

2006

ANNUAL OPERATING PLAN

for

FISH PRODUCTION PROGRAMS

in the

CLEARWATER RIVER BASIN

by

U.S Fish and Wildlife Service

Idaho Department of Fish and Game

Nez Perce Tribe Fisheries

March 1, 2006

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CLEARWATER BASIN ANNUAL OPERATING PLAN (AOP) 2006

Version 2/10/06

(Each section should list a contact person for additional information, coordination, or notification – contact information is listed in Section 6.)

1. STEELHEAD

1.1. Broodyear 2005 Steelhead

1.1.1. Dworshak – *Broodstock need for Dworshak mitigation is ~2,300 fish, this number of steelhead is needed to provide enough males to allow a 1:1 spawning ratio for the 580 females needed for egg collection. (An additional 2,000 fish are needed to provide eggs for Clearwater and Magic Valley Hatchery steelhead programs.) Male to female ratio at Dworshak is typically 1:3, so to collect enough males more females than needed are collected, excess steelhead are typically outplanted for natural spawning. This number includes jacks, and accounts for pre-spawning mortality. Typically 500 steelhead are collected in the fall to include the early returning, early spawning component of the run. This brood level provides ~2.1 million smolts at an average of 80% eyed egg-to-smolt survival to meet the adult return goal of 20,000 to the Clearwater River.*

1.1.1.1. Production status - As of January 1, 2006 there were a total of 2.17 million steelhead on station, 166 mm average total length, 10 ffp. Length frequency and pound counts are performed monthly on representative ponds. *Thomas Trock*

1.1.1.2. Projected release – Offsite release is expected to occur the week of April 10, 2006. Onsite release is expected to occur the week of April 17. DNFH expects to release a total of 2.1+ M steelhead, including ~220k un-clipped, at an average total length > 200 mm (6 ffp). *Thomas Trock*

1.1.1.3. Fish health status - June started the IHNV/Coldwater Disease event. This outbreak started early, and has caused chronic mortality as seen in previous years. The reuse system was started in December, allowing the fish to gain a larger size and ability to resist *Ich* infections better. The combination of the two pathogens weakened the fish enough in past years that many were not able to withstand the infection. As size continues to increase, fish immune systems should be better able to fight the infections. A 60 fish sample will be tested for viral, bacterial, and parasitic pathogens prior to release. *Kathy Clemens*

1.1.1.4. M&E – Six CWT groups for system contribution and early return groups, and 1,500 PIT tags for Fish Passage Center emigration timing [ex. BY04 = 75.5%, 14.3 days]. Prior to release 500 marked fish from each mark group (tag code) are checked for tag retention (ex. BY04 = 99.5%). Also 500 fish are checked for LV clip and AD clip quality. Each pond with un-clipped fish is sampled (100 fish) for dorsal fin erosion. *Ralph Roseberg*

1.1.2. Clearwater - *Original design memorandum shows the production goal may be as high as two million steelhead smolts. Historically, the steelhead smolt releases from Clearwater Fish Hatchery have ranged from approximately 600 to 1.04 million. Adult return goal for the program is 14,000 steelhead.*

- 1.1.2.1. Production status / projected release - The estimated number of BY05 steelhead to be released in the spring of 2006 is 845,000. 284,000 AD-clip production into the lower SF Clearwater, 318,000 no ad-clip and 243,000 ad-clip production will be released into the upper SF Clearwater River pursuant to the US v. Oregon 2005-2007 Interim Management Agreement. **(Table 1) Jerry McGehee**
- 1.1.2.2. Fish health status - For Egg Disease Certification, all females are sampled for IHNV. Eggs from any females that test positive are destroyed, and only eggs that test negative for IHNV are taken to CFH. Juvenile rearing inspections are performed quarterly by Eagle Fish Health Lab. No prophylactic treatments are used during steelhead rearing. Inspections are conducted quarterly. Diagnostics on demand. Pre-liberation samples performed on 20 fish sample prior to release. Viral pathogens have not been detected in these fish. *Flavobacterium psychrophilum*, *Aeromonas hydrophila*, and *Aeromonas sobria* were detected in all fish sampled in the outdoor raceways after these fish were marked. Mortality was not high enough to warrant treatment. *Doug Munson*
- 1.1.2.3. M&E - The fish are sampled monthly between the 25th and 28th of the month. During months of rapid growth, fish are sampled biweekly. Pound counts are taken to track fish growth and monitor if growth is following the annual growth projections. Length frequencies are taken monthly. Approximately 30 days prior to release, 100 fish are sampled to quality check adipose (Ad) fin clips, ventral fin clips, and coded wire tag (CWT) retention. *Jerry McGehee*

1.1.3. South Fork Un-clipped Releases - *533,000 un-clipped steelhead is the program goal for SF Clearwater releases stated in the harvest agreement between the States, Tribes and Federal parties. The agreement of releasing un-clipped fish was to offset reductions in down-river Tribal fisheries. The principle is that the returning un-clipped adult steelhead will escape the sport fishery therefore return at higher numbers to tributaries, to hopefully spawn, thereby increasing natural production.*

- 1.1.3.1. Production status – See Dworshak NFH and Clearwater FH for information.
- 1.1.3.2. Projected release – 318,000 unclipped steelhead from Clearwater Hatchery will be released into the South Fork tributaries and Lolo Creek. ~220,000 unclipped steelhead from Dworshak NFH will be released into Newsome Creek and American River (50:50 split). **(Table 1) Howard Burge**
- 1.1.3.3. M&E - Brood Year 03, 04 and 05 steelhead were uniquely marked by the FWS-IFRO with PIT, CWT, and elastomer tag groups to evaluate acclimated vs. direct release affects using Red R as study stream. Releases include 50k acclimated (L blue) and 50k direct (L orange) for comparison and an upriver group and pooled (25k+25k=50k) (R orange) Mill/Meadow (direct) as downriver group. FWS will also be analyzing tributary of release effect by comparing Red R (upriver) to Mill/Meadow (downriver). IFRO will also test if unclipped steelhead perform differently than production steelhead by comparing Red River unclipped

and production releases as paired release. Additional monitoring will include determining if any un-clipped steelhead stray into and spawning in wild production areas such as the Lochsa or Selway basins. *Howard Burge*

1.2. Broodyear 2006 Steelhead

1.2.1. Dworshak

- 1.2.1.1. Projected adult return - Based on the 759 I-salt rack returns (expanded) the predicted steelhead return to Dworshak NFH in 2005-2006 should be about 7,700 which is above average. In-season hatchery "B" steelhead estimates at both Bonneville and Lower Granite dams have caused the estimate to be revised slightly downward. (**Table 2b**). *Ralph Roseberg*
- 1.2.1.2. Ladder operation - The ladder was open October 3-17, then opened October 20 and closed the next day for collection of early-return SST. During this 15 day period there were 596 early-run steelhead collected for spawning in the spring of 2006. It was reopened two-three days/week until November 18 to collect coho. There were 635 adult SST excess which were outplanted to Hog Island. There were an additional 125 adult SST donated to the Nez Perce Tribe for traditional tribal harvest at the Nez Perce Tribal Hatchery at Cherry Lane. Three fall Chinook (1 female, 2 males) were also trapped and transferred to NPTH with NMFS approval. Based on this prediction we are considering intermittent ladder operation to prevent excess fish collection. Intermittent ladder operation also keeps steelhead in the river where they are available for sport and tribal harvest and allows us to spawn fish that have not been held in the hatchery for more than a few days. The ladder will be reopened February 21, 2006 for the collection of mid and late returning steelhead. Surplus adults will be outplanted by the Nez Perce Tribe late in the season. Outplanting schedule will be coordinated with Mike Key, NPT. *Thomas Trock*
- 1.2.1.3. Adult fish health – 60 males were injected with the hormone sGnRHa prior to spawning, using the implant form, under INAD. Fish are treated three times per week with formalin for fungus, under a veterinary prescription. A minimum of 60 tissues samples, and 150 ovarian fluid samples will be collected at spawning and assayed for viruses, bacteria, and parasites. *Kathy Clemens*
- 1.2.1.4. Adult outplanting/marking –Ladder opening for collection of spring returns is not planned until February 21. Any excess steelhead collected will be put in a separate holding pond until the NPT outplant them in SF Clearwater River tributaries. These fish will all be marked with left opercal v-notch. Due to the planned intermittent ladder operation in 2006 we will need to expand the number collected to estimate what the rack return would have been if we had not closed the ladder. Like 2003-05 we will use the average conversion between Lower Granite and Dworshak NFH for 2 &3-ocean hatchery 'B' steelhead. *Ralph Roseberg*
- 1.2.1.5. Carcass disposition - Adult carcasses will be distributed to 1) Department of Justice and local food banks, 2) Coeur D' Alene Tribe, 3) grizzly bear

and eagle programs at WSU, 4) research and 5) landfill. If distribution points become limiting Howard Burge will coordinate with Bill Horton.

Thomas Trock

- 1.2.1.6. Adult M&E –Blank wire, system contribution, and early return CWT are being recovered for two of three age classes. FWS-IFRO is radio tagging un-clipped dorsal eroded adult steelhead (VIE identified fish will be tagged for BY07) at Lower Granite Dam to evaluate returns from that supplementation program. Returning adults are measured and examined for gender, various clips and tags, and seal bites or other injuries, then sorted for spawning or holding. The protocol for handling of suspected blank-wire-tagged / un-clipped adipose fin steelhead was to identify them as they came across the sorting table. Mark them with a rubber band and send them down to the spawning area. They were spawned if we needed them and they were ripe. If we did not need them for spawning we killed them for tags and recorded if they were ripe or not. *Ralph Roseberg / Howard Burge*
- 1.2.1.7. Spawning/egg take plans, mating protocol - Current plans are to take 2.8 million eyed eggs for Dworshak, ~1.3 million green for Clearwater and ~1.5 million for Magic Valley. Potlatch will receive approximately 18K green eggs. **Table 3.** *Thomas Trock*
- 1.2.1.8. Juveniles Production - Incubation: Dworshak will incubate eggs from approximately 630 steelhead females for its program, 150 fall-return adults and 480 from winter and spring returns. After eye-up and enumeration, approximately 2.8 million eyed eggs will go into the Dworshak program. Dworshak will also provide incubation space for up to 1.4 million green eggs for Clearwater Fish Hatchery. *Thomas Trock*
Nursery Rearing: Dworshak will early-rear 2.5 million steelhead in its nursery until the fish reach approximately 80 fpp during the spring and summer of 2006.
Outside Rearing: Approximately 2.35 million steelhead will be moved from nursery tanks to 83 outside Burrows Ponds from the end of May until September, 2006. Fish will be ponded at final rearing densities, ~28,500 fish/pond. Most steelhead transferred outside will receive an adipose-fin clip when moved to designate it as a hatchery fish. *Thomas Trock*
SF releases – Steelhead for this program are no longer raised at Hagerman NFH, because of the New Zealand mudsnail problem. The 200k of production slated for American River and Newsome Creek will be raised at Dworshak NFH. The 100k un-clipped steelhead direct release group from Dworshak is no longer included in the settlement releases. *Howard Burge*
- 1.2.1.9. Juvenile Fish health - Upon ponding, will be monitored for coldwater disease and parasites. A 60 fish sample will be tested for viral, bacterial, and parasitic pathogens prior to release. *Kathy Clemens*
- 1.2.1.10. Planned juvenile marking & tagging, release sites - Marking plans for BY05 steelhead at Dworshak NFH are found in **Table 4.** *Ralph Roseberg*

- 1.2.1.11. Juvenile M&E FWS will be CWT steelhead from the three systems and early return progeny. *Howard Burge*
- 1.2.1.12. Communication FWS puts out weekly spawning reports and weekly return reports, and annual spawning and adult return reports are also produced. All of these will be sent to the Contact list (**Section 6.**).

1.2.2. Kooskia

- 1.2.2.1. Weir/trap operation - The adult trap will be opened sometime in mid-March. The trap will remain opened until late April.
- 1.2.2.2. Adult handling/outplanting/markings - All natural (unmarked) fish will be passed upstream of the weir. CWT steelhead will be sacrificed for tag recovery. Adult hatchery steelhead (not taken for CWT) will be loaded into NPT truck for outplanting at time of sorting; NPT contact will be Mike Key. Outplanted steelhead will be given a right opercle v-notch. Any Tribal requests for steelhead will be coordinated through Nancy McAllaster, NPT (208-843-7320 ext.2445). Other native species (bull trout, suckers, whitefish etc.) trapped will be passed upstream above the weir. *Ralph Roseberg*
- 1.2.2.3. M&E - Returning adults are measured and examined for gender, various clips and tags, and seal bites or other injuries, then sorted for spawning or holding. CWT steelhead will be sacrificed for tag recovery. No steelhead evaluation is planned at Kooskia at this time. *Howard Burge*

1.2.3. Clearwater

- 1.2.3.1. Clearwater Hatchery - BY06 smolt release has been set at a range from 843K to 1.16 million including 360K to 560K for tribal supplementation. 1,252,900 green eggs are requested for Clearwater Hatchery. **Table 3.** All spawning will occur at DNFH. Our expected first spawn date for Clearwater Hatchery egg collection is March 8. Spawning occurs on every Tuesday. When possible 1:1 male:female spawning will be used. On spawning days, eggs taken for CFH and Magic Valley will be from fresh fish that have entered DNFH trap since the last spawning day or fish that were green (not ripe) on previous spawning days and returned to the holding pond. Incubation to eyed stage of eggs destined for CFH production will occur at Dworshak Hatchery. All eggs from positive IHNV parentage will be culled at this point. At Dworshak Hatchery, the eggs will be shocked and then transferred to Clearwater Hatchery where they will be disinfected and placed in Heath egg trays. They will be picked and enumerated the next day. The eggs will then be placed in Heath egg trays for the remaining incubation period. The fry remain in the indoor vats until they are approximately 35 fish per pound. Each vat is loaded with approximately 60k swim-up fry and will be split to approximately 20k after spring Chinook are moved outside. *Jerry McGehee*
- 1.2.3.2. Magic Valley - 1,514,200 green eggs are requested for Magic Valley and Hagerman NFH. **Table 3.** Our expected first spawn date for these hatcheries is March 21. Eggs are taken to CFH Isolation Incubation each spawning day where they are held until certification of disease status. The

isolation incubation building will be used to house and incubate the Dworshak B strain steelhead eggs destined for Magic Valley/Hagerman NFH. Eggs will be received on three different spawning days and held until the fish pathology lab determines virus results. At that time, positive IHNV eggs will be destroyed and the negative will be picked, enumerated, and shipped to Magic Valley. *Jerry McGehee*

- 1.2.3.3. Fish health – All females spawned at Dworshak NFH will have ovarian fluid sample taken, shipped to Eagle Fish Health Lab, and tested for Infectious Hematopoietic Necrosis Virus (IHNV); only negative tested eyed eggs are transferred to Clearwater Fish Hatchery main incubation for rearing at CFH. All eggs from IHNV positive females will be culled from production. Juvenile rearing inspections will be performed each quarter by Eagle Fish Health Lab. Pre-liberation inspections will also be performed on a 20 fish sample 10 to 15 days before liberation. No prophylactic treatments are planned at this time. *Doug Munson*
- 1.2.3.4. Marking plans - Plans for BY06 steelhead from Clearwater hatchery are found in **Table 4**. As fish are moved outside, they receive ad-clips, ventral fin clips, and test groups receive CWT's. Fish will remain there until they are full smolt size and age, maximum of 4.5 to 7.5 fish per pound. (Raceways are loaded with approximately 50k -70k fish). In February or March, 500 fish from each release group are injected with PIT tags. *Bill Horton*

1.2.4. South Fork Un-clipped Program

- 1.2.4.1. Planned rearing / juvenile marking & tagging – See Dworshak NFH and Clearwater FH for information.

2. SPRING CHINOOK SALMON

Broodstock needs for all facilities total 4,610 adults, specifically: 1,200 for Dworshak, 800 for Kooskia, 1,860 for Clearwater, 750 for NPTH. Additional details are listed in the pertinent sections below.

2.1. Broodyear 2004 Spring Chinook

2.1.1. Dworshak – *Approximately 1,200 Chinook are needed for broodstock for the Dworshak spring Chinook salmon program. This number includes jacks and accounts for pre-spawning mortality. This brood level will provide 1.5 million green eggs and 1.05 million smolts at an average of 89% eyed egg-to-smolt survival to meet the adult return goal of 9,135 to the river above Lower Granite Dam.*

- 2.1.1.1. Production status - On January 1, 2006, there were 1,014,279 BY04 spring Chinook averaging 31 fpp and 121 mm (4.8 inches) total length on station. At present, these fish appear to be on schedule to meet the size-at-release requirements of 18–20 fish per pound. *Thomas Trock*
- 2.1.1.2. Projected release – In March 2006, projected release will be approximately 1,010,000 spring Chinook. Chinook will be released (forced out of raceways) on two consecutive evenings from A and B banks in mid to late March with a number of environmental factors considered:

- flows, turbidity, increasing hydrograph, and new moon – to give fish as much cover from predators as possible. *Thomas Trock (Table 5)*
- 2.1.1.3. Fish health - BY04 SCS have done very well to date. No treatments have been required and there is no sign of IHNV. Monthly monitoring samples for BKD are currently being taken. A pre-release exam of 60 fish will be sampled for viral and bacterial pathogens prior to release. *Kathy Clemens*
- 2.1.1.4. M&E - Approximately 130k Dworshak stock are CWT for system contribution monitoring. Prior to release 500 marked fish from each mark group (tag code) are checked for tag retention (ex. BY03 = 98.9%). For the Comparative Survival Study (CSS) - Idaho FRO has contracted with the Columbia River Fisheries Program Office (Vancouver) to PIT tag the 52,000 spring Chinook salmon for Dworshak's contribution to the CSS. [ex. BY03 = 76.1%, 29.2 days] 1,000 PIT tags for USGS, and BioMark will PIT tag another 45k Chinook for a COE/USGS study. *Howard Burge / Ralph Roseberg*
- 2.1.2. Kooskia** - *Approximately 800 Chinook are needed for broodstock for the Kooskia spring Chinook salmon program. This number includes jacks and accounts for pre-spawning mortality. This brood level produces 600,000 smolts at an average 80% eyed egg-to-smolt survival.*
- 2.1.2.1. Production status - There are a total of 637,951 Kooskia stock BY04 spring Chinook fry weighing 20,941 lbs, 4.78 inches or 121 mm long, at 30.5 fish/lb (fpp). The Burrows ponds were put on Clear Creek water September 27 2005. Chinook were split from Burrow's ponds into raceways January 26-27, 2006. *Adam Izbicki*
- 2.1.2.2. Projected release - KNFH will release approximately 635,000 spring Chinook at 20-25 fpp on or after the last week in March. **(Table 5)** *Howard Burge / Adam Izbicki*
- 2.1.2.3. Fish health – Treated for *Ich* in late summer 2005. Monthly monitoring samples for BKD are currently being taken. A sample of 60 fish will be taken and assayed for virus, bacteria, and parasites prior to release. *Marilyn Blair*
- 2.1.2.4. M&E – Approximately 100k Kooskia stock are CWT for system contribution monitoring. Prior to release 500 marked fish from each mark group (tag code) are checked for tag retention (ex. BY03 = 92.2%). There are no ISS releases, since 2004 was the last year for those releases. ISS will continue monitoring adult returns from those releases until 2007. The plan is to continue monitoring until 2012. [ex BY03 = 64.9%, 30.6 days] *Howard Burge*
- 2.1.3. Clearwater** - *Approximately 1,860 Chinook are needed for broodstock for the Clearwater Fish Hatchery spring Chinook salmon program. This number includes 1,020 for Powell, 840 for the SF program and also accounts for pre-spawning mortality. Original design memorandum shows the production goal may be as high as three million Chinook smolts. Historically, Chinook releases from Clearwater have ranged up to approximately 1.98 mil.smolts, 1.65mil. presmolts and 1.0 mil. parr. Adult return goal for the program is 12,000 adult Chinook over Lower Granite Dam.*

- 2.1.3.1. Production status/transfer date/projected release – Fish will be released from transportation trucks at designated release sites. The release number is determined by subtracting fish loss from the inventory at the time of Ad clipping. Red River, Powell, and Crooked River acclimation ponds will be watered up and screens put in place by the third week of March. Fish will be transported to the facility and placed in the pond during the last week of March to first week of April. Smolts are then released directly from the ponds between April 10 and 15. At Crooked River smolts will be released directly from the ponds between April 7 and 15 or daily if intake ice-up problems are anticipated. Due to unknown causes, a significant mortality has occurred to smolts somewhere between the upper and lower facilities during the spring of 2004 and 2005. During Spring 2006, 1/2 to 3/4 of the Crooked River full-term smolts will be direct released at the lower facility. All production Chinook are Ad clipped. During the first week of April (dates) the NPT will transport 300,000 smolts to the Selway River for release near the mouth of Meadow Creek. Transport should be coordinated with Butch Harty and Mike Key. Planned releases of BY04 spring Chinook smolts are for 1,912,000 fish at an expected 16-20 fish per pound (115,879 pounds of fish). (**Table 5**) *Jerry McGehee*
- 2.1.3.2. Fish health – Brood Powell Spring Chinook: IHNV was detected in 14/20 pools (3 fish per pool) of ovarian fluids (61 fish sampled). These positive detections were reported to the APHIS veterinarian-in-charge. ELISA sampling detected 15 Highs (3.2%), 297 Lows and 163 Negatives from 475 females sampled. Eggs from females with high ELISA values were culled from the Clearwater Chinook salmon program. Prespawning mortality was at 2.1%.
Broodyear 2004 Powell: Pathogens have not been detected in these fish to date during routine sampling.
Brood S. F. Clearwater Spring Chinook: IHNV was detected in 0/20 pools (3 fish per pool) of ovarian fluids (75 fish sampled). These positive detections were reported to the APHIS veterinarian-in-charge. ELISA sampling detected 38 Highs (8.9%), 314 Lows and 73 Negatives from the 425 females sampled. Eggs from females with high ELISA values were culled from the Clearwater Chinook salmon program. Prespawning mortality was at 8%.
Broodyear 2004 S. F. Clearwater Spring Chinook: No pathogens have been detected during routine sampling.

Juvenile

- Rearing inspections – Quarterly inspections are performed by Eagle Fish Health Lab
- Pre-liberation inspections – These inspections are performed by Eagle Fish Health Lab
- Prophylactic – 2 Erythromycin medicated feed treatments throughout rearing cycle.

- Nine raceways received 1 treatment as part of University of Idaho and IDFG Research.
- Quarterly inspections. Preliberation prior to release at Satellites (20 fish samples). *Ichthyophthirius multifiliis* epizootic at Crooked River.

Doug Munson

- 2.1.3.3. M&E - The fish are sampled monthly between the 25th and 28th of the month. During months of rapid growth, fish are sampled biweekly. Pound counts are taken to track fish growth and monitor if growth is following the annual growth projections. Length frequencies are taken monthly. Approximately 30 days prior to release, 100 fish are sampled to quality check Ad clips, ventral fin clips, and CWT retention. *Jerry McGehee*

2.2. Broodyear 2005 Spring Chinook

2.2.1. Dworshak

- 2.2.1.1. Production status - All of Kooskia stock and 200K of Dworshak stock BY05 spring Chinook eggs were shipped to Kooskia NFH during October and November, 2005. The release location and marking of these fish is still to be determined. Approximately 1.05 million of Dworshak stock remained at Dworshak for incubation over the winter. On January 1, 2006, there were approximately 1.04 million sac-fry incubating at Dworshak. In the spring of 2006, Dworshak stock will be ponded directly into raceways at Dworshak. *Thomas Trock*
- 2.2.1.2. Fish health status - BY05 has experienced no problems to date. 60 fish will be sampled prior to release. *Kathy Clemens*
- 2.2.1.3. M&E Approximately 140k Dworshak stock will be CWT in August for contribution monitoring (**Table 6**). Tagging plans also include 52,000 PIT tags for the Comparative Survival Study (CSS). The CSS is looking at adult survival of transported vs non-transported and up-river vs. down-river releases. *Howard Burge*

2.2.2. Kooskia

- 2.2.2.1. Production status - Kooskia stock BY05 spring Chinook eggs were taken from a total of 128 females spawned with a total of 94 males. This produced a total of 448,000 green eggs. All of the Kooskia stock, and approximately 200,000 Dworshak stock were transferred to KNFH the last week of October and the first week of November. Eggs were incubated on Clear Creek water, at temperatures of approximately 40°F. Normally eggs for Dworshak and Kooskia all hatch out by mid January. The eggs will be switched to chilled well water at the end of January to prevent silt problems due to spring runoff and to protect the sac fry from ICH. The disposition of the 200,000 Dworshak stock will be determined at a later date, but most likely will be raised to release size at Kooskia NFH. Kooskia fry will be tanked and started on feed in late April or early May. Approximately 400k Kooskia stock will be reared to ~25-20 fpp. These fish will be released April 2007. *Howard Burge / Adam Izbicki*

- 2.2.2.2. Fish health status - BY05 has experienced no problems to date. 60 fish will be sampled prior to release. *Marilyn Blair*
- 2.2.2.3. M&E – While there will be no ISS smolt releases, ISS will continue monitoring adult returns. Approximately 100k fish will be CWT in August for contribution (**Table 6**). On-going Kooskia weir evaluation will continue. *Ralph Roseberg / Howard Burge*

2.2.3. Clearwater

- 2.2.3.1. Production status – The proposed number of Clearwater Fish Hatchery fish to be allocated from brood year 2005 is 1.575 million smolts. NPTH requested 200 females and 200 males to meet their egg needs; they were given 0 females and 0 males. *Jerry McGehee*
- 2.2.3.2. Estimated numbers/planned marking & tagging - All production Chinook are Ad clipped. Planned releases of BY05 Chinook are for 1,575,000 smolts 15-20 fish per pound. No parr and pre-smolts will be reared due to egg shortage. Fish will be released from transportation trucks at designated release sites. Red River, Powell, and Crooked River acclimation ponds will be watered up and screens put in place by the third week of March each year. Fish will be transported to the facility and placed in the pond during the last week of March. Smolts are then released directly from the ponds between April 7 and 15. The NPT will transport and release 262,500 smolts directly into the lower Selway River near the mouth of Meadow Creek. (**Table 6**) *Tom Rogers*
- 2.2.3.3. Fish health status – Brood Powell Spring Chinook: IHNV was detected in 11/32 pools (3 fish per pool) of ovarian fluids (60 fish sampled). These positive detections were reported to the APHIS veterinarian-in-charge. ELISA sampling detected 3 Highs (3.7%), 49 Lows and 29 Negatives from the 81 females sampled. Eggs from females with high ELISA values were culled from the Clearwater Hatchery Chinook salmon program. Prespawning mortality dropped to 2% from 18% in 2003.
- Brood S.F. Clearwater Spring Chinook: IHNV was detected in 9/38 pools (3 fish per pool) of ovarian fluids (60 fish sampled). These detections were reported to the APHIS veterinarian-in-charge. ELISA sampling detected 3 Highs (3.7%), 84 Lows and 39 Negatives from the 126 females sampled. Eggs from females with high ELISA values were culled from the Clearwater Hatchery Chinook program. Prespawning mortality dropped to 3.9% from 8% in 2004.
- Eggs- Disease Sampling: When the females are spawned, kidney samples are collected from all females; ovarian samples are collected from 60 females as well as head wedges from 20 fish for disease testing. All samples are air freighted weekly to the Eagle Fish Health lab for analysis. Females are screened for BKD using ELISA techniques. Females with optical densities (OD) over 0.25 are culled.
- Juvenile
- Rearing inspections – quarterly inspections are performed by Eagle Fish Health Lab

- Pre-liberation inspections – These inspections are performed by Eagle Fish Health Lab
- Prophylactic – 1 Erythromycin medicated feed treatments throughout rearing cycle.
- Some raceways will receive 3 treatments as part of University of Idaho and IDFG Research because of BKD moderate group being reared.
- Quarterly inspections. Preliberations prior to release at Satellites (20 fish samples). *Doug Munson*

2.2.3.4. M&E - The fish are sampled monthly between the 25th and 28th of the month. During months of rapid growth, fish are sampled biweekly. Pound counts are taken to track fish growth and monitor if growth is following the annual growth projections. Length frequencies are taken monthly. Approximately 30 days prior to release, 100 fish are sampled to quality check Ad clips, ventral fin clips, and CWT retention. *Chris Harrington*

2.2.4. Nez Perce Tribal Hatchery *Approximately 750 spring Chinook salmon adults are needed for broodstock for the Nez Perce Tribal Hatchery spring Chinook program. This number includes jacks and accounts for pre-spawning mortality. This brood level will provide for a target release of 75,000 presmolts from Newsome Creek (South Fork Clearwater River) acclimation facility, 150,000 presmolts from Yoosa/Camp (Lolo Creek) acclimation facility and 400,000 parr into Meadow Creek (Selway River).*

2.2.4.1. Production status – A total of 71 BY05 adult spring Chinook were collected at the following locations: Lolo Creek (28), Newsome Creek (36), Site 1705 (7). Adults held at the Newsome and Yoosa/Camp facilities, were transferred to NPTH in July and August, 2005, due to water temperatures approaching 65° F in Newsome and Yoosa/Camp creeks. The Lolo stock yielded 61,724 green eggs, Newsome stock yielded 52,947 green eggs, and the Powell/S. Fork stock yielded 6,963 green eggs. Eggs were incubated on mixed well and chilled, treated surface water at a temperature of 46°F. As of December 31, 2005, a total of 99,235 spring Chinook fry were on hand at NPTH. Targeted 2006 releases: (**Table 5**) *Butch Harty*

- 50,000 presmolts (acclimated) into Yoosa/Camp/Lolo Creek in October
- 50,000 presmolts (acclimated) into Newsome Creek in October

2.2.4.2. Estimated numbers/planned marking & tagging – Fish destined for release from acclimation facilities will be marked (CWT) at approximately 180 fish per pound (2.52 g) in mid-March, held in production room tanks or raceways at NPTH. Newsome Creek fish will be transferred to Sweetwater Springs prior to transfer to acclimation facilities at Newsome Creek for final rearing. Yoosa/Camp fish will be transferred from NPTH to Yoosa/Camp acclimation facility for final rearing. *Butch Harty*

2.2.4.3. Acclimation facility operations/release –

- Yoosa/Camp – Transfer of the fish will occur when conditions permit (mid- May to the first week of June). Facility will be set-up and operational at least 2 days prior to transfer of fish. Prior to release, 6,000 fish will be tagged with a PIT tag. Volitional release will commence will begin on October 5, and end October 19, 2006 with force out at 34 fish per pound (13.3 g) (**Table 5**).
 - Newsome Creek – After marking, fish will be transferred to the Sweetwater Spring facility, held until late August/early September (when water temperatures cool) and then be transferred to the Newsome AF facility. Prior to release, 6,000 fish will receive a PIT tag. Volitional release will commence October 3 and end October 17, 2006 with force out at 29 fish per pound (15.6 g) (**Table 5**).
 - Meadow Creek – Due to broodstock limitations, there will be no releases into Meadow Creek in 2006 (**Table 5**). *Butch Harty*
- 2.2.4.4. Fish health status – There were no viruses isolated during spawning from any of the NPT SCS sites. Eggs from one female from Yoosa Camp were culled because they had a high ELISA value (2.662). *Kathy Clemens*
- 2.2.4.5. M&E -
- Tag retention and delayed mortality – Estimate CWT delayed mortality rates within 5 days of tagging. Estimate CWT retention rates 25-35 days after tagging. Estimate PIT tag retention rates and delayed mortality within 5 days of tagging.
 - PIT survival studies- Estimate smolt survival rates and migration timing (**Table 6**).
 - Downstream migration – Operate rotary screw traps within Meadow Creek, Lolo Creek and Newsome Creek to monitor movement, timing, condition factors, and population estimates. *Sherman Sprague*
- 2.2.4.6. Communication - NPTH produces monthly production and pathology reports. Fish Research produces weekly weir reports, final weir summary report, spawning ground summary reports, and SURPH survival summary reports.

2.3. Broodyear 2006 Spring Chinook

2.3.1. Dworshak

- 2.3.1.1. Projected adult returns - Based on 2005 draft tribal harvest, sport harvest data, and rack returns; the expected return for BY06 adult spring Chinook to North Fork Clearwater is 1,568 fish. Our forecast for the 2006 spring Chinook salmon returns to Dworshak NFH is given in **Table 7a**. FWS is not optimistic that they will meet broodstock requirements. IDFG and the NPT may decide to open sport and tribal fisheries in the Clearwater River in the spring of 2006 after dam counts of PIT tagged adults possibly revise our estimates. *Ralph Roseberg*
- 2.3.1.2. Ladder operation – Ladder opening will be influenced by possible fisheries openings and in-season run projection adjustments. If fisheries are open and the run looks good the ladder may be opened around the first of June to collect ~200 Chinook and then closed until July, when regular

spring Chinook trapping would begin. If the run estimate is close to our prediction or total brood needs we will likely open the ladder the end of June and leave it open to maximize collection of Dworshak broodstock and brood for other facilities. The NPT requested that adult spring Chinook in excess of DNFH broodstock requirements be provided for broodstock at NPTH. Notify Butch Harty and Becky Johnson. *Howard Burge*

- 2.3.1.3. Adult outplanting / distribution plans – **Table 8a** list the priority of streams to receive adult spring Chinook salmon. Outplanting will be coordinated between Mike Key (NPT) and Ralph Roseberg (FWS). All adults outplanted from Dworshak will receive a left opercal v-notch as shown in **Table 8b**. *Howard Burge / Ralph Roseberg*
- 2.3.1.4. Adult M&E Returning adults are measured and examined for gender, various clips and tags, and seal bites or other injuries, then sorted for spawning or holding. *Ralph Roseberg*
- 2.3.1.5. Spawning plans Dworshak will spawn 350-425 females for its program and 250-300 females for Kooskia’s program. *Thomas Trock*
- 2.3.1.6. Egg Incubation All eggs taken for Kooskia and Dworshak will be initially incubated at Dworshak. After eye-up and enumeration, all of Kooskia eggs will be shipped to Kooskia for final incubation. All of Dworshak eggs will be incubated at Dworshak. *Thomas Trock*
- 2.3.1.7. Fish health – Every adult female will be sampled individually for BKD with ELISA. Up to 150 ovarian fluid samples (3 pool) will be sampled for viruses. An additional 60 tissue samples will be taken for bacteria assays, and 20 samples for *M. cerebralis* and *C. Shasta*. Eggs from high and medium ELISA level females will be culled; exact level will depend upon number of fish returning. *Kathy Clemens*
- 2.3.1.8. Communication FWS puts out weekly spawning reports and weekly return reports, and annual spawning and adult return reports are also produced. All of these will be sent to the Contact list (**Section 6**).

2.3.2. Kooskia

- 2.3.2.1. Projected adult returns - Based on 2005 draft tribal harvest, sport harvest data, and rack returns; Kooskia’s BY06 adult Chinook return is expected to be about 395 fish. Our forecast for the 2006 spring Chinook salmon returns to Kooskia NFH is given in **Table 7a**. FWS is not optimistic that they will meet their brood stock requirements of 800 Chinook. *Ralph Roseberg*
- 2.3.2.2. Trap operation – Trap will be opened for Chinook collection around the beginning of May. All natural and a matching number of returning ISS adults (up to 60 pairs of unmarked/ventral clip adults) will be released upstream for natural spawning in accordance with ISS protocol. ISS adults in excess of what is needed for natural spawning will be incorporated into general production. Adults collected for broodstock will be transported to Dworshak for holding until spawning. *Howard Burge /*
- 2.3.2.3. Adult outplanting / distribution plans - **Table 8a** list the priority of streams to receive adult spring Chinook salmon. Chinook loaded for adult

outplanting will be loaded directly into NPT trucks at Kooskia. Outplanting will be coordinated between Mike Key (NPT) and Ralph Roseberg (FWS). All adults outplanted from Kooskia will receive a right opercal v-notch as shown in **Table 8b**. Tribal use of un-anesthetized jacks for the elder program will need to be coordinated prior to adult sorting. (NPT contact Nancy McAllaster, 208-843-7320 ext.2445) *Ralph Roseberg*

- 2.3.2.4. Adult M&E Returning adults are measured and examined for gender, various clips and tags, and seal bites or other injuries, then sorted for spawning or holding. *Ralph Roseberg*
- 2.3.2.5. Spawning plans - Kooskia spring Chinook adult broodstock will be kept at Dworshak NFH. Spawning normally occurs the third week of August. Eggs collected that are in the low range of the BKD testing will be kept and the medium to high eggs are discarded. Jacks will be utilized for ~10% of the spawners. *Howard Burge / Adam Izbicki*
- 2.3.2.6. Egg incubation - BY06 Kooskia stock (750k) eggs will be transferred to KNFH beginning of November after eye-up. Eggs will be incubated on Creek water, approximately 40°F, and then switched to Chilled well water in late January, at temperatures of approximately 40°F. Normally eggs all hatch out by mid January. *Adam Izbicki*
- 2.3.2.7. Fish Health - Every adult female will be sampled individually for BKD with ELISA. Up to 150 ovarian fluid samples (3 pool) will be sampled for viruses. An additional 60 tissue samples will be taken for bacteria assays, and 20 samples for *M. cerebralis* and *C shasta*. Eggs from high and medium ELISA level females will be culled; exact level will depend upon number of fish returning. *Kathy Clemens*
- 2.3.2.8. Communication FWS puts out weekly spawning reports and weekly return reports, and annual spawning and adult return reports are also produced. All of these will be sent to the Contact list (**Section 6**).
- 2.3.3. Clearwater**
- 2.3.3.1. Projected adults returns – The Technical Advisory Committee of US v Oregon has projected returns of Snake River spring/summer Chinook to be very close to the actual numbers that returned in 2005. If the projections hold, then IDFG may seek sport harvest seasons. The sport fishery will be managed to harvest State's share of 50% of the excess adipose clipped adult spring Chinook. Real time predictions will be used to adjust the share. *Bill Horton, Ed Schriever*
- 2.3.3.2. Trapping operations at satellite facilities - Spring Chinook will be trapped at the Crooked River and Red River weirs, which will be installed approximately the third week of March, prior to high water. Trapping operations will continue until after September 1 and five consecutive days of zero fish are trapped. Proposed adult needs will be approximately 930 females and 930 males for Clearwater Hatchery allocations. NPT requested adult spring Chinook in excess of Clearwater broodstock requirements be available for broodstock at NPTH. Notify Butch Harty and Becky Johnson. A minimum of 200 females and 200 males will be requested to fill broodstock needs at NPTH. If CFH manager predicts

elevated prespawning mortality in holding adults, hatchery manager will compensate for loss by taking and holding additional adult fish. If by commencement of spawning too many adults have been taken, then adult outplants will be implemented at locations and priorities given in **Table 8a**. *Jerry McGehee*

- 2.3.3.3. Adult outplanting / distribution plans - The outplanting protocol [for excess hatchery broodstock] provides for distribution for natural spawning and subsistence use. If adult Chinook, available for release into natural spawning areas, exceeds [delete s] the numbers agreed to in Table 8a, further consultation will occur. The general procedure for providing fish for subsistence will be first to tribal programs, then to charitable organizations. Jack Chinook may go to subsistence programs directly. Please see Tables 8a and 8b for outplanting priority streams and marks. *Bill Horton*
- 2.3.3.4. Spawning plans - Spawning ratios of 1:1 will be used unless the brood stock population is less than 100 females. If the spawning population is less than 100 females, then eggs from each female will be split into two equal groups. A different male will fertilize each group. One cup of well water will be added to each bucket and set aside for 30 seconds to one minute. The two buckets will be poured together and continued through the spawning process. When brood stock population is 50 to 25 females, the eggs from each female will be split into three equal groups and each group fertilized by a different male. One cup of well water will be added to each bucket and set aside for 30 seconds to one minute; then all three buckets will be poured together. When brood stock population is 25 females or less, the eggs from each female will be divided into four equal groups, each fertilized by a separate male. The process will be completed as previously mentioned to finish the spawning process. During the entire spawning year, at least five to ten percent of the jacks will be used during the spawning process. An effort will be made to use all returning fish for spawning. If presented with an excess number of one sex, gametes from individual parents may be subdivided and each part fertilized with gametes with different parents. The first sort will occur between August 5 and 10. All females will be sorted twice per week, and all ripe females will be spawned each time. Spawning will continue until all females are spawned. NPT assistance will be provided when spawning Chinook for NPTH. If too many eggs are taken for the hatchery program, these eggs can be used to backfill appropriate IDFG programs, other agency programs. If not needed, surplus eggs will be disposed. *Jerry McGehee*
- 2.3.3.5. Juvenile production - Original design memorandum shows a production goal may be as high as 1.5 million Chinook smolts reared at the main facility, and 1.5 million fall release pre-smolts reared at the three satellite facilities. *Jerry McGehee*
- 2.3.3.6. Fish Health - All females will be tested by ELISA for Bacterial Kidney Disease (BKD). All eggs from females that are identified at a level of 0.25 OD or higher will be culled. A 60 fish sample (ovarian fluids) will be

taken for viral replicating agents. A 20 fish sample (head wedge) will be taken for *Myxobolus cerebralis* analysis. Juveniles will be inspected on a quarterly basis. Diagnostics on demand. Pre-liberation samples prior to release at satellites (20 fish sample). *Doug Munson*

2.3.4. Nez Perce Tribal Hatchery

- 2.3.4.1. Projected adult returns (Table 7b) Projected adult returns (Table 7b) Adult return estimates to Lolo and Newsome creeks are 228 and 59, respectively. At the present time, there are no adult return estimates for Meadow Creek. The 5 year average capture efficiency at our Lolo Creek Weirs is 30%, for Newsome Creek it is 85%. The total number of returning adults we expect to capture at our Lolo and Newsome Creek weir sites are 69 and 50, respectively. Broodstock needs are: 120 adults for Lolo Creek, 60 adults for Newsome Creek, and 400 adults for Meadow Creek, Selway. The broodstock needs assumes a 50:50 sex ratio.

Sherman Sprague

- 2.3.4.2. Trapping operations at NPTH – The adult ladder and trap, at Nez Perce Tribal Hatchery, will be operated in 2006 to collect spring chinook adults. Trapping operations will begin mid-April and continue through July 31st. The ladder will be operated intermittently to collect up to 542 adults needed for broodstock for the Meadow Creek, Selway program. Broodstock needs are based on an 85% survival from collection to spawning. In an attempt to select adults representatively across the return, the trap will be open in April and May until 34% (up to 182 adults) of the collection goal has been retained for broodstock. If the collection goal is reached, the trap will be closed until June 1. Beginning June 1, the trap will reopen until 33% (up to 180 adults) of the collection goal has been retained for broodstock. If the goal is reached, the trap will be closed until July 1. Beginning July 1, the trap will reopen until the remaining 33% (up to 180 adults) of the collection goal has been retained for broodstock.

Broodstock selection will be based on existing fin clips, marks, or tags. Only adipose fin clipped fish will be used as broodstock and will be retained at the rate described above. All natural, non-adipose fin clipped, known Idaho Supplementation Studies (ISS), and radio tagged fish will be returned to the Clearwater River and allowed to continue their spawning migration.

An alternative broodstock source for the Meadow Creek, Selway program is to obtain spring Chinook broodstock from other programs. Per agreement with IDFG and USFWS, adults returning to Crooked River, Clearwater Hatchery, Red River and the Powell satellites as well as Dworshak Hatchery may also be used for broodstock. Approximately 400 adults (200 females and 200 males) will be collected at IDFG or USFWS facilities – provided they are available - and transported to NTPH for maturation and spawning. *Becky Johnson*

- 2.2.4.3. Trapping operations at Lolo Creek and Newsome Creek -

Trapping operations on Lolo and Newsome creeks usually begin at the end of May, after peak flows are reached. Trapping will continue through September 14th, or until zero fish are trapped for 7 consecutive days. Two weirs will be operated on Lolo Creek, an upper weir (RKM 51) and a lower weir (RKM 21). Pass/keep ratios for the upper and lower weirs are initially set at 4:1 until 30 adults are collected at each weir. Pass/keep ratios for the Newsome Creek weir are initially set at 2:1. All ratios will be adjusted on a weekly basis dependent on actual captures. The adult weirs will also be used for escapement, estimating sex composition, age structure, return timing and genetic tissue sampling. The following marks/tags are proposed for application at NPTH trap sites on fish that are passed; Lower Lolo Cr = Left Operculum Punch and Left Numbered Orange Tyvek Tag; Upper Lolo Cr = Right Operculum Punch; and Newsome Cr Left Operculum Punch. Adults collected for broodstock will be held at the Yoosa/Camp and Newsome creek satellite facilities until water temperatures in Newsome and/or Yoosa/Camp creeks approach 65°. If water temperatures reach this level adults will be transferred to NPTH for maturation and spawning. *Becky Johnson*

- 2.3.4.4. Adult outplanting plans - Please see **Table 8a** and **8b**. *Becky Johnson*
- 2.3.4.5. Spawning plans – The first sort and spawn will occur August 8th. Spawning will occur once per week at the Yoosa/Camp satellite facility and once per week at NPTH (moribund ripe females will not be spawned). Spawning schedule: Tuesday and Wednesday. A spawning ratio of 1:1 will be used. Jacks will be limited to ten percent of the male contribution. Spawning will continue until the egg take goal is achieved or all females are spawned. *Butch Harty*
- 2.3.4.6. Juvenile production – Phase I production goals are 625,000 parr/pre-smolts. Distribution of juvenile production is 400,000 parr (Meadow Creek), 150,000 pre-smolts (Lolo Creek), and 75,000 pre-smolts (Newsome Creek). Juvenile production for Meadow Creek will be reared in the “S” channels at NPTH. Juvenile production destined for remote sites will be held in production room tanks and transferred when conditions permit (end of May first week of June). Production will be marked 100% with a CWT and sub-release groups will be PIT tagged. Monitor the in-hatchery survival and rearing conditions by treatment and rearing strategy. *Butch Harty*
- 2.3.4.7. Fish Health - All females will be tested by ELISA for Bacterial Kidney Disease (BKD). All eggs from females that are identified at a level of 0.20 OD or higher will be culled. A 150 fish sample (ovarian fluids) will be taken for viral replicating agents. A 20 fish sample (head wedge) will be taken for *Myxobolus cerebralis* analysis. Juveniles will be inspected on a quarterly basis. Diagnostics on demand. Pre-liberation samples prior to release (60 fish sample). *Kathy Clemens*
- 2.3.4.8. Communication - A monthly NPTH narrative and fish health report will be completed and submitted to BPA/COTR, NPT Research and

Production divisions, IDFG/Clearwater Fish Hatchery and all other interested parties.

- 3. COHO** - *A coho reintroduction program was initiated by the Nez Perce Tribe in 1995. Recent production releases have occurred in Lapwai Creek (275,000 smolts), Potlatch Creek (275,000 smolts), Clear Creek (acclimated at Kooskia – 280,000 smolts), and Eldorado Creek, Lolo Creek, and Musselshell Creek (total 270,000 pre-smolts). Fish production for this program comes from Eagle Creek NFH, Dworshak, and Clearwater hatcheries.*

3.1. Broodyear 2004 Coho

3.1.1. Dworshak

- 3.1.1.1. Production status – There were 193,039 fish on hand (4.83”, 7661 pounds, 25.2 fpp) at Dworshak as of February 2, 2006. In 2005, we experienced a high level of early-rearing mortality at DNFH. We took a heavy hit when 1) we moved fish from the incubation trays to the vat room without adequate water tempering, 2) when we moved fish from the incubation room to the outside raceways without adequate water tempering and 3) when we moved fish that were quite small from the incubation room to the outside raceways. *Scott Everett*
- 3.1.1.2. Projected transfer date/acclimation period at Kooskia – Smolts will be transferred to Kooskia NFH as soon as Kooskia spring Chinook are released in April 2006 for a 3-5 week acclimation. *Scott Everett*
- 3.1.1.3. Numbers/dates/marks & tags (Table 9) 80,028 coho were CWT with no AD clip on July 18-20, 2005. 1,500 fish will be PIT tagged at Kooskia as soon as fish are there for acclimation in April 2006. *Scott Everett*
- 3.1.1.4. Fish health – Disease history for this brood year of fish is complete at Lower Columbia River Fish Health Center for eggs that are transferred in. All fish are certified disease free. Fish are sampled no less than quarterly and prior to liberation; a 60 fish sample will be taken and assayed for virus, bacteria, and parasites. Fish were treated with Florfenicol medicated feed under INAD prior to transfer to Kooskia to help guard against mortality from Bacterial Coldwater Disease. *Kathy Clemens*
- 3.1.1.5. Juvenile M&E –
- Juvenile survival and emigration timing to Lower Granite Dam.
 - Smolt-to-adult survival, and adult return timing based on counts at Lower Granite Dam and ladder counts at Dworshak and Kooskia National Fish Hatcheries. *Scott Everett*

3.1.2. Transfers (Eagle Creek NFH)

- 3.1.2.1. Projected release - Smolts reared at Eagle Creek NFH will be released into Potlatch and Lapwai Creeks March 6-10, 2006. Approximately 550,000 (275,000 each stream) will be direct stream released. Approximately 50,000 will be CWT/AD, and 50,000 will be CWT only per release site. There will be 1,500 PIT in each release group. **(Table 9)** *Scott Everett*
- 3.1.2.2. Fish health – Disease history for this brood year of fish is complete at Lower Columbia River Fish Health Center. All fish are certified disease free. *Kathy Clemens*

3.1.2.3. M&E

- Juvenile survival and emigration timing to Lower Granite Dam.
- Smolt-to-adult survival and adult return timing based on counts at Lower Granite Dam and weir monitoring at Lapwai Creek and the Potlatch River, and redd surveys.
- Genetic samples collected for future analysis. *Scott Everett*

3.2. Broodyear 2005 Coho**3.2.1. Dworshak**

3.2.1.1. Production status - Adult coho salmon were collected for broodstock from Dworshak NFH, Kooskia NFH, Lyons Ferry FH, and temporary weirs on Lapwai Creek, and the Potlatch River. A total collection of 330,606 eggs resulted in 234,633 eyed eggs from coho adults returning to the Clearwater River (Clearwater stock). On December 1, 2005 an additional 175,000 eyed eggs were transferred from Eagle Creek NFH. On December 7, 2005, 33,250 of these were transferred to the Potlatch Corp. As of February 2, 2006, there are a total of 325,660 (192,798 Clearwater Stock, 132,862 Eagle Creek stock) fry in the nursery. *Scott Everett*

3.2.1.2. Projected production - The projected production will be 280,000 smolts reared through spring 2007. 150,000 fish will receive CWT and 1,500 will receive PIT. (**Table 10**) *Scott Everett*

3.2.1.3. Fish health – Every adult female was sampled individually for BKD with ELISA. No eggs were culled. Up to 150 ovarian fluid samples (3 pool) were sampled for viruses; no viruses were detected. An additional 60 tissue samples will be taken for bacteria assays, and 60 samples for *M. cerebralis*. Brood fish health samples were taken by NPT staff and delivered to Idaho Fish Health Center personnel for analysis. Juvenile fish will be sampled quarterly and prior to liberation. We suggest treating with Florfenicol prior to transfer to Kooskia to help guard against mortality from Bacterial Coldwater Disease. *Kathy Clemens*

3.2.1.4. M&E - Juvenile survival and emigration timing to Lower Granite Dam. Smolt-to-adult survival, and adult return timing based on counts at Lower Granite Dam and ladder counts at Dworshak and Kooskia National Fish Hatcheries. Genetic samples collected from adults for future analysis. *Scott Everett*

3.2.2. Clearwater

3.2.2.1. Production status - A total of 352,000 eyed-eggs were transferred from Eagle Creek NFH beginning on December 1, 2005. As of February 2, 2006 there were 344,444 eyed-eggs at Clearwater. *Scott Everett*

3.2.2.2. Projected production - The projected production will be 270,000 pre-smolts reared through early fall 2006. 120,000 will be CWT and 3,000 will receive PIT. Fish will be transferred the last week of September 2006 to the Lolo Creek drainage for a direct stream release. (**Table 10**) *Scott Everett*

3.2.2.3. Fish health - Fish will be sampled quarterly and prior to liberation. *Kathy Clemens/Doug Munson*

3.2.2.4. Juvenile M&E -

- Juvenile survival and emigration timing to Lower Granite Dam.
- Adult return timing based on counts and PIT tag returns at Lower Granite Dam and redd surveys.
- Genetic samples collected for future analysis. *Scott Everett*

3.2.3. Transfers (Eagle Creek NFH)

3.2.3.1. Projected release - Smolts reared at Eagle Creek NFH will be released into Potlatch and Lapwai Creeks in mid-March 2007. Approximately 550,000 (275,000 each stream) will be direct stream released. Approximately 50,000 will be CWT/AD, and 50,000 will be CWT only per release site. There will be 1,500 PIT in each release group. *Scott Everett*

3.2.3.2. Fish health – Disease history for this brood year of fish is complete at Lower Columbia River Fish Health Center. All fish are certified disease free. *Kathy Clemens*

3.2.3.3. M&E

- Juvenile survival and emigration timing to Lower Granite Dam.
- Smolt-to-adult survival and adult return timing based on counts at Lower Granite Dam and weir monitoring at Lapwai Creek and the Potlatch River, and redd surveys.
- Genetic samples collected for future analysis. *Scott Everett*

3.3. Broodyear 2006 Coho - *One of the program objectives is to develop a local Clearwater River coho stock. To accomplish this adult coho returning to the Clearwater River are a priority for use as broodstock. Fish are collected at fish ladders at Dworshak NFH, Kooskia NFH, Lyons Ferry FH, Nez Perce Tribal Hatchery, and weirs on the Potlatch River and Lapwai Creek*

3.3.1. Dworshak

3.3.1.1. Ladder operation - Ladder operation will begin on October 1, 2006 to begin trapping steelhead and coho salmon at Dworshak. NPT requests that the ladder be operated such that sorting can occur twice a week in order to maximize the adult take. *Howard Burge*

3.3.1.2. Adult transfers - Adult steelhead trapped (in excess of 500 fish) during operation of the ladder to collect coho will be loaded and hauled by NPT and released in the lower Clearwater River at Hog Island. *Scott Everett*

3.3.2. Tributary weir operation - Weirs will be placed in Lapwai Creek and Potlatch River around September 27, 2006 and operated until early December, 2006. *Scott Everett*

3.3.2.1. Adult handling - Adult coho salmon trapped at Potlatch and Lapwai Cr. and Kooskia NFH will be transported by NPT to a holding pond at Dworshak NFH. *Scott Everett*

3.3.2.2. Adult transfers - Adult coho trapped in excess of broodstock need will be transferred to natural production areas. Coho trapped at Lolo Creek and Kooskia NFH will be released above the weir on Lolo Creek. Coho trapped on the Potlatch River and Lapwai Creek will be release above the weir on the Potlatch River. *Scott Everett*

- 3.3.2.3. Spawning operation - First sort will take place around the second week of October and spawning operations will take place once a week, until all fish have been spawned. *Scott Everett*
- 3.3.2.4. Fish health – Every adult female will be sampled individually for BKD with ELISA. Up to 150 ovarian fluid samples (3 pool) will be sampled for viruses. An additional 60 tissue samples will be taken for bacteria assays, and so samples for *M. cerebralis*. Brood fish health samples will be taken by NPT staff and delivered to Idaho Fish Health Center personnel for analysis. Fish with a high or moderate BKD titer were culled. *Kathy Clemens*
- 3.3.2.5. Juvenile M&E –
- Smolt-to-adult survival is based on weir monitoring in Lapwai Creek and the Potlatch River, and redd surveys in the Potlatch River.
 - Smolt-to-adult survival, and adult return timing based on counts at Lower Granite Dam and ladder counts at Dworshak and Kooskia National Fish Hatcheries.
 - Genetic samples collected from adults. *Scott Everett*
- 3.3.2.6. Communication - NPTH produces monthly production and pathology reports, and Fish Research produces weekly weir reports. *Scott Everett*
- 4. FALL CHINOOK SALMON** - *Fall Chinook salmon production in the Clearwater River occurs through two programs – Lower Snake River Compensation Plan/Fall Chinook Acclimation Project and Nez Perce Tribal Hatchery.*
- 4.1. Broodyear 2004 Fall Chinook**
- 4.1.1. NPT Fall Chinook Acclimation Project – Big Canyon Facility** - *The Big Canyon Acclimation facility is a portable acclimation setup designed and operated for acclimation and release of Snake River fall Chinook salmon that are reared at Lyons Ferry Hatchery. Big Canyon facility is operated by the Nez Perce Tribe as part of the Fall Chinook Acclimation Project (FCAP) funded by BPA. The facility has capacity to acclimate 150,000 yearlings and 500,000 subyearlings. The facility is operated in conjunction with two other acclimation facilities on the Snake River in an effort to restore ESA listed Snake River fall Chinook salmon and achieve the LSRCP mitigation goal of 18,300 adults to the project area.*
- 4.1.1.1. Production status – Approximately 130,000 yearlings are being reared at Lyons Ferry Hatchery for transfer to the Big Canyon acclimation facility on March 1-3, 2006. *Becky Johnson, Bruce McLeod*
- 4.1.1.2. Projected release – Target release will be 150,000 yearlings at 10 fpp on April 15. Fish are 70K CWT and ad clipped and 80K CWT only (**Table 11**) *Bruce McLeod*
- 4.1.1.3. Fish health - Yearling fish at Lyons Ferry SFH were sampled 1/11/06 for ELISA and viral assays for the import permit for this program. Monitoring samples for BKD will be taken weekly and a 60 fish sample will be collected and assayed prior to release from each site. *Kathy Clemens*
- 4.1.1.4. M&E -

Yearling release groups will be sampled for length at weight at time of release. We will sample 100 fish from each tank as they are being released. We sample 500 fish from each raceway at LFH for coded wire tag and adipose fin clip retention 30 days after tagging/marketing is completed. We will PIT tag 5,000 yearlings to estimate survival, migration rate and timing through the FCRPS. All mortalities at Big Canyon will be scanned for PIT tags. Aerial redd counts and adult spawner carcass sampling in the Clearwater subbasin will be conducted by NPTH M&E personnel. Coded wire tags will provide SAR data. *Steve Rocklage*

- 4.1.1.5. Communication - O&M and M&E quarterly and annual reports to BPA

4.2. Broodyear 2005 Fall Chinook

4.2.1. NPT – Fall Chinook Acclimation Project – Big Canyon Facility

- 4.2.1.1. Production status – Approximately 520,000 subyearlings are being reared at Lyons Ferry Hatchery for transfer to the Big Canyon acclimation facility on May 01, 2006. *Becky Johnson, Bruce McLeod*
- 4.2.1.2. Projected release – Target release is 500,000 subyearlings at 75-50 fpp on June 1, 2006. A group of 100,000 fish are CWT ad-clipped and 100,000 CWT only for evaluation – the balance of fish are unmarked. (**Table 11**) *Bruce McLeod*
- 4.2.1.3. Fish health - Import permit sampling will be done in March/April. A 60 fish sample will be collected and assayed prior to release from each site. *Kathy Clemens*
- 4.2.1.4. Juvenile M&E – Subyearling release groups will be sampled for length at weight at time of release. We will sample 100 fish from each tank as they are being released. We sample 500 fish from each raceway at LFH for coded wire tag and adipose fin clip retention 30 days after tagging/marketing is completed. We will PIT tag 2,500 subyearlings to estimate survival, migration rate and timing through the FCRPS. All mortalities at Big Canyon will be scanned for PIT tags. Aerial redd counts and adult spawner carcass sampling in the Clearwater subbasin will be conducted by NPTH M&E personnel. Coded wire tags will provide SAR data. *Steve Rocklage*
- 4.2.1.5. Communication - O&M and M&E quarterly and annual reports to BPA

4.2.2. Nez Perce Tribal Hatchery – *Nez Perce Tribal Hatchery was constructed in 2001 and is authorized to produce 1.4 million subyearling fall chinook juveniles. Target releases are 500,000 on station at Site 1705, 500,000 acclimated and released from North Lapwai Valley facility, 200,000 acclimated and released from Lukes Gulch facility (South Fork Clearwater) and 200,000 acclimated and released from Cedar Flats facility (Selway River).*

- 4.2.2.1. Ladder Operation - Ladder operations commenced on 23, August 2005, and continued through 29, November 2005. A total of 117 adults (63♀, 54♂) and 50 jacks (<53 cm) were collected at NPTH. Another 13 females, 10 males and 1 jack were collected at the Potlatch weir. An

additional 2 males and 1 female were collected at DNFH. All broodstock, collected off-site, were transported to NPTH for spawning. In September and October, 429 adult fall Chinook (202♀ and 227♂) and 29 jacks (<53 cm) were transported from Lower Granite Dam to NPTH for spawning.

Butch Harty

- 4.2.2.2. Spawning – Over the course of nine weeks, a total of 278 females were spawned, which yielded 958,536 green eggs. Average eye up was 92.41%. Fourteen females were identified as strays and their eggs culled.

Butch Harty

- 4.2.2.3. Production status - As of January 12, 2006, an estimated 885,738 fall Chinook eyed eggs were on hand at NPTH. On February 2, approximately 33,000 fry will be transported from Lyons Ferry Hatchery to NPTH to backfill a shortage in production but remain within the 5% stray rate for out of basin fall Chinook. *Butch Harty*

- 4.2.2.4. Projected release - Anticipated release: 831,500 sub-yearlings.

- Site 1705: A release of 500,000 sub-yearlings into the Clearwater River at 50 fish per pound (9.07 grams) is planned. The fish will be transferred directly into the ponds from the marking trailer. Unmarked fish (200,000) destined for release into the Clearwater River will be held in production room tanks at Site 1705 until they attain a size of ~180 fpp (2.52 grams). The fish will then be transferred and divided equally into the two fall Chinook acclimation ponds at Site 1705 for acclimation and release. The ponds will be set-up and operational at least 2 days prior to receiving fish. Prior to release, 3,000 fish will be tagged with a PIT tag. Mortalities will be picked daily and the fish feed 2 times per day. At the start of the scheduled volitional release, lengths and weights will be taken and recorded on a minimum of 500 fish. Prior to release, a minimum 60 fish sample will be collected from each release group for a pre-release health inspection. Bacteriology, virology and parasitic assays will be performed. Scheduled release date from Site 1705 is June 15th.
- North Lapwai Valley: A release of 281,500 sub-yearlings into Lapwai Creek at 50 fish per pound (9.07 grams) is planned. Lapwai Creek water temperatures will be monitored from late February through mid-April. In the event the water temperatures in Lapwai Creek exceed 55° F (12.8° C) in late March, the 281,500 sub-yearlings may not be transferred to the North Lapwai Valley Acclimation facility. The fish may be reared at Site 1705 and released into the Clearwater River. The transfer of the fish will occur in mid to late April. The facility will be set-up and operational at least 3 days prior to transfer of fish. Prior to release, 3,000 fish will be tagged with a PIT tag. PIT tagging operations will take place prior to water temperatures attaining 17° C. Lengths and weights will be taken and recorded on a minimum of 500 fish prior to release. Mortalities will be picked daily and the fish feed 2 times per day. Scheduled release date for North Lapwai Valley AF is May 31st.
- Cedar Flats: A release of 25,000 sub-yearlings into the Selway River at 50 fish per pound (9.07 grams) is planned. Transfer of the fish will

occur in late April to early May. The facility will be set-up and operational at least 5 days prior to transfer of fish. Prior to release, 4,900 fish will be tagged with a PIT tag. Lengths and weights will be taken and recorded on a minimum of 500 fish prior to release. Mortalities will be picked daily and the fish feed 2 times per day. Schedule release date from Cedar Flats AF is June 15th. However, an earlier release may occur to avoid unfavorable water temperatures.

- Lukes Gulch: A release of 25,000 sub-yearlings into the South Fork Clearwater River at 50 fish per pound (9.07 grams) is planned. Transfer of the fish will occur in late April to early May. The facility will be set-up and operational at least 5 days prior to transfer of fish. Prior to release, 4,900 fish will be tagged with a PIT tag. Lengths and weights will be taken and recorded on a minimum of 500 fish prior to release. Mortalities will be picked daily and the fish feed 2 times per day. Scheduled release date from Lukes Gulch AF is June 15th. However, an earlier release may occur to avoid unfavorable water temperatures.

(Table 11) *Butch Harty*

- 4.2.2.5. Fish health – Kidney samples were assayed by ELISA on all spawned females; no eggs were culled due to ELISA OD's all below cut-off (.20). 150 ovarian fluid samples, 60 tissues samples and 30 cranial samples were taken for assay. IHNV was found in 34.5% of samples tested from Tribal hatchery 1705. IHNV was found in 33.9% of samples tested from Lyons Ferry. A 60 fish sample will be collected and assayed prior to release.

Kathy Clemens

- 4.2.2.6. M&E

- Scan all fish for CWT. Initial tag retention and tagging mortality estimated. Estimate final CWT retention rates 14 days or more after tagging.
- PIT survival studies- Pit tag 3,000 of each release group for survival estimates, growth rates, and migration timing.
- Redd surveys and carcass collection. Scales and genetic samples taken, hatchery/wild determination, scan for PIT tags and CWTs, along with all other biological information.
- Volunteers to NPTH will be scanned for PIT tags and CWTs and scales and genetics will be taken on a sub-sample of spawned fish and mortalities, along with all other biological information. *Bill Arnsberg, Jay Hesse*

- 4.2.2.7. Communication - NPTH produces monthly production and pathology reports, and M&E quarterly and annual reports to BPA.

- 4.2.3. Dworshak NFH – *Dworshak NFH is being used to rear subyearling fall Chinook for several reasons; 1) the Service allows this since it does not impact the spring Chinook or steelhead mitigation programs, 2) this fall Chinook study is fully funded and workers will be hired, so it does not increase the workload of the existing crew, 3) Lyons Ferry is does not have the space to hold these fish to full term, and 4) Lyons Ferry cannot achieve the desired size at release because of warmer water*

temperatures. Dworshak has cooler water temperatures and a window from approximately the end of March to the end of July that they can rear these fish in the spring Chinook raceways. This window is after spring Chinook salmon are released and before the next broodyear are marked, which is when the fish are ponded to final rearing densities. Finalization of out years of this study is still under discussion.

- 4.2.3.1. Transportation Study – The 2006 releases will be the second year for the transportation study. While wild fish are PIT tagged during annual beach seining, hatchery surrogates are needed to improve SAR estimates. A total of 328,000 sub-yearlings will be brought from Lyons Ferry and Umatilla hatcheries to Dworshak in April after spring Chinook are released; these will be held in the raceways for approximately 6 weeks, until that space is needed for the next spring Chinook broodyear. 230,000 will be released in the Snake River near the Capt. Johns acclimation facility and 98,000 will be released into the Clearwater River near the Big Canyon facility. Fall Chinook released for this study will be 100% PIT tagged. *Howard Burge, Billy Connor*
- 4.2.3.2. Communication - NPTH produces monthly production and pathology reports, and M&E quarterly and annual reports to BPA.

4.3. Broodyear 2006 Fall Chinook

4.3.1. Adult collection - Snake River Fall Chinook adults will be collected at Lower Granite Dam (LWG) and transported to Site 1705, in accordance with the U.S. vs. Oregon Interim Management Agreement. Additionally, adult fall Chinook may enter the fish ladder and be trapped at Site 1705.

- 4.3.1.1. Lower Granite Dam - Trapping and transport activities will occur under an ESA Section 10 Permit and will be coordinated with Lyons Ferry Hatchery, Jerry Harmon and U.S. Army Corps of Engineers. Adult fall Chinook will be trapped at LWG commencing the last week of August for brood year 2006 or as soon as water temperatures allow. Trapping will continue throughout the run and is anticipated to end by late November or early December. Fall Chinook are collected in the trap as a sub-sample of the returning run. The sub-sample rate for 2006 has not yet been determined, but should range from 13-15% of the run over LWG. Currently, all adults trapped at LWG and retained for broodstock will receive a right operculum punch (ROP). Also, all females trapped will be injected with erythromycin and oxytetracycline during the sorting process. Washington Department of Fish and Wildlife (WDFW) Fish Management, Lyons Ferry Hatchery (LFH) and NPTH will develop a transportation schedule for adults trapped at LWG> The goal of NPTH is to receive 30% of the adults trapped at LWG (anticipated to be approximately 750 fish). A portion of known LFH origin and unknown origin hatchery Chinook. *Butch Harty, Becky Johnson*
- 4.3.1.2. Trapping sites/Ladder operation - Commencing on August 21, 2006, and continuing through December 5, 2006, the adult ladder and trap will be operated at Nez Perce Tribal Hatchery to collect fall chinook adults for brood year 2006. Adults that voluntarily return to NPTH will be injected

with erythromycin prior to the first spawning. Adults will receive formalin treatments every-other day to control fungus and decrease pre-spawning mortality. *Butch Harty, Becky Johnson*

- 4.3.1.3. Spawning plans – To meet the egg take goal of 1.978 million, approximately 565 females will be spawned at NPTH. Spawning will begin October 24, 2006, and may continue through December 5, 2006. All out-of-Snake River Basin adults, identified as “strays” by CWT or other distinguishing marks, will be culled. WDFW may use scale pattern data to cull suspect “strays” and eggs. However, scale pattern data will not be used at NPTH in the culling of eggs. On all fish spawned the following data will be collected: Fork length, sex, fin clips, visual implant elastomer (VIE) tags (document side and color i.g. LR for left red), coded wire tag identification number and opercle punches and side V-notches, radio tag number if present and any other identifying marks or tags. All fish will be scanned for a PIT tag and scales will be taken on all unmarked/untagged fish with a sub-sample taken on CWT tagged fish. In addition, tissue samples will be taken on a random sub-sample of 100 spawned females and 100 spawned males for DNA analysis and genetic monitoring. Data entry, verification and finalization of all data collected will be coordinated with WDFW and completed by mid-January 2006. Finalized database files will be sent to NPT (Bill Arnsberg, WDFW (Debbie Milks) and Technical Advisory Committee (TAC) (Cindy Lefleur). Coded wire tagged adults, excess to broodstock needs, will be sacrificed for run-reconstruction purposes. Accurate run-reconstruction to LWG is based on a set sub-sampling protocol that requires that all hauled fish be accounted for i.e., CWT’s read and scales read on unmarked/untagged fish for expansion of fish not sampled at LWG. Adults excess to broodstock needs and without a CWT, will be anesthetized and scale samples taken before they are released into the Clearwater River. Adults transported from Lower Granite Dam (LWG) and excess to broodstock needs will be sampled. All CWT tagged adults will be sacrificed for run-reconstruction purposes. All fish transported from LWG without a CWT and, not needed for broodstock, will be anesthetized and scales taken for run-re-construction purposes (wild/hatchery origin) prior to release into the Clearwater River. Every adult female will sampled individually for BKD with ELISA. Up to 150 ovarian fluid samples (3 fish pools) will be sampled for viruses. In addition 60 tissues samples will be taken for bacteria assays, and sampled for *M. cerebralis*. Broodstock fish health samples will be taken by NPTH staff and delivered to Idaho Fish Health Center for analysis. *Butch Harty*
- 4.3.1.4. Egg Incubation – Fertilized eggs will be water hardened for one hour in 100 parts per million (PPM) iodophore and placed in iso-incubation units. At between 550 and 620 temperature units (TU’s) eyed eggs will be shocked, machine sorted the following day and transferred into Heath trays. Eggs will be incubated on processed (well and treated, chilled surface) water at a temperature of 52° F. Eggs from females with a BKD

ELISA value of 0.2 and above will be culled. All eggs should be hatched out by late January or early February. At swim-up, ~1,600 fish per pound (0.30 grams), the fish will be transferred to production room tanks. *Butch Harty*

- 4.3.1.5. Egg transfers from Lyons Ferry - Egg transfers from Lyons Ferry Hatchery may occur for brood year 2006 depending on the broodstock availability for NPTH and Lyons Ferry Hatchery. *Becky Johnson*
- 4.3.1.6. Adult M&E
- Redd surveys and carcass collection. Scales and genetic samples taken, hatchery/wild determination, scan for PIT tags and CWTs, along with all other biological information.
 - Volunteers to NPTH will be scanned for PIT tags and CWTs and scales and genetics will be taken on all spawned fish and mortalities, along with all other biological information. *Bill Arnsberg, Jay Hesse*
- 4.3.1.7. Fish health – Every adult female will be sampled individually for BKD with ELISA. Up to 150 ovarian fluid samples (3 pool) will be sampled for viruses. An additional 60 tissue samples will be taken for bacteria assays, and so samples for *M. cerebralis*. Brood fish health samples will be taken by NPT staff and delivered to Idaho Fish Health Center personnel for analysis. Fish with a high BKD titer will be culled. *Kathy Clemens*
- 4.3.1.8. Communication - NPTH produces monthly production and pathology reports, and Fish Research produces quarterly and annual reports to BPA.

5. RAINBOW TROUT

5.1. USFWS Program

5.1.1. Dworshak Kids' Fishing Day

- 5.1.1.1. Production status - BY05: Dworshak is rearing Shasta strain rainbow trout from Ennis NFH for the June 9, 2006 Kids' Fishing Day. On January 1, 2006, there were 15,961 rainbows at Dworshak. Approximately 3,800 of these trout will be transported to Kooskia NFH in February for their Open-House. The rainbow trout are currently being reared in a burrows pond in System I and two raceways in C-bank. The Service hopes to achieve 15 inches in length (0.75 per lb.) by Open House. No fish health problems to date in this group of fish. *Thomas Trock*
- 5.1.1.2. Excess outplanting - The plan is to continue what has been done in previous years, with excess fish going to the Nez Perce Tribe ~ 40%; Coeur D' Alene Tribe ~ 20%; and Idaho Dept. of Fish and Game ~ 40%. *Howard Burge*

5.2. IDFG Programs

5.2.1. Dworshak Reservoir

Nampa Fish Hatchery will stock 50,000 sterile triploid rainbows into Dworshak Reservoir in May- July. Since 1997 Hagerman NFH has raised rainbows for stocking into Southern Idaho reservoirs and IDFG reciprocates by stocking Dworshak Reservoir. There are no planned changes for the program this year. *Jerry McGehee / Howard Burge*

5.2.2. Clearwater Basin

IDFG stocks approximately 50,000 Kamloops rainbow trout and 160,000 Spokane rainbow trout annually into the Clearwater River system. For 2006, the Kamloops rainbow are raised at Lyons Ferry and Nampa Fish Hatcheries (25k each) and stocked into the lower Clearwater River in October, after AD and RV-clipping.

Spokane rainbow from Lyons Ferry Hatchery will be stocked into lowland lakes within the Clearwater drainage in April and May, these unmarked fish provide additional fishing opportunities. This program is funded by the Lower Snake River Compensation Plan and the Dingle-Johnson Program to compensate for dam related losses. *Robert Hand*

The Clearwater Fish Hatchery regional rainbow program redistributes 100,000 Nampa reared trout. A total of 29 plant sites, requiring 110 trips are stocked May to August. *Jerry McGehee*

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