5/4/10			101,500	1,269			80	Pittsburg Landing AP-NPT	SR-215	CWT only
5/4/10			202,900	2,536			80	Pittsburg Landing AP-NPT	SR-215	UM
5/7/10			101,000	1,329			76	Big Canyon AP-NPT	SR-164	AdCWT
5/7/10			102,000	1,342			76	Big Canyon AP-NPT	SR-164	CWT Only
5/7/10			310,000	4,079			76	Big Canyon AP-NPT	SR-164	UM
5/4/10			101,200	1,446			70	Capt. John's Rapids AP-NPT	LCR-35	AdCWT
5/4/10			102,600	1,466			70	Capt. John's Rapids AP-NPT	LCR-35	CWT Only
5/4/10			325,405	4,649			70	Capt. John's Rapids AP-NPT	LCR-35	UM
5/24/10					203,162	3,503	58	Couse Creek	SR-158	100% AdCWT
6/2/10					202,328	3,891	52	On-Site Release	SR-59	100% AdCWT
Total			1,448,005	19,384	405,490	7,394				

Table 8. Brood Year 2009 Snake River fall Chinook adult collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: Lyons Ferry Hatchery

MONTH ENDING	EST. TRAP/RECEIVE		RETURNED TO RIVER			SHIPPED/PLANTED			MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	JACKS	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	NVF	J x	MALE	FEMALE	J x
Sep - 09	1,053	22							3	1								
Oct - 09	372	83							3	22	7	37	148		100	6	1	10
Nov - 09	276	1	58	175	366				27	38	151	88	499	1	61	3	4	75
Dec - 09																		
SEASON TOTAL	1,701	106	58	175	366				30	63	159	125	647	1	161	9	5	85

Table 9. Brood Year 2009 Snake River fall Chinook adult collection and spawning - LGR

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: Lower Granite Dam

MONTH ENDING	EST. TRAP/RECEIVE																	
	ADULTS	JACKS	RETURNED TO RIVER			SHIPPED/PLANTED			MORTALITY			SPAWNED				DISPOSAL		
			MALE	FEMALE	J x	MALE	FEMALE	MALE	FEMALE	NVF	J x	MALE	FEMALE	NVF	Jx	MALE	FEMALE	Jx
Aug - 09	69	29							1	2								
Sep - 09	864	2,051							2	6	12							
Oct - 09	110	359							4	19	17	27	87	2	70	0	0	1,361
Nov - 09	27	72	47	42	150				6	8	71	166	559	5	283	0	66	497
Dec - 09																		
SEASON TOTAL	1,070	2,511	47	42	150	0	0	0	13	35	100	193	646	7	353	0	66	1,858

Table 10. Brood Year 2009 Lyons Ferry summer steelhead - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/09/10			66,054	10,321			6.4	Dayton AP		AD Only
2/09/10			20,683	2,686			7.7	Dayton AP		AD/LV/ CWT 63-51/70
4/05/10 – 4/12/10					66,054	16,111	4.1	From Dayton AP	54	AD Only
4/05/10 – 4/12/10					20,683	5,045	4.1	From Dayton AP	54	AD/LV/ CWT 63-51/70
4/19/10 – 4/22/10					45,877	10,427	4.4	On-site release	59	AD Only
4/16/10					20,516	4,663	4.4	On-site release	59	AD/LV/ CWT 63-51/67
4/19/10 – 4/22/10					86,656	19,695	4.4	Walla-Walla River	29.6	AD Only
4/20/10					20,464	4,651	4.4	Wall-Walla River	29.6	AD/LV/ CWT 63-51/68
4/19/10 – 4/22/10					84,033	19,098	4.4	Tucannon River	11	AD Only
4/15/10					20,613	4,581	4.5	Tucannon River	11	AD/LV/ CWT 63-51/69
Total			86,737	13,007	364,896	84,271	4.33			

Table 11. Brood Year 2010 Lyons Ferry summer steelhead - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: LFH Trap

MONTH ENDING	EST. TRAP/RECEIVE		RETURNED TO RIVER				SHIPPED/PLANTED			MORTALITY			SPAWNED				DISPOSAL				
	ADULTS	JACKS	MALE	FEMALE	J	x	MALE	FEMALE	J	x	MALE	FEMALE	Jx	MALE	FEMALE	NVF	Jx	MALE	FEMALE	Jx	
Sep -09	599									1	3										
Oct - 09	739									0	3										
Nov - 09	314		543	603						12	34										
Dec - 09										2	9										26
Jan - 10										6	4		63	63				5	1		
Feb - 10										31	7		36	36				92	73		
SEASON TOTAL	1,652		543	603						52	59		99	99				97	100		

Table 12. Brood Year 2011 Lyons Ferry summer steelhead - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: LFH Trap

MONTH ENDING	EST. TRAP/RECEIVE		RETURNED TO RIVER			SHIPPED/PLANTED			MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	JACKS	MALE	FEMALE	Jx	MALE	FEMALE	J x	MALE	FEMALE	Jx	MALE	FEMALE	NVF	Jx	MALE	FEMALE	Jx
	MAXI	MINI																
Sep - 10	751																	
Oct - 10	600																	
Nov - 10	272		459	578					3	20								
SEASON TOTAL	1,623		459	578					3	20								

Table 13. Brood Year 2009 Wallowa summer steelhead - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

Cottonwood Acclimation Pond

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/2/10 – 2/4/10			21,091	3,148			6.7	Cottonwood AP	28.7	AD/LV/ CWT 63-51/71
2/2/10 – 2/4/10			142,110	21,210			6.7	Cottonwood AP	28.7	Ad Only
4/05/10– 4/12/10					21,091	5,022	4.2	Grande Rhonde	28.7	AD/LV/ CWT 63-51/71
4/05/10- 4/12/10					142,106	33,835	4.2	Grande Rhonde	28.7	Ad Only
Total			163,201	24,358	163,197	38,857				

Table 14. Brood Year 2010 Wallowa summer steelhead - Hatchery - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: Cottonwood Creek Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED		RETURNED TO STREAM						MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	Jx	A b o v e R a c k			B e l o w R a c k			T r a p			Lethal	Lethal	Live	Live			
			MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	U K	MALE	VF/NVF	NVF	MALE	MALE	FEMALE	Jx
Feb-10																		
Mar-10	1																	
Apr-10	1,467		32	27				17	16							534	842	
SEASON TOTAL	1,468		32	27				17	16							534	842	

NOTE: Broodstock collected and spawned at Big Canyon Facility (ODFW) in March due to low flows in Cottonwood Creek.

Table 15. Brood Year 2009 Tucannon summer steelhead - Hatchery - Plants and Transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/08/2010	29,955	4,539					6.6			
2/08/2010	18,236	2,498					7.3			
2/08/2010	9,547	562					17			
4/05/2010					18,208	4,028	4.5	Tucannon River	40.7	CWT
4/13/2010					29,897	6,688	4.5	Tucannon River	40.7	CWT
5/12/2010					9,457	1,631	5.8	Tucannon River	40.7	CWT
Total	57,738	7,599			57,562	12,347	4.7			

Table 16. Brood Year 2010 Tucannon River summer steelhead - Wild - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY/TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED								MORTALITY			SPAWNED				DISPOSAL			
	ADULTS	J x	Returned to River			Trucked to LFH			Trap			Lethal	Lethal	Live	Live				
			MALE	FEMALE	Jx	MALE	FEMALE	Jx	MALE	FEMALE	U K	MALE	FEMALE	N V F	MALE	MALE	FEMALE	J x	
Jul - 09	1			1															
Mar - 10	78		42	9		14	11						5				8		
Apr - 10	225		121	108				10					6				6		
May - 10	15		7	8															
SEASON TOTAL	319		170	126		14	11	10	0	0		0	11	0	14		0	0	0

NOTE: Males were live spawned and returned to the river.

Table 17. Brood Year 2010 Tucannon River summer steelhead - Endemic - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY/TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED								MORTALITY			SPAWNED				DISPOSAL		
			Returned to River			Trucked to LFH			Trap			Lethal	Lethal	Live	Live			
	ADULTS	J x	MALE	FEMALE	Jx	MALE	FEMALE	Jx	MALE	FEMALE	U K	MALE	FEMALE	N V F	MALE	MALE	FEMALE	J x
Feb - 10	2		2															
Mar - 10	144		106	27		5	7					1	4		2			
Apr - 10	186		71	117					2			3		4				
SEASON TOTAL	332		179	144		5	7		2	0	0	1	7	0	6	0	0	0

Table 18. Brood Year 2008 Touchet summer steelhead - Wild - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
4/12/10					5,599	1,167	4.8	Touchet River	57.2	CWT+PIT 63-46-89
Total					5,599	1,167	4.8			

NOTE: Brood Year 2008 was the first year of a two-year smolt release study. Fish were released with the Brood Year 2009 yearling smolts.

Table 19. Brood Year 2009 Touchet summer steelhead - Wild - plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
4/12/10					37,837	8,599	4.4	Touchet River	57.2	CWT+PIT 63-51-72
5/13/10					18,241	3,317	5.5	Touchet River	57.2	CWT+PIT 63-51-72
Total					56,078	11,916				

Table 20. Brood Year 2010 Lyons Ferry summer steelhead - Hatchery - collection and spawning.

ADULT COLLECTION AND SPAWNING

TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED								MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	J x	Returned to River			Trucked to LFH			Trap			Lethal	Lethal	Live	Live			
			MALE	FEMALE	Jx	MALE	FEMALE	Jx	MALE	FEMALE	UK	MALE	FEMALE	NVF	MALE	MALE	FEMALE	J x
Jul - 09	5		1	4														
Aug - 09	2		1	1														
Sep - 09	1							1										
SEASON TOTAL	8		2	5	0	0		1	0	0	0	0	0	0	0	0	0	0

NOTE: Fish returned to river were returned below trap. The one fish in the mortality column was an AD/LV that was taken out of circulation to Snake River Lab for CWT recovery. The trap records are before this reporting period due to early returns of Brood Year 2010 adults in the River.

Table 21. Brood Year 2010 Touchet River summer steelhead - Wild - collection and spawning.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: Dayton Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED		RETURNED TO RIVER						MORTALITY			SPAWNED				DISPOSAL				
	ADULTS	J x	A b o v e R a c k			Trucked above Dayton			Trap			Lethal	Lethal	Live	Live					
			MALE	FEMALE	J x	MALE	FEMALE	J x	MALE	FEMALE	U K	MALE	FEMALE	NVF	Ma le	MALE	FEMALE	Jx		
Jan-10	4		3	1																
Feb-10	23		13	10																
Mar-10	257		110	113	16	18		1				11			11					
Apr-10	321		133	193				12				4			4					
May-10	9		2	7																
SEASON TOTAL	614		261	324	16	18		13	0	0		0	15		0	15		0	0	0

Table 22. Brood Year 2009 Lyons Ferry coho - Hatchery - collection.

ADULT COLLECTION AND SPAWNING

LYONS FERRY HATCHERY

Adult Collection Site: LFH Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED								MORTALITY				SPAWNED				DISPOSAL		
	ADULTS	J x	RETURNED TO RIVER			SHIPPED/PLANTED			MALE	FEMALE	U K	Lethal	Lethal	Live	Live	DISPOSAL			
			MALE	FEMALE	J x	MALE	FEMALE	Jx				MALE	VF/NVF	NVF	MALE	MALE	FEMALE	Jx	
Nov - 09	1								1										
SEASON TOTAL	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	

Note: Coho incidently trapped along with fall Chinook volunteering into Lyons Ferry Hatchery.

Table 23. Brood Year 2010 Tucannon River bull trout handling at Rainbow Lake Trap.

ADULT COLLECTION AND SPAWNING

TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED		RETURNED TO RIVER						MORTALITY			SPAWNED				DISPOSAL			
	ADULTS	Jx	Above Barrier			Below Barrier			Trap			Lethal	Lethal	Live	Live				
			MALE	FEMALE	Adult	MALE	FEMALE	J x	MALE	FEMALE	U K	MALE	VF/NVF	NVF	Male	MALE	FEMALE	Jx	
May - 10	4				4														
Jun - 10	50				50														
Jul - 10	13				13														
Aug - 10	3				3														
Sep - 10	3				3														
SEASON TOTAL	73	0	0	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 24. Brood Year 2010 Tucannon River Whitefish handling at Rainbow Lake Trap.

ADULT COLLECTION AND SPAWNING

TUCANNON HATCHERY

Adult Collection Site: Rainbow Lake Trap

MONTH ENDING	EST. TRAPPED/ RECEIVED		RETURNED TO RIVER						MORTALITY			SPAWNED				DISPOSAL		
	ADULTS	Jx	Above Barrier			Below Barrier			Trap			Lethal	Lethal	Live	Live			
			MALE	FEMALE	Adult	MALE	FEMALE	J x	MALE	FEMALE	U K	MALE	VF/NVF	NVF	Male	MALE	FEMALE	Jx
Sept - 10	0																	
SEASON TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0

Note: No Whitefish collected during this reporting period.

Table 25. Egg take and disposition summary for the period Oct 1, 2008 - Sept 30, 2009

EGG TAKE AND DISPOSITION

LYONS FERRY HATCHERY

SHEET 1 OF 3

SPAWNING PERIOD	STOCK CODE	FEMALES SPAWNED	EGGS LOST	% LOSS	EGGS EYED	EGGS SHIPPED	EGGS DESTROYED	TOTAL TAKE	FECUNDITY
Oct.-Dec. 2009	CK:FA:SNAK:09:H	1,293	213,862	4.68	2,853,020	1,507,300	N/a	4,574,182	3,538
Aug.-Oct. 2010	CK:SP:TUCA:10:M	83	32,517	11.61	247,452	N/a	N/a	279,969	3,373
Feb.-Mar. 2010	SH:SU:TUCA:09:W	18	8,691	10.0	81,100	N/a	N/a	89,791	4,988
Mar.-Apr. 2010	SH:SU:TOUC:09:W	15	10,541	14.0	65,055	N/a	N/a	75,596	5,040
Jan.-Feb. 2010	SH:SU:LYON:09:H	99	68,809	13.2	451,318	N/a	N/a	520,127	5,254
Mar.-Apr. 2010	SH:SU:WARI:09:H	48	31,869	13.0	212,618	N/a	N/a	244,487 ¹	5,093

¹All eggs were transferred to Lyons Ferry Hatchery from Big Canyon Facility (ODFW) due to low flows restricting adult collections in Cottonwood Creek.

Table 26. Eggs received/shipped for Tucannon during the period Oct 1, 2009 - Sept 30, 2010

EGGS RECEIVED

TUCANNON HATCHERY

SHEET 1 OF 1

DATE	RECEIVED FROM	SHIPPED TO	STOCK CODE	EGG STAGE	EGG NUMBER
1/5/10	Spokane Hatchery		RB:NA:SPOK:09:H	Eyed	175,044
1/7/10		School Co-ops	RB:NA:SPOK:09:H	Eyed	2,304

Table 27. Eggs received/shipped for Lyons Ferry during the period Oct 1, 2009 - Sept 30, 2010

LYONS FERRY HATCHERY

SHEET 1 OF 1

DATE	RECEIVED FROM	SHIPPED TO	STOCK CODE	EGG STAGE	EGG NUMBER
12/14/09	Spokane Hatchery		RB:NA:SPOK:09:H	Eyed	210,041
1/05/10	Spokane Hatchery		RB:NA:SPOK:09:H	Eyed	130,004
12/8/09		Oxbow hatchery	CK:FA:SNAK:09:H	Eyed	210,000
12/8/09		Umatilla Hatchery	CK:FA:SNAK:09:H	Eyed	700,000
12/17/09		Irrigon Hatchery	CK:FA:SNAK:09:H	Eyed	270,000
12/22/09		Umatilla Hatchery	CK:FA:SNAK:09:H	Eyed	326,000
4/6/2010	Big Canyon (ODFW)		SH:SU:WARI:10:H	Green	244,487

Table 28. Brood Year 2008 Spokane rainbow trout (catchable) plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

Page 1 of 3

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	P O U N D S	NUMBER	POUNDS				
04/07/10					9,417	2,190	4.3	Quarry Pond		
04/08/10					2,054	501	4.1	Fishhook Pond		
04/08/10					2,665	650	4.1	Dalton Lake		
04/09/10					3,120	780	4.0	Golf Course Pond		
04/09/10					4,300	1,075	4.0	West Evans Pond		
04/14/10					3,002	790	3.8	Spring Lake		
04/14/10					4,770	1,325	3.6	Blue Lake		
04/14/10					2,997	810	3.7	Rainbow Lake		
04/14/10					1,995	525	3.8	Pampa Pond		
04/16/10					301	86	3.5	Lions Park Pond		
04/21/10					507	130	3.9	Casey Pond		
04/21/10					2,028	520	3.9	Headgate Pond		
04/21/10					507	130	3.9	Donnie Lake		
04/21/10					4,000	1,026	3.9	Curl Lake		
04/21/10					1,000	256	3.9	Dayton JV Pond		
04/22/10					2,000	526	3.8	Garfield Pond		
04/22/10					1,000	263	3.8	Gilcrest Pond		
04/23/10					4,515	1,290	3.5	Watson Lake		
04/25/10					3,108	840	3.7	Bennington Lake		
04/30/10					6,335	1,712	3.7	Dalton Lake		
04/30/10					3,885	1,050	3.7	Bennington Lake		
04/30/10					1,443	390	3.7	Deer Lake		
05/11/10					500	132	3.8	Jefferson Park Pd		
Page 1 Total					65,449	16,997	3.8			
Sub Total					65,449	16,997	3.8			

Table 28.1. Brood Year 2008 Spokane rainbow trout (catchable) plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

Page 2 of 3

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
Page 1 Subtotal					65,449	16,997	3.8			
05/11/10					4,009	1,055	3.8	Bennington Lake		
05/11/10					2,508	660	3.8	Blue Lake		
05/11/10					1,000	263	3.8	Dayton JV Pond		
05/13/10					4,588	1,240	3.7	Golf Course Pond		
05/13/10					1,158	313	3.7	Deer Lake		
05/13/10					3,071	830	3.7	West Evans Pond		
05/14/10					3,108	840	3.7	Watson Lake		
05/14/10					300	81	3.7	Lions Park Pond		
05/19/10					3,293	890	3.7	Golf Course Pond		
05/20/10					2,808	780	3.6	Curl Lake		
05/20/10					2,000	556	3.6	Spring Lake		
05/21/10					3,000	833	3.6	Rainbow Lake		
05/21/10					2,377	660	3.6	Blue Lake		
05/25/10					2,629	751	3.5	West Evans Pond		
05/26/10					1,540	440	3.5	Union Flat Creek		
05/27/10					2,376	660	3.6	Watson Lake		
05/27/10					2,376	660	3.6	Curl Lake		
06/08/10					2,088	700	2.9	Golf Course Pond		
06/10/10					3,500	1,207	2.9	Bennington Lake		
06/11/10					3,000	1,071	2.8	West Evans Pond		
06/11/10					4,032	1,440	2.8	Blue Lake		
Page 2 Total					54,761	15,930	3.4			
Sub Total					120,210	32,927	3.6			

Table 28.2. Brood Year 2008 Spokane rainbow trout (catchable) plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

Page 3 of 3

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
Page 2 Subtotal					120,210	32,927	3.6			
06/11/10					3,000	1,071	2.8	Rainbow Lake		
06/11/10					1,404	520	2.7	Spring Lake		
06/17/10					1,593	590	2.7	Curl Lake		
Page 3 Total					5,997	2,181	2.7			
Sub Total					126,207	35,108	3.59			

Table 29. Brood Year 2008 Spokane rainbow trout (Jumbo) plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

Page 1 of 2

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
02/23/10					300	390	0.78	Big Four Lake		Jumbos
02/24/10					100	130	0.78	Golf Course Pond		Jumbos
02/24/10					100	130	0.78	West Evans Pond		Jumbos
02/24/10					100	130	0.78	Rainbow Lake		Jumbos
02/24/10					150	195	0.78	Blue Lake		Jumbos
02/24/10					100	130	0.78	Spring Lake		Jumbos
02/26/10					100	130	0.78	Watson Lake		Jumbos
03/25/10					150	210	0.71	West Evans Pond		Jumbos
03/25/10					100	147	0.68	Golf Course Pond		Jumbos
03/25/10					150	221	0.68	Blue Lake		Jumbos
03/25/10					100	147	0.68	Rainbow Lake		Jumbos
03/25/10					100	147	0.68	Watson Lake		Jumbos
03/25/10					100	147	0.68	Spring Lake		Jumbos
04/06/10					100	145	0.69	Watson Lake		Jumbos
04/06/10					100	145	0.69	Spring Lake		Jumbos
04/06/10					100	145	0.69	Blue Lake		Jumbos
04/07/10					300	410	0.68	Quarry Pond		Jumbos
04/08/10					150	224	0.67	Fishhook Pond		Jumbos
04/08/10					300	448	0.67	Dalton Lake		Jumbos
04/09/10					150	238	0.63	Golf Course Pond		Jumbos
04/09/10					150	238	0.63	West Evans Pond		Jumbos
Page 1 Total					3,000	4,247	0.71			
Sub Total					3,000	4,247	0.71			

Table 29.1. Brood Year 2008 Spokane rainbow trout (Jumbo) plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

Page 2 of 2

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
Page 1 Subtotal					3,000	4,247	0.71			
04/14/10					100	161	0.62	Rainbow Lake		Jumbos
04/14/10					150	225	0.67	Pampa Pond		Jumbos
04/16/10					50	81	0.62	Lions Park Pond		Jumbos
04/21/10					150	230	0.65	Watson Lake		Jumbos
04/21/10					25	38	0.65	Dayton JV Pond		Jumbos
04/22/10					25	38	0.65	Gilcrest Pond		Jumbos
04/22/10					25	38	0.65	Garfield Pond		Jumbos
04/25/10					150	263	0.57	Bennington Lake		Jumbos
05/11/10					50	91	0.55	Jefferson Park Pd		Jumbos
05/11/10					25	45	0.55	Dayton JV Pond		Jumbos
05/14/10					50	91	0.55	Lions Park Pond		Jumbos
05/27/10					150	300	0.50	Curl Lake		Jumbos
05/28/10					83	166	0.50	Blue Lake		Jumbos
05/28/10					54	108	0.50	Rainbow Lake		Jumbos
05/28/10					50	100	0.50	Watson Lake		Jumbos
Page 2 Total					1,137	1,975	0.58			
Sub Total					4,137	6,222	0.67			

Table 30. Brood Year 2009 Spokane rainbow trout plants and transfers.

PLANTS AND TRANSFERS

TUCANNON HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
01/06/10	175,044	33.19					277/oz.	Spokane Hatchery		
01/06/10			277				277/oz.	Dayton Elementary		
01/06/10			277				277/oz.	Pomeroy Elementary		
01/07/10			250				277/oz.	Walla Walla High School		
01/07/10			250				277/oz.	Garrison Middle School		
01/07/10			500				277/oz.	Lincoln Middle School		
01/07/10			250				277/oz.	Asotin Elementary		
01/07/10			250				277/oz.	Asotin High School		
01/07/10			250				277/oz.	Clarkston High School		
09/28/10					308	50	6.2 fpp	B l u e L a k e		
Total	175,044	33.19	2,304		308	50				

Table 31. TFH Plants and Transfers summary for the period October 1, 2009 - September 30, 2010.

Oct 1, 2009 – Sep 30, 2010

PLANTS AND TRANSFERS SUMMARY

TUCANNON HATCHERY

STOCK CODE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		AVERAGE SIZE FISH / POUND
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS	
CK:SP:TUCA:08:M	88,276	3,098					28.5
CK:SP:TUCA:08:M	86,495	3,932					22.0
CK:SP:TUCA:08:M					86,694	7,539	11.5
CK:SP:TUCA:08:M					86,203	12,493	6.9
CK:SP:TUCA:09:M	113,549	4,811					23.6
CK:SP:TUCA:09:M	118,632	4,063					29.2
SH:SU:TUCA:09:H	29,955	4,539					6.6
SH:SU:TUCA:09:H	18,236	2,498					7.3
SH:SU:TUCA:09:H	9,547	562					17
SH:SU:TUCA:09:H					48,105	10,716	4.5
SH:SU:TUCA:09:H					9,547	1,631	5.8
RB:NA:SPOK:08:H					126,207	35,130	3.59
RB:NA:SPOK:08:H					4,137	6,236	0.67
RB:NA:SPOK:09:H	175,044	eyed eggs					
RB:NA:SPOK:09:H			2,304	eyed eggs			
RB:NA:SPOK:09:H					308	50	6.2
Total	639,734	23,503	2,304		361,201	73,795	4.9

Table 32. Brood Year 2008 Spokane rainbow trout (catchable) plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

Page 1 of 2

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/10/10					1,000	303	3.3	Orchard Pond		
2/16/10					8,022	2,865	2.8	Quarry Pond		
2/16/10					8,022	2,865	2.8	Dalton Pond		
2/17/10					3,920	1,400	2.8	West Evans Pond		
2/17/10					2,002	715	2.8	Pampa Pond		
2/17/10					1,512	540	2.8	Riparia Pond		
2/18/10					3,556	1,270	2.8	Golf Course Pond		
2/18/10					1,008	360	2.8	Dam Pond		
2/18/10					3,024	1,080	2.8	Fish Hook Park Pd.		
2/19/10					1,008	360	2.8	Marmes Pond		
2/22/10					4,509	1,670	2.7	Blue Lake		
2/22/10					3,504	1,120	2.7	Rainbow Lake		
2/22/10					2,002	770	2.6	Spring Lake		
2/23/10					2,002	770	2.6	Big Four Lake		
2/24/10					3,016	1,160	2.6	Watson Lake		
2/24/10					507	195	2.6	Beaver Lake		
2/24/10					715	275	2.6	Deer Lake		
3/03/10					3,037	1,168	2.6	Sprague Lake		
Page 1 Total					52,366	18,886	2.8			
Sub Total					52,366	18,866	2.8			

Table 32.1. Continued - Brood Year 2008 Spokane rainbow trout (catchable) plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
Page 1 Total					52,366	18,886	2.8			
3/08/10					1,001	385	2.6	Dayton JV Pond		
3/09/10					1,001	385	2.6	Jefferson Park Pond		
3/10/10					3,037	1,168	2.6	Bennington Lake		
3/16/10					7,565	3,152	2.4	Quarry Pond		
3/16/10					7,565	3,152	2.4	Dalton Pond		
3/17/10					5,100	2,125	2.4	West Evans Pond		
3/17/10					3,500	1,400	2.5	Golf Course Pond		
3/18/10					1,008	420	2.4	Marmes Pond		
3/18/10					1,008	420	2.4	Orchard Pond		
3/18/10					1,008	420	2.4	Silcott Pond		
3/19/10					2,058	980	2.1	Pampa Pond		
3/23/10					3,002	1,580	1.9	Bennington Lake		
3/24/10					3,705	1,950	1.9	Rainbow Lake		
3/24/10					2,379	1,252	1.9	Spring Lake		
3/24/10					3,990	2,100	1.9	Blue Lake		
3/25/10					2,980	1,419	2.1	Watson Lake		
4/16/10					992	496	2.0	Hood Park Pond		
Page 2 Total					50,899	22,804	2.2			
Total					103,265	41,690	2.48			

Table 33. Brood Year 2008 Spokane rainbow trout (Jumbo) plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

Page 1 of 1

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
2/10/10					25	28	.9	Orchard Pond		
2/16/10					100	111	.9	Quarry Pond		
2/16/10					100	111	.9	Dalton Pond		
2/17/10					25	28	.9	Pampa Pond		
2/17/10					25	28	.9	Riparia Pond		
2/18/10					25	28	.9	Dam Pond		
2/19/10					25	28	.9	Marmes Pond		
2/24/10					25	31	.8	Deer Lake		
3/08/10					25	36	.7	Dayton JV Pond		
3/09/10					100	143	.7	Jefferson Park Pond		
3/10/10					80	114	.7	Bennington Lake		
3/17/10					50	83	.6	Golf Course Pond		
3/18/10					32	53	.6	Orchard Pond		
3/19/10					40	67	.6	Pampa Pond		
3/23/10					80	133	.6	Bennington Lake		
4/16/10					258	430	.6	Hood Park Pond		
Total					1,015	1,452	0.7			

Table 34. Brood Year 2009 Spokane rainbow trout transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
4/28/10			83,781	873			96	Idaho Fish & Game		
4/29/10			72,856	662			110	Idaho Fish & Game		
Total			156,637	1,535			102			

Table 35. Brood Year 2008 Kamloop rainbow trout plants and transfers.

PLANTS AND TRANSFERS

LYONS FERRY HATCHERY

DATE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		SIZE FISH / POUND	WATER LOCATION	RIVER MILE	MARKS
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS				
10/07/09			53,527	3,568			15	Idaho Fish & Game		
Total			53,527	3,568			15			

NOTE: This was final transfer/release of Kamloop rainbow juveniles. Program was discontinued.

Table 36. LFH Plants and Transfers summary for the period October 1, 2009 - September 30, 2010.

Oct 1, 2009 – Sep 30, 2010

PLANTS AND TRANSFERS SUMMARY

LYONS FERRY HATCHERY

STOCK CODE	TRANSFERRED IN		TRANSFERRED OUT		PLANTED		AVERAGE SIZE FISH / POUND
	NUMBER	POUNDS	NUMBER	POUNDS	NUMBER	POUNDS	
CK:SP:TUCA:08:M			88,276	3,098			28.5
CK:SP:TUCA:08:M			86,495	3,932			22.0
CK:SP:TUCA:09:M					52,253	757	69
CK:SP:TUCA:09:M			113,359	4,811			23.6
CK:SP:TUCA:09:M			118,632	4,063			29.2
CK:FA:SNAK:08:M			464,875	37,914			12.0
CK:FA:SNAK:08:M					478,852	48,862	10.0
CK:FA:SNAK:09:M			1,507,300	<i>eyed eggs</i>			-
CK:FA:SNAK:09:M			1,448,005	19,384			74.7
CK:FA:SNAK:09:M					405,490	7,394	58
SH:SU:TUCA:09:H			57,738	7,599			7.6
SH:SU:TOUC:08:H					5,599	1,166	4.4
SH:SU:TOUC:09:H					37,837	8,599	4.5
SH:SU:TOUC:09:H					18,241	3,317	5.5
SH:SU:WARI:09:H			163,201	27,200			6.0
SH:SU:WARI:10:H	244,487	<i>green eggs</i>					
SH:SU:LYON:09:H			86,737	14,219			6.0
SH:SU:LYON:09:H					278,159	63,218	4.4
RB:NA:SPOK:08:H					103,265	41,690	2.5
RB:NA:SPOK:08:H					1,015	1,452	0.70
RB:NA:SPOK:09:H	340,045	<i>eyed eggs</i>					-
RB:NA:SPOK:09:H			156,637	1,535			102
RB:NA:KAML:08:H			53,527	3,568			15
Total	584,532		4,344,782	127,323	1,328,458	175,698	18.7